

CORRIGENDUM to Tender BHU/RD&I/2018-19/015 dated 24.04.2018

Please refer to Tender Notice No. BHU/RD&I/2018-19/015 dated 24.04.2018 issued for purchase of Digital Subtraction Angiography unit with a flat panel detector technology for the Department of Radiodiagnosis & Imaging, IMS, BHU, the following changes in the tender notice is hereby notified through this corrigendum.

Please read revised Tender Notice No. BHU/RD&I/2018-19/015 dated 24.04.2018 as mentioned below.

Clause no.	Tender specification	Amendment
Preamble	Vendor should take the responsibility for executing AERB certification with site approval and all procedures till the license of operation is awarded. Renewal of certification till the equipment is under CMC shall be the responsibility of the vendor. All major components of equipment should be from the same vendor only.	Addition of the point – <b>Department shall provide necessary help and document in facilitating the same.</b>
1D	Electro-magnetic lock mechanism for individual locking of all movements using Single Touch Operation.	Deleted
1E	Please specify whether all movements are motorized or partially so	All movements should be motorized.

1F	<p>Focus image receptor distance : 105cm</p> <p>C-Arm vertical free space: <math>\geq 80</math> cm</p> <p>C-Arm depth : <math>\geq 60</math> cm</p> <p>Width : <math>\geq 80</math>cm</p> <p>All movements should be controllable by brakes and steering</p>	Width : $\geq 80$ cm – this point is deleted.
1H	Automatic saving and recall of at least 25 stored C-arm angulations & positions should be available.	Deleted
1I	Minimum coverage of C-arm rotation angulations at oblique direction is LAO/RAO, & CRA/CAU	Deleted
1J	Minimum coverage of C-arm rotation angulations at head position is LAO/RAO and CRA/CAU	Deleted
2B	Output of $\geq 12$ kW	Output of $\geq 20$ kW
2C	Fluoroscopy kV & mA range $\geq 40$ kV & 100 mA or more, respectively	$\geq 100$ mA
2D	Radiographic kV & mA range 40-120 kV or more & $\geq 200$ mA respectively	Radiographic kV & mA range 40-120 kV or more & $\geq 100$ mA respectively
2E	<p>Pulsed fluoroscopy with</p> <ul style="list-style-type: none"> <li>• kV Range : 40 to 120 kV or more</li> <li>• mA range : 1.5 to 200mA or</li> </ul>	<p>Pulsed fluoroscopy with</p> <ul style="list-style-type: none"> <li>• kV Range : 40 to 120 kV or more</li> <li>• mA range : 3- 200mA</li> </ul>

	<p>more</p> <ul style="list-style-type: none"> <li>• pulse width : 4- 40 ms or more</li> </ul> <p>upto 25 pulses per second</p>	<p>or more</p> <ul style="list-style-type: none"> <li>• pulse width : 5-14 ms</li> </ul> <p>or more</p> <p>upto 25 pulses per second</p>
4G	Laser localizer & anti-collision sensor and prevention technology (both to patient and other objects) integrated in the detector housing	Laser localizer integrated in the detector housing
5	Medical grade high resolution & high brightness twin flat screen monitors of adjustable height	High resolution and high brightness twin flat screen monitors.
6A	Recursive filtering (at least 4 levels), auto window& Manual windowing, edge enhancement, real time zoom (at least 3 levels), grey-scale image inversion& digital image rotation with right-left & top-bottom reversal	auto window& Manual windowing, edge enhancement, real time zoom (at least 3 levels), grey-scale image inversion& digital image rotation with right-left & top-bottom reversal
6B	Should have minimum 3 Fluoroscopy modes	Deleted
7C	Thermal printer with 100 printing rolls	Black and White Thermal printer with 100 printing rolls
7E	Hard disk with digital image processing capability of 32 bits and an ability to Record 5,000 images at a time	Hard disk with digital image processing capability of 32

		bits and an ability to Record 100,000 images at a time
10A	Certificates attached Three (3) government institutes/colleges or multispecialty hospitals above 250 beds	One central Government Institute where the equipment of same specifications has been procured fulfilling all formalities of government e-tendering process (to be mentioned in certificate)
13.	Please clearly state whether you are willing to do all the civil/electrical/plumbing and wooden work in the projected space to make your equipment ready for I.R work	<p>Please clearly state whether you are willing to do all the civil/electrical/plumbing and wooden work in the projected space to make your equipment ready for I.R work</p> <p>The scope of work includes:</p> <ol style="list-style-type: none"> <li>1. Civil work- demolition and reconstructions of walls as per site requirement to create a reception, Doctor's room, changing room, toilet, catheter storage</li> </ol>

		<p>area and patient recovery room</p> <ol style="list-style-type: none"><li>2. Flooring, walls and false ceiling work as required</li><li>3. Lead lined laminated wooden doors with hard wood frames. SS guard rails to be provided at procedure room entrance.</li><li>4. Electrical: Vendor to provide machine load requirement for machine area, general lighting using LED light (Phillips, syska or equivalent ), Trench/raceway/cable tray if required, to be provided along with a copper earthing. Switches (Legrand, Havells or equivalent),</li></ol>
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		<p>5. LAN connectivity for console system, work station and computers.</p> <p>6. Scrub station</p> <p>7. Furniture including two revolving chairs (godrej, geeken, fetherlite or equivalent), fabricated table for work station , change room locker</p>
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# **BID DOCUMENT**

## **(e – Procurement - CORRIGENDUM)**

**Supply of 3 T MRI equipment on turn-key basis  
in Deptt. of Radiodiagnosis & Imaging  
Institute of Medical Sciences  
BHU, Varanasi**



**DEPTT. OF RADIODIAGNOSIS & IMAGING  
INSTITUTE OF MEDICAL SCIENCES  
BANARAS HINDU UNIVERSITY  
VARANASI-221005, INDIA**

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## CORRIGENDUM

Clause no.	Tender specification	Amendment
GCC – clause 10.3	All questions, disputes and differences arising shall be referred by the Vice-Chancellor, Banaras Hindu University to the sole arbitrator for arbitration under the provision of the Arbitrations and Conciliation Act, 1996.	All questions, disputes and differences arising shall be referred to the arbitrator appointed by the Vice-Chancellor, Banaras Hindu University on <b>mutual agreement of the Parties</b> for arbitration under the provision of the Arbitrations and Conciliation Act, 1996.
GCC – clause 25.3	Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services otherwise shall be at the cost of suppliers.	Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services ( <i>i.e. identical in nature, class, specifications prevailing exchange rate, warranty, quantity and other commercial terms &amp; conditions</i> ) otherwise shall be at the cost of suppliers.
SCC – Section VIII Payment Term- GCC 16.1	Payment for Goods and Services supplied from within India: Payment for Goods and Services supplied from within India shall be made in Indian Rupees, as follows: (i) On Delivery & Acceptance: Hundred (100%) percent of the Contract Price shall be paid on receipt of the Goods in good conditions and acceptance certificate for satisfactory installation and functioning.	Payment for Goods and Services supplied from within India: Payment for Goods and Services supplied from within India shall be made in Indian Rupees, as follows: (i) On Delivery & Acceptance: The Contract Price shall be paid <b>through inland letter of credit</b> on receipt of the Goods in good conditions and acceptance certificate for satisfactory Installation and functioning. (ii) For Services rendered (including turnkey job etc): 30% advance payment against submission of advance bank guarantee and balance within 30 (thirty days) upon submission of claim supported by the acceptance Certificate issued by the Purchaser by bank draft/wire transfer.
C. Preparation of Bids: Point No 18	EMD/Bid security shall be paid @ 2% of the estimated value(s) of quoted items by the way of Demand Draft (DD)/Bank Guarantee (BG) in favor of	EMD/Bid security shall be paid @ 2% of the estimated value(s) of quoted items by the way of Demand Draft (DD)/Bank Guarantee (BG) <b>along with the attach</b>

	the Registrar, Banaras Hindu University, Varanasi-21005 and should be valid for a period of 45 days beyond the BID validity period. All tenders received without EMD/Bank Security shall be rejected.	<b>BG format for EMD/BID Security</b> in favor of the Registrar, Banaras Hindu University, Varanasi-221005 and should be valid for a period of 45 days beyond the BID validity period. All tenders received without EMD/Bank Security shall be rejected.
List of Goods and Delivery Schedule Latest Delivery Date Page No-37	30 days	4 months from the date of order or LC or site handing over along with permanent power, whichever is later.
Technical Specifications point no (b) Page no-39	Please confirm that the system would be handed over for use within a period of 6 months from the award of tender and would not be phased out during the next 10 years (Yes/No). Please mention the year of launch of the quoted model.	Please confirm that the system would be handed over for use within a period of 6 months from the award of tender or letter of credit date or site handing over date along with permanent power, whichever is later and would not be phased out during the next 10 years (Yes/No). Please mention the year of launch of the quoted model.
Technical Specifications point no (o) Page no-41	(o) Please confirm that you undertake to support and permit installation (both the hardware and software) of any third party item purchased or developed by the university or any university supported/collaborated academic program. (Yes/No)	(o) Please confirm that you undertake to support and permit <b>additional installation external to the main equipment</b> (both the hardware and software) of any third party item purchased or developed by the university or any university supported/collaborated academic program <b>provided such installation does not interfere with the proprietary rights of the manufacturer or does not interfere with the performance of the equipment.</b> (Yes/No). The university wishes to enter into a formal RESEARCH AGREEMENT with the vendor so that the research scientists at both ends can work seamlessly. The vendor shall provide a research key to modify all imaging parameters and, is free to make any positive suggestions pertinent for scientific research.
Custom Duty		The purchaser shall provide custom duty exemption certificate, and the custom duty. However logistics of custom clearance will have to be managed by

		the vendor.
Section VIII – SCC GCC 27.1	The maximum amount of liquidated damages shall be 10%	The maximum amount of liquidated damages shall be: <b>10% of contract value.</b>
Technical Specifications 1. MAGNET: d.	The homogeneity of the magnet should be mentioned in relation to 10, 20, 30, 40 cm DSV. Automatic shimming in phantom should be better than 3.5ppm in 40 DSV .	The homogeneity of the magnet should be mentioned in relation to 10, 20, 30, 40 cm DSV.
Technical Specifications 1. MAGNET: a.	3.0 T (127.5MHz) actively & passively shielded super conductive magnet with best homogeneity. Field stability over time should be < or equal to 0.2 ppm/hr.	3.0 T actively & passively shielded super-conductive magnet with best homogeneity. Field stability over time should be < or equal to 0.2 ppm/hr. Please mention that 3.0T MRI system should be approved by both US-FDA & European CE
1 j)	Noise level inside the examination room should be as minimum as possible. Specify decibel level.	Noise level inside the examination room should be as minimum as possible. Sequences with gradient wave modification for extremely quiet imaging without compromise on slew rate or peak amplitude or image quality should be provided. Please mention the decibel levels should be 85dB or less.
1.e.	Please specify up to what FOV gradient linearity is maintained.	Please specify up to what FOV gradient linearity is maintained. For better functionality of gradient , it should be 2.5% @ full FOV.
1.k.	Physiological signal display like ECG, Heart rate, respiration etc. present on gantry.	Physiological signal display like ECG, Heart rate, respiration etc. present either on gantry or on console or both.
6. PATIENT TABLE & HANDLING SYSTEM	k. The physiological monitors and gating systems should be displayed & controlled at both gantry and console.	The physiological monitors and gating systems should be displayed & controlled at console.
2. b & C)	b) The strength of each gradient individually (i.e. of each axis gradient) should be more than 44 mT/m (Yes/No).The rise time of each gradient should be mentioned separately and should be minimum best possible for each vendor. c) The slew rate of each gradient individually (i.e. of each axis gradient) should be more than	The gradient should be such that the peak amplitude of min 44 mT/m with a slew rate of minimum 200T/m/sec can be applied simultaneously. The duty cycle at maximum and minimum strength at full peak should be 100 percent (mention the exact duty cycle performance of the gradient).

	200T/m/sec (Yes/No). The duty cycle at maximum and minimum strength at full peak should be 100 percent (mention the exact duty cycle performance of the gradient).	
3. i)	High performance gradient insert for use of animal imaging – peak strength = 600mT/m, peak slew rate 3200T/m/sec should be quoted separately as an option.	Deleted
4.c	The system should have the best possible B1 homogeneity correction technology available with the vendor with no additional cost for this feature.	The system should have the best possible patient specific B1 homogeneity correction technology such as Multidrive/Multitransmit/Trueshape available with the vendor with no additional cost for this feature.
4. d) Technical Specifications RF SYSTEM – is fully digital broad band solid state System with auto-tuning	It should also have at least minimum of 64 independent ADC hardware RF channels with each having bandwidth of 1MHz or more along with necessary Hardware to support Quadrature/CP array coils.	It should also have at least minimum of 32 independent ADC hardware RF receiver channels or channel independent with number of independent receiver channels that can be used simultaneously in one single scan and in one single FOV, each generating an independent partial image with each having bandwidth of 1MHz or more along with necessary hardware to support Quadrature/CP array coils.
4. RF System a.	a. The system is capable of transmitting power of at least 25 KW or more. (Yes/No).	a. Single / Dual RF amplifier with 25kW transmitting power.
3. j) Technical Specifications 4. RF SYSTEM – is fully digital broad band solid state system with auto-tuning	Broad Band RF receiver with at least 64 channel system in transmitter as well as receiver side. (Yes/No) Receiver Bandwidth for superior RF performance (> 1 MHz). Receiver to support 12 or more elements of parallel acquisition coils, compatible with parallel imaging techniques with Scan time reduction factors of at least upto 4 or more in 2D & 3D sequences.	Broad Band RF receiver with at least 32 channel system in transmitter as well as receiver side with number of independent receiver channels that can be used simultaneously in one single scan and in one single FOV, each generating an independent partial image. Receiver Bandwidth for superior RF performance (> 1 MHz). Receiver to support 12 or more elements of parallel acquisition coils, compatible with parallel imaging techniques with Scan

		<p>time reduction factors of at least upto 4 or more in 2D &amp; 3D sequences.</p> <p><b>A RF system should be capable of transmitting enough power (please quote the value) (as per FDA guidelines), and the operating frequency should cover 1H, and 31P nuclei (for multinuclear spectroscopy of 1H/31P). The coils and sequences for multinuclear spectroscopy.</b></p>
3. Technical Specifications 5. R.F Coil b.	A Head-neck coil capable of vascular imaging & multi frequency MR spectroscopy (1H) - 16 channels or more	A Head-neck coil capable of vascular imaging & multi frequency MR spectroscopy (1H) - 20 channels or more
3. Technical Specifications 5. R.F Coil f.	Body phased array coils 28 channels of more (single or in combination) at least 45 cm z-axis coverage for imaging of abdomen, with at least 28 channels acquisition for body parts.	Body phased array coils 28 channels of more (single or in combination) at least 45 cm z-axis coverage for imaging of abdomen, with at least 28 channels acquisition for body parts.
5. e	Shoulder coil – 16 channels or more, rigid type – 2nos. (One large and one small)	Dedicated shoulder Coil of 16 Channel Rigid/flex type - 1 no.
5.f.	Body phased array coils 28 channels of more (single or in combination) at least 45 cm -axis coverage for imaging of abdomen, with at least 32 channels acquisition for body parts.	Body phased array coils 28 channels or more for at least 45 cm z-axis coverage for imaging of whole abdomen by using single coil or two coils.
5. g.	Breast coil -16 channel or more. Please provide biopsy grid and compression pads also.	Breast coil -16 channel or more.
3. Technical Specifications 5. R.F Coil o.	Multipurpose flex coils of at least two sizes – Small (for hand/ wrist/foot/ankle) and medium Large (for above as well as pediatric head, pediatric body) – at least 4 channel	Multipurpose flex coils of at least two sizes – Small and medium/large
3. Technical Specifications 5. R.F Coil i.	The table should be detachable and /auto dockable.	The table should be Fixed/ detachable and /auto dockable.
7. MAIN OPERATOR CONSOLE	b. At least 18-inch or more TFT/LCD type color monitor for acquisition,	b. At least 18-inch or more TFT/LCD type color monitor for acquisition, all

	<p>all calculations&amp; post processing should be provided. Console must have full color with user define protocols with programmable inter-scan delay. Necessary image processor with large RAM (should be at least 8 GB) for ultra-fast image reconstruction should be provided.</p>	<p>calculations&amp; post processing should be provided. Console must have full color with user define protocols with programmable inter-scan delay. Necessary image processor with large RAM (should be at least 32 GB) for ultra-fast image reconstruction should be provided.</p>
<p>7 Main Operator Console i.</p>	<p>The system to be able to connect to PACS through RIS/HIS at no extra cost. Highest version of DICOM connectivity to be provided.</p>	<p>The system to be able to connect to PACS through RIS/HIS at no extra cost. Highest version of DICOM connectivity to be provided. Institute/hospital will provide all the necessary details including IP address etc. to connect to existing PACS. However networking and cable laying within department should be included as a standard in the package at no added cost.</p>
<p>3. Technical Specifications</p> <p>8. WORKSTATION</p> <p>a.</p>	<p>One off-line work station (21' LCD with at least 3 MP resolution &amp; 1024x1024 display) with hardware specification similar to main console. Please quote (as an optional) a server (at least 3TB image storage and 64 GB RAM) and two additional nodes having capability of medical grade image viewing only.</p>	<p>Provide a CLIENT SERVER SYSTEM with 3TB storage &amp; 20,000 concurrent slices as standard scope of supply along with equipment. <b>Concurrent user license for all applications . DICOM 3.0 compatibility and interfacing with other modalities must be possible. The Client / Nodes shall have the resolution, software and all functionality of a stand-alone workstation</b> (Dexus, Intelligence Portal, Syngo, via. Etc. or higher). <b>CONFIGURATION : 1 no. Server and 2 no.s Clients/Nodes. User license for each of the applications to be provided as standard for concurrent use on all nodes and the console (where applicable).</b> <b>Licenses:</b> 3 nos. Concurrent license here implies the</p>

		<p>capability to process all the loaded software to be accessible and usable on all the clients/ nodes simultaneously without any processing delay. The software should also include a reputed antivirus software of a perpetual type or renewed by the supplier. <b>Hardware:</b>  <b>Client / Node:</b> CPU unit , minimum 32GB RAM , Medical grade monitor of 2MP resolution &amp; size - 18" or more , mouse, keyboard. <b>Hardware Server:</b> The server (single/dual configuration) should have image storage capacity of at least 2.5 Tera bytes, minimum 20,000 concurrent slice processing power and at least 32GB RAM. 21" or more TFT/LCD monitor.</p>
<p>3. Technical Specifications  8. WORKSTATION  d.</p>	<p>All necessary latest software including post-processing software (with calculation of all metrics available with the vendor)for all offered / purchased sequences including evaluation for resting brain fMRI, perfusion (ASL, T1 perfusion and T2* perfusion), diffusion, DTI with fiber-tracking, DKI,T1/T2/T1 Rho mapping, BOLD, metabolite mapping, CSF Flow analysis Another associated post processing like MIP, MPR, inter/intra-modality image fusion / subtraction software of any two of above (especially DTI with fMRI) surface reconstruction should be provided. Please provide step wise guideline videos &amp; booklet of each postprocessing software at no added cost of a DVD.</p>	<p>All necessary latest software including post-processing software (with calculation of all metrics available with the vendor) for all offered / purchased sequences including evaluation for resting brain fMRI, perfusion (T1 &amp; T2*), diffusion, DTI with fiber-tracking, DKI,T1/T2/T1 Rho mapping, BOLD, metabolite mapping, CSF Flow analysis and other associated post processing like MIP, MPR, inter/intra-modality image fusion / subtraction software of any two of above (especially DTI with fMRI) surface reconstruction should be provided. Please provide step wise guideline videos &amp; booklet of each post processing software at no added cost of a DVD. (In case the vendor does not have the facility for DKI and T1Rho mapping at present and plans to</p>

		offer in near future, then the same to be provided from your side as soon as you provide it in India to any other institution/researcher, at no added cost to BHU. In case the vendor wants to provide these under a research agreement the university shall consider the option)
8. WORKSTATION b)	Concurrent (usable on all terminals simultaneously and equally) licenses of all applications and postprocessing softwares (on main console and one workstation) to be supplied with the system	Apart from the inline processing softwares all other post-processing software to be licensed for the two off-line clients/workstations.
10. Imaging Sequences FAST SEQUENCES	k. Sequence package for diffusion study including DTI (tractography) in organs like brain, kidney, muscle, heart etc. if available. Unavailable techniques to be provided as and when available without any additional cost.	k. Sequence package for diffusion study including DTI & tractography in organs like brain, kidney, muscle, heart etc. (64 or more directions DTI in brain and maximum available with the vendor for other organs).
BOQ	Air Conditioner	Air-conditioning (minimum 18 ton split appropriately in an active and a stand-by unit) that is required for the MRI equipment, examination room, and Console areas have to be carried out by the vendor with the new unit. Proper ducting and other essential works. Good quality units like Daikin, Hitachi, Blue Star, Voltas or equivalent should be provided.
BOQ	Generator	Generator (DG set) with minimum capacity 350 KVA should be provided and should be good enough to support all high power sequences including gradient based sequences and DTI. Further all cabling and installation work related to generator should be completed by the vendor. A silencing canopy/enclosure should be provided along with the generator. Please also provide an auto-start mechanism to switch on the generator with requisite battery and switches.

BOQ	UPS	Uninterrupted power supply (UPS) with a minimum of 250 kVA or more to support complete working of the machine for 30 minutes on back up with full load of the running MR system and its accessories. The battery bank should be sufficient to support the above configuration. All batteries should be of same make and "certified" brand new.
BOQ	Camera	Latest state-of-art dry laser camera (Agfa/Fuji/Kodak), with three online tray system and more than <b>500 dpi</b> , capable of storing/printing images of 1024 x 1024 (or higher) matrix size in various matrix formats (including 16 format) without loss of digital resolution to be attached to both the off-line clients and the online work station.
BOQ	CAMC	A row to fill price of CAMC price from 6-10 years added in BOQ.
BOQ	Government Taxes	Provision to include/quote applicable Government tax structure like IGST for main unit & GST wherever applicable (Site modification & local accessories)  A row has been added in BOQ to include above cited taxes
BOQ	Customs Duty	A row has been inserted in BOQ to include price of Customs Duty
BOQ	Pressure Injector	MR Compatible Dual Pressure injector (MedRad/ equivalent or better models). 500 compatible syringes and tubings to be included as a standard.
BOQ	Buy-Back Price of Existing 1.5T MRI System installed in the department of Radio-diagnosis	Deleted
3. Technical Specifications  Details of the equipment  1) MAGNET: i.	Built - in 2 way intercom facility (with and without headphones) to communicate with patient is required with a CC-TV system for patient monitoring. The same should be usable as an audio paradigm generator and music system for the patient when inside the magnet. <b>Visual paradigm generator</b> which	Built - in 2 way intercom facility (with and without headphones) to communicate with patient is required with a CC-TV system for patient monitoring. The same should be usable as an audio paradigm generator and music system for the patient when inside the magnet.

	may also be used for entertainment for patient when inside gantry should be quote as option.	
<b>Point No 3. Technical Specifications Sub Point No b. page no 39</b>	Please confirm that the system would be handed over for use within a period of 6 months from the award of tender and would not be phased out during the next 10 years (Yes/No). Please mention the year of launch of the quoted model.	Please confirm that the system would be handed over for use within a period of 6 months from the award of tender or <b>site handover along with layout drawing approval whichever is later</b> and would not be phased out during the next 10 years (Yes/No). Please mention the year of launch of the quoted model.
<b>3. Technical Specifications, Page 39</b>	Tenders are invited from reputed vendors for <b>turnkey installation</b> (including site preparation, flooring, lighting, furnishing & interiors, air-conditioning)	<p><b>SCOPE OF WORK Under turnkey works:</b></p> <p>A total of approximately <b>4000 sq. feet</b> area (split in two places, as discussed during site visits of all interested vendors) shall be included in the turn key work. This would include free of cost guideline based dis-installation and proper disposal of an old 0.2 tesla equipment occupying the provided area as the first step and an old hitachi head scanner (<i>the responsibility to find out any guidelines if available for this purpose and to certify that the dis-installment/disposal has been done according to same would be on the vendor. The certificate to the effect should be provided to the university after dis-installation/disposal. In case the equipment may be sold as a junk, the university reserves the right to secure the same in the university junkyard</i>). The vendors are free to inspect and seek for required details of this equipment.</p> <p><b>Site development:</b> Please note that one part of the proposed site is a raw green area which would have to be developed as a clean area. This would include all works related to creation/relocation of shallow/deep sewer, electric cables, drinking water pipes and any other feature either interfering with working of or being interfered by the new MRI system. Creation of an apron for the</p>

		<p><b>surrounding buildings, PCC and filling area of surrounding courtyard with creation of open rain-water surface drains should be included. Any leftover area would have to be cleared up so that the same may be converted into an aesthetic green belt.</b></p> <p><b>Civil Works:</b> The space for necessary Civil works like Platform, Pedestals, etc., if any, required shall be provided for MRI/ other accessories including generator unloading/ final positioning. However the same shall be created by the vendor at their own cost.</p> <p>Demolition of walls/Site modification/renovation within already constructed area as per site requirement and approved Layout Plan to be done by the turnkey vendor.</p> <p>Flooring: providing and laying 2 mm thick Anti-static vinyl flooring in MRI Room 600 x 600 mm Vitrified tiles (Make: Kajaria/ Nitco/ Somani/Eq) in All areas under scope apart MRI Room.</p> <p>False Ceiling: Mineral fibre panel false ceiling with AL suspension should be provide in all rooms apart MRI Room. (Make :Armstrong/St.Gobin/Eq). Ceiling height to suit the equipment mount and clearances. Gypsum ceiling with Cove and Light panel in the Centre should be provided in MRI Room.</p> <p>Walls: Pre-laminated particle board paneling on the walls of MRI Exam room.</p> <p>Vitrified tiles 600mm x 600mm ( Make:Kajaria/Nitco/Somani/Eq) up to 5 Feet from ground level and POP</p> <p>Paint :(Make: Asian/Burger/Nerolac/eq.) upto false ceiling above tiles in all rooms</p>
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		<p>under scope apart MRI Room.</p> <p>Doors: Door of MRI Room should be the part of RF Cage, Rest all doors of MRI Complex should be Aluminum doors with required fittings.</p> <p>Non Magnetic Ferro guard door to be mounted outside the MRI room entry</p> <p><b>Electrical Works:</b> Electrical power inlet cable shall be provided by the institution upto the panel installed by vendor in MRI Panel room, vendor to share machine load requirement along with general lighting, Air conditioning and any other requirement for the machine area. All general lighting in the area will be carried out by LED light by using copper wiring and PVC conduits. The lights will be of Philips, syska or equivalent. The switches will be of Crabtree, Havells or equivalent. Trench/raceway/cable tray if required for the area will be provided by the vendor. The switches will be of Crabtree, Havells or equivalent. 4 Nos of Copper/chemical Earthings for the MRI unit should be provided by the vendor. Cabling for network (LAN) connectivity for console system, workstation and computers etc. to be provided by the vendor.</p> <p>8 NOS. of non-magnetic lights will be provided in MRI ROOM. <b><u>In addition the vendor is requested to provide ONE non-magnetic focus light with a foldable extension arm which can be utilized to examine the patient/ or to give IV injections, and be parked along one of the patient side walls.</u></b></p> <p><b>Fire Detection System:-</b> Fire Detection system (consisting fire panel, smoke &amp; heat detectors, hooters, response indicators etc) along with Fire extinguisher equipment (ABC type</p>
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		<p>Extinguishers) to be provided as per site requirement. Make- Agni or equivalent. 4 Nos. of Fire extinguishers ABC Type 4 Kg each and 1 No MRI Compatible fire extinguisher should be supplied.</p> <p><b>Furniture:-</b>  Furniture of good quality of reputed make should be provided.  Office table with side : 1 no .(customized)  Computer/Office chairs: 4 no. Godrej/Feather lite or equivalent make,  Storage counter: 2Nos. (size 2000x 450x 600 mm) customized in console room.</p>
		<p>The post- warranty (after 5 years) CMC should be comprehensive and should include helium and cold head (repair and / or replacement) + labour + spares for the complete system which includes all the accessories supplied such as UPS, Generator, AC, etc. (including all consumables like batteries for UPS, and maintenance for another 5 years. This CAMC should be quoted in Indian rupees.</p> <p>Note any Liquid Helium filling due to quenching or due to any other causes during the CMC period shall be borne by the firm.</p> <p>If a particular coil is not working for more than 5 days or the equipment as such malfunctions beyond 5 % of 365/366 days, and due to which patient work suffers, the firm will be asked to pay penalty for each loss-day in form of extension of warranty/CMC in ratio of 1:5 (i.e five days extended for each day lost). The total loss days shall be calculated on a cumulative basis at the end of warranty/CMC (as is applicable).</p>