

Amendment No. 1**Sub: Amendment to the tender enquiry****Ref.: Tender Enquiry HITES/PCD/PMSSY-III/04/RAD/2017-18 dated 09-05-2017 read with clarification no. 1 dated 16.05.2017**

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

Existing:

Sl. No.	Description	Schedule
d.	Closing date & time for submission of online bids	15.06.2017, 1800 hrs IST
c.	Closing date & time for submission of tender processing fee and EMD in physical form*	16.06.2017, 1400 hrs IST
e.	Time and date of opening of online bids	16.06.2017, 1430 hrs IST

Read as:

Sl. No.	Description	Schedule
c.	Closing date & time for submission of online bids	27.06.2017, 1800 hrs IST
d.	Closing date & time for submission of tender processing fee and EMD in physical form*	28.06.2017, 1400 hrs IST
e.	Time and date of opening of online bids	28.06.2017, 1430 hrs IST

SECTION - IV**GENERAL CONDITIONS OF CONTRACT (GCC)****Existing:**

8.9 Followed by delivery of the items, a joint inspection by HITES and respective Medical College/ Institution at site will be carried out to verify the quantity and quality of goods.

Read as:

8.9 Deleted

Existing (under clause 15):

- The warranty shall remain valid for 60 months from the date of installation & commissioning with a regular up gradation of newer technology as and when evolved followed by a CMC for a period of 5 (Five) Years for all the equipments after the goods or any portion thereof as the case may be, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the purchaser/ consignee in terms of the contract, unless specified otherwise in the SCC.

Read as:

- The warranty shall remain valid for 60 months from the date of installation & commissioning with a regular **updates** of newer technology as and when evolved followed by a CMC for a period of 5 (Five) Years for all the equipments after the goods or any portion thereof as the case may be, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the purchaser/consignee in terms of the contract, unless specified otherwise in the SCC.

Existing:

11.1-ii) in case of supply of the imported goods on CIP Named port of Destination Basis, the additional extended Insurance (local transportation and storage) would be borne by the Supplier from the port of entry to the consignee site for a period including 3 months beyond date of delivery for an amount equal to 110% of the overall expenditure to be incurred by the purchaser from ware house to ware house (consignee site) on all risk basis.

Read as:

11.1-ii) in case of supply of the imported goods on CIP Named port of Destination Basis, the additional extended Insurance (local transportation and storage) would be borne by the **Supplier or its Indian Subsidiary/Indian agent** from the port of entry to the consignee site for a period including 3 months beyond date of delivery for an amount equal to 110% of the overall expenditure to be incurred by the purchaser from ware house to ware house (consignee site) on all risk basis.

SECTION - V

SPECIAL CONDITIONS OF CONTRACT (SCC)

Existing:

The warranty conditions will be as mentioned in the list of requirement as per section VI of the tender enquiry.

Read as:

The warranty **and CMC period** will be as mentioned in the list of requirement as per section VI of the tender enquiry.

SECTION - VII
TECHNICAL SPECIFICATION

Sch-02 - 300 mA X-RAY MACHINE(HF)		
Para No.	Tender Specification	Amended as:
1	X-ray generator	X-ray generator
iv	Exposure time should be in range of 1 ms to 2 sec.	Exposure time should be in range of 5 ms to 0.9 sec.
2	Control:	Control:
iii	Machine ON/OFF switch ,Digital Display of KV & mAs., K V & control switches, AEC.	Machine ON/OFF switch ,Digital Display of KV & mAs., K V & control switches
iv	Tube focal spot selection switch, Ready and x-ray on switch with indicators.	X-ray on switch with indicators.
3	X-ray tube	X-ray tube
ii	Anode heat storage capacity of tube should be more than 140 KHU.	Anode heat storage capacity of tube should be more than 135 KHU.
7	ACCESSORIES, SPARE PARTS, CONSUMABLES	ACCESSORIES, SPARE PARTS, CONSUMABLES
i	2 No.Zero lead apron(0.25mm Lead equivalent) with thyroid shield, gonad shield and all protection attachments.	2 No.Zero lead apron(0.25mm Lead equivalent) with thyroid shield, gonad shield
10	Turnkey Work:	Installation work:
	The department would provide standard room with only three phase power supply in the room. The rest of the work will be done by the supplier on "turnkey basis" including girders for ceiling suspension etc., The installation of X- Ray machine include all the associated work like suitable AC (min 5TR), suitable flooring, cabling. Earthing, Lead lining etc. Should be done by the vendor. The Turnkey should be as per AERB guidelines.	The department would provide standard room with only three phase power supply in the room. The rest of the installation work will be done by the supplier, including girders for ceiling suspension etc., The installation of X-Ray machine includes all the associated work like suitable AC (min 4 TR) , suitable flooring, cabling. Earthing, Lead lining etc. Should be done by the vendor. The Turnkey should be as per AERB guidelines.
BOQ		
2	Turnkey Work for 200 Sq.ft except Air conditioning - 1 - LS	Installation work for 200 Sq.ft except Air conditioning - 1 - LS
3	Air Conditioning - 5 TR	Air Conditioning - 4 TR

Sch-03 - 500 mA X-RAY MACHINE(HF)		
Para no.	Tender Specification	Amended as:
1	X-RAY GENERATOR:	X-RAY GENERATOR:
i	High Frequency X-Ray Generator having frequency of 50KHz or more should be provided.	High Frequency X-Ray Generator having frequency of 40KHz or more should be provided.
iii	Radiographic KV Range should be 40 to 150KV	Radiographic KV Range should be 40 to 125KV
v	Exposure time (Rad.): 1ms to 3Sec.	Exposure time (Rad.): 3ms to 3Sec.
vi	mAs Range (Rad.): 1 to 200mAs.	Deleted
	Turnkey Work:	Installation work:
	<p>Turnkey Work: The department would provide standard room with only three phase power supply in the room. The rest of the work will be done by the supplier on "turnkey basis" including girders for ceiling suspension etc., The installation of X- Ray machine include all the associated work like suitable AC (min 6TR), suitable flooring, cabling. Earthing, Lead lining etc. Should be done by the vendor. The Turnkey should be as per AERB guidelines.</p>	<p>Installation work: The department would provide standard room with only three phase power supply in the room. The rest of the installation work will be done by the supplier, including girders for ceiling suspension etc., The installation of X- Ray machine includes all the associated work like suitable AC (min 4 TR), suitable flooring, cabling. Earthing, Lead lining etc. Should be done by the vendor. The Turnkey should be as per AERB guidelines.</p>
BOQ		
2	Turnkey Work for 200 Sq.ft except Air conditioning - 1 - LS	Installation work for 200 Sq.ft except Air conditioning - 1 - LS
3	Air Conditioning - 6 TR	Air Conditioning - 4 TR

Sch-04-800mA Digital X-Ray unit with Single Detector – Floor Mounted		
Para No.	Tender Specification	Amended as:
2	X Ray Tube	X Ray Tube
	e. Automatic multileaf collimator having bright light source and auto shut-off provision of the light.	e. Multileaf collimator having bright light source and auto shut-off provision of the light.
	f. Automatic collimator must be mounted on X-ray tube and collimator must have an integrated dose area product (DAP) meter. Output of DAP meter should be visible in console	f. Collimator must be mounted on X-ray tube and collimator must have an integrated dose area product (DAP) meter. Output of DAP meter should be visible in console
3	Digital Detector	Digital Detector
	e. The resolution should be minimum of 3.5lp/mm up to 5lp/mm.	The resolution should be minimum of 2.5lp/mm up to 5lp/mm.
	g. DQE 65% or more at 0lp/mm.	DQE at 0lp/mm or 0.5lp/mm should be at least 65%
4	Radiographic table	Radiographic table
	a. Mobile table with height adjustment to be	a. Mobile table with brakes.

	provided with brakes.	
5	U/C Arm Positioner with control unit	Automatic U/C Arm Positioner with control unit
	c. Range of detector rotation should be +/- 90degree or more.	c. Range of detector rotation should be 90 degree or more.
6	Image acquisition and Processing work station	Image acquisition and Processing work station
	Application related software like paediatric ; black border/black masking should be available.	Application related software like black border/black masking should be available.
	The system should have software and hardware to perform full Leg-Full spine/long body imaging/image stitching.	Deleted
	The Turnkey Scope of Work – DR	The Site Modification Work - Scope of Work – DR
	1.The Supplier should inspect the proposed site offered by the Consignee Institute in which the DR system has to be installed and they are required to submit the plan for the complete DR Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of DR Centre.	1. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of DR Centre.
	3. The cost of Turnkey for the area of 1000sq.ft and Air-conditioning of Tonnage 12 TR will be considered for Ranking / Evaluation purpose.	3. 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.
	4. Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work	4. Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification Work
	Scope of work for turnkey DR system:	Scope of work for Site Modification Work DR system:
	The actual area of turnkey works done will be considered for payment, based on the unit rates and site measurements	The actual area of Site Modification Work done will be considered for payment, based on the unit rates and site measurements
		BOQ
	Turnkey Work (1000 sq ft) as per specification	Site Modification Work (1000 sq ft) as per specification

Sch-05- BIPLANE D.S.A		
Para No.	Tender Specification	Amended as:
	Para added	<p>Added para:</p> <p>I. Certifications: Offered model should be European CE or US FDA approved. Copy of certifications should be submitted with bid</p> <p>The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid.</p> <p>Regular QA according to AERB norms will be responsibility of bidder during warranty and CMC period.</p>
A	Gantry:	Gantry:
5	Both gantries should have fast speed for angulations and positioning. The frontal system should have a speed of at least 15 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 at least 10 degree/sec. for all positions and lateral plane should have a speed of at least 8 degree/sec

7	Both the gantries should have an automatic positioning capability dependent on the reference image being selected and possibility to select reference image depending on the gantry position.	Both the gantries should have an automatic positioning capability dependent on the reference image being selected
B	Patient Table:	Patient Table:
1	The table should have motorized longitudinal, horizontal and vertical travel.	The table should have motorized Vertical & longitudinal and free floating
3	The table with trendelenberg tilt facility .	Deleted
D	X-Ray Tubes:	X-Ray Tubes:
	Anode heat storage capacity should be 1.7 MHU or more having liquid bearing technology or metal lubricant. (Price to be quoted separately)	Anode heat storage capacity should be 1.7 MHU or more having liquid bearing technology or metal lubricant.
F	Biplane Digital System:	Biplane Digital System:
3	Size of lateral plane should be at least 40 cm diagonal	Size of lateral plane should be at least 39 cm diagonal
5	Spatial resolution should be at least 3.0 LP/mm in frontal plane and 2.5 LP/mm in the lateral plane.	Spatial resolution should be at least 2.5 LP/mm in frontal plane and 2.5 LP/mm in the lateral plane.
7	Console Room Monitors	
	Separate Monitor for patient data registration.	Separate/inbuilt Monitor for patient data registration.
G	Digital Imaging System and essential softwares:	Digital Imaging System and essential softwares:
6	It should have minimum image storage capacity of 1,00,000 images in the 1024 x 1024/12 bit.	It should have minimum image storage capacity of 75,000 images in the 1024 x 1024/12 bit.
12	An additional workstation for processing of the DSA images and their documentation should be provided in addition to 3D workstation. This workstation should have the facility to reconstruct the long leg view for peripheral images.	An additional workstation for processing of the DSA images and their documentation should be provided in addition to 3D workstation. Workstation/main console should have the facility to reconstruct the long leg view for peripheral images.
H	Essential accessories:	Essential accessories:
5	dp/dt 1 channel : 2 no.s	dp/dt 1 channel : 1 no.
	The Turnkey Scope of Work - Biplane D.S.A	The Site Modification Work - Biplane D.S.A
1	The Supplier should inspect the proposed site offered by the Consignee Institute in which the DR system has to be installed and they are required to submit the plan for the complete DR Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of DR Centre.	The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of DR Centre.
3	The cost of Turnkey for the area of 1500sq.ft and Air-conditioning of Tonnage 20 TR will be considered for Ranking / Evaluation purpose	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
4	Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work .	Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification Work .
	Scope of work for turnkey Biplane D.S.A system :	Scope of work for Site Modification Work Biplane D.S.A system :
	The Biplane D.S.A site shall consist of the following rooms: d. Patient preparation room	The Biplane D.S.A site shall consist of the following rooms: d. Patient preparation cum change room
	Plumbing work	Plumbing work
3	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.	All water pipes and fittings (for Scrub etc) 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.

	Miscellaneous:	Miscellaneous:
v	Lead Glass of 90 x 90 cm.	Deleted
	BOQ	
	Components of Turnkey Work:	Components of Site Modification Work:
	Miscellaneous:	Miscellaneous:
1	Lead Glass of 150 x 90 cm - 1 no.	Deleted

Sch-06- CT SCAN – 128 Slice		
Para No.	Tender Specification	Committee recommendation
10	<p>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 storage of 10 TB on the server.</p> <p>Client hardware specification- 2 no.s Workstations with licence: dual quad core processor, 16 GB RAM, 1TB hard drive, DVD Writing with medical grade monitor of minimum 3 MP resolution & 3 button mouse.</p>	<p>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.</p> <p>Client hardware specification- 2 no.s Workstations with two licences: dual quad core processor, 16 GB RAM, 1TB hard drive, DVD Writing with medical grade monitor of minimum 3 MP resolution & 3 button mouse.</p>
12	The Turnkey Scope of Work - CT	The Scope of Work- Site Modification Work - CT
1	<p>The Supplier should inspect the proposed site offered by the Consignee Institute in which the CT system has to be installed and they are required to submit the plan for the complete CT Scan Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre</p>	<p>The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre</p>
3	The cost of Turnkey 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 1200 sq.ft and Air-conditioning of Tonnage 15 TR will be considered for Ranking / Evaluation purpose.
4	Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work .	Moreover Bidders will have to quote the Unit Rates of the following components of Site modification work .
	Scope of work for turnkey CT unit works:-	Scope of work for Site modification work CT unit works:-
	The CT SCAN CENTRE shall consist of the following rooms: d. Patient preparation room	The CT SCAN CENTRE shall consist of the following rooms: d. Patient preparation cum change room
	The actual area of turnkey works done will be considered for payment, based on the unit rates and site measurements	The actual area of Site modification work done will be considered for payment, based on the unit rates and site measurements
BILL OF QUANTITY (BOQ)		
6	Lead Glass of 150 x 90 cm - 1 no	Lead Glass of 120 x 90 cm or more - 1 no
	Components of Turnkey Work:	Components of Site modification work Work:

Sch-07- CT SCANNER -16 Slice		
Para No.	Tender Specification	Committee recommendation
1	Gantry :	Gantry :
ii	Scan time for a 360 Degree rotation : 0.8 Seconds or less	Scan time for a 360 Degree rotation : 1 Seconds or less
vii	The Scan field of view (FOV) in acquisition mode should range from 200mm to 500 mm with intermediate Steps for scanning different anatomies.	The Scan field of view (FOV) in acquisition mode should range 240 mm upto 400 mm or more with intermediate Steps for scanning different anatomies.
4	Patient Couch :	Patient Couch :
iii	The range of metal free scan should be atleast 165 cms.	The range of metal free scan should be atleast 120 cms.
iv	Remote control : UP/DOWN , FWD/BWD of the Patient Couch should be standard	Remote control : FWD/BWD of the Patient Couch should be standard
5	Spiral / Helical Section :	Spiral / Helical Section :
i	The system offered should have Spiral Capability of at least 100 seconds & above.	The system offered should have Spiral Capability of at least 90 seconds
v	The system should have the Smart Prep or equivalent facility & ability to track Contrast medium to trigger scan should be included in the scope of Supply. More than 2 No:s ROI is required for such Contrast Chase & Exposure Trigger facility.	The system should have the Smart Prep or equivalent facility & ability to track Contrast medium to trigger scan should be included in the scope of Supply.
6	Operator Console:	Operator Console:
viii	An Advanced Work station with at least 4 GB RAM , Archival on DVD / CD with CT Angiography , Colonoscopy , 3D VRT , SSD , CT / MRI Fusion as well as DICOM Print should be included in the Scope of Supply. DVD / CD Archival is Required.	Deleted
8	Workstation	Workstation
	<p>One independent post processing workstation with all the software as in the main console should be available. It should be a high speed (minimum post-processing frame rate of 16 frames/sec) CPU with a speed of 3.0 GHz or better and with an independent image storage capacity of atleast 10 tera byte storage capacity with expansion slot of additional tera bytes memory.</p> <p>19 inches or more high resolution medical grade colour LCD monitors.</p> <p>The necessary connectivity etc. for proper functioning should be provided by the vendor .</p> <p>All software as above and Specialized Software such as Virtual Endoscopy, Colonoscopy, CT Perfusion , CT DSA , CT Angiography , Bone Removals , CT / MRI Fusion should be available on the Work Station .</p> <p>All post processing facility and data archiving should be available in the workstation. The workstation shall be capable of simultaneously viewing and performing all post processing functions and filming independently without the help of main console.</p> <p>Memory of the workstation should be independent of the console.</p>	<p>One independent post processing workstation with all the software as in the main console should be available. It should be a high speed (minimum post-processing frame rate of 16 frames/sec) CPU with a speed of 3.0 GHz or better and with online image storage capacity of atleast 10 tera byte storage capacity</p> <p>19 inches or more high resolution medical grade colour LCD monitors .</p> <p>The necessary connectivity etc. for proper functioning should be provided by the vendor.</p> <p>All software as above and Specialized Software such as Virtual Endoscopy, Colonoscopy, CT Perfusion , CT DSA , CT Angiography , Bone Removals.</p> <p>All post processing facility and data archiving should be available in the workstation. The workstation shall be capable of simultaneously viewing and performing all post processing functions and filming independently without the help of main console.</p> <p>Memory of the workstation should be independent of the console.</p> <p>Two way data transfer between the operator console & the workstation should be automatic and standard.</p>

	Two way data transfer between the operator console & the workstation should be automatic and standard.	
12	Training for a period of Two Weeks.	On Site Training for a period of Two Weeks.
	The Turnkey Scope of Work - CT	The Site Modification Work - CT
1	The Supplier should inspect the proposed site offered by the Consignee Institute in which the CT system has to be installed and they are required to submit the plan for the complete CT Scan Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre.	The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre.
3	The cost of Turnkey 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 1200 sq.ft and Air-conditioning of Tonnage 15 TR will be considered for Ranking / Evaluation purpose.
4	Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work.	Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification work .
	Scope of work for turnkey CT unit works:-	Scope of work for site modification work CT unit works:-
1	The Supplier should inspect the proposed site offered by the Consignee Institute in which the CT system has to be installed and they are required to submit the plan for the complete CT Scan Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre.	The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre.
	The CT SCAN CENTRE shall consist of the following rooms: d. Patient preparation room	The CT SCAN CENTRE shall consist of the following rooms: d. Patient preparation cum change room
	The actual area of turnkey works done will be considered for payment, based on the unit rates and site measurements	The actual area of Site Modification Works done will be considered for payment, based on the unit rates and site measurements
	Furniture:	
j)	Any other furniture item as per requirement.	Deleted
BOQ		
	Components of Turnkey Work:	Components of Site Modification Work:
6	Miscellaneous items - 1 set	Deleted

Sch-08- CT Scanner System 256 Slice		
Para No.	Tender Specification	Amedned as
7	Console & Workstation	Console & Workstation
a	The Console offered should be the Latest Multi tasking Processors and a menu driven platform with a RAM size of at least 8 GB.	The Console offered should be the Latest Multi tasking Processors and a menu driven platform with a RAM size of at least 4 GB .
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 storage of 10 TB on the server. Client hardware specification- 2no.s Workstation	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

	with licence : dual quad core processor, 16 GB RAM, 1TB hard drive, DVD Writing with medical grade monitor of minimum 2 MP resolution & 3 button mouse.	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.
10	Training for a period of Two Weeks.	On Site Training for a period of Two Weeks.
12	The Turnkey Scope of Work - CT	The Scope of Work- Site Modification Work - CT
1	The Supplier should inspect the proposed site offered by the Consignee Institute in which the CT system has to be installed and they are required to submit the plan for the complete CT Scan Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre.	The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre.
3	The cost of Turnkey 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 for the area of 1200 sq.ft and Air-conditioning of Tonnage 15 TR will be considered for Ranking / Evaluation purpose.
4	Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work .	Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification work .
	Scope of work for turnkey CT unit works:-	Scope of Site Modification work for CT unit:-
	The CT SCAN CENTRE shall consist of the following rooms: d. Patient preparation room	The CT SCAN CENTRE shall consist of the following rooms: d. Patient preparation cum change room
	The actual area of turnkey works done will be considered for payment, based on the unit rates and site measurements	The actual area of Site Modification works done will be considered for payment, based on the unit rates and site measurements
	Components of Turnkey Work:	Components of Site Modification Work:

Sch No. 09 - Digital mammography system		
Para No.	Tender Specification	Amended as:
	c. kV range: 20 to 35 or more in 1 kV steps	c. kV range: 25 to 35 or more in 1 kV steps
3	Gantry assembly	Gantry assembly
	e. Distance floor to image receptor:- 65 to 150 cm	e. Distance floor to image receptor:- 70 to 140 cm
	m. Magnification: 1.5 & 1.8	m. Magnification: 1.5 or more
	n. Motorized compression force: 0 to 200 Newton	n. Motorized compression force: 0 to 190 Newton or more
	o. Manual compression force: up to 270 Newton	o. Maximum manual compression force: at least 175 N
	q. Regular 19 x 23 sliding paddle	q. Regular (19 x 23)+/- 2 cm sliding paddle
	r. Spot sliding compression paddle	r. Spot compression paddle
5	Automatic technique selection	Automatic technique selection
	a. Parameters: Anode track, filter, kV mAs, Virtual cell and dose should be chosen automatically	Parameters: Anode track, filter, kV mAs, and dose should be chosen automatically
	b. Different modes should be available for selection	Deleted
6	Collimator	Collimator
	a. Beam filter: Mo and Rh	Beam filter: 2 Nos. (Mo/Ag/Al) & Rh
	b. Light beam intensity (Lux)> 300	Deleted
7	Flat panel detector	Flat panel detector
	a. Detector material (Amorphous Silicon or others) and Detector type (Direct or independent type)	a. Detector material (Amorphous Selenium or others) and Detector type (Direct or Indirect)

	b. Detector size:- 24 x30 cm	b. Detector size:- 24 x30 cm (+/-1cm) .
	d. DQE at 0 LP/mm: 60%	d. DQE at 0 LP/mm: 60% OR DQE at 5LP/mm : 29%
	e. DQE at 5LP/mm : 29%	Deleted
	g. Operating temperature: - 15 to 35 degrees Celsius	g. Operating temperature: 20 to 30 degrees Celsius
12	Accessories included	Accessories included
	d. Large paddle- 24x31cm	d. Large paddle- 24x31cm (+/-2cm)
	e. 19x23 cm sliding paddle	e. 19x23 cm paddle (+/-2cm)
	h. Quality control toolkit	Deleted
	j. UPS for power supply & backup of 30 minutes.	j. UPS for power supply & backup of 30 minutes for the entire system
	k. Dry view camera: 500 DPI or more, with 500 films	k. Dry view camera: 508 DPI or more, with 300 films each (size 18 X 24cm and 24X30cm)
13	Display workstation	Display workstation
	b. Two high contrast and resolution 5 MP LCD B & W monitors	b. Two high contrast and resolution 5 MP LCD B & W monitors (Barco/NEC/Eizo make)
	j. Is the hard disk capacity expandable	Deleted
	The Turnkey Scope of Work – MAMMOGRAPHY	The Site Modification Work - Scope of Work – MAMMOGRAPHY
	1.The Supplier should inspect the proposed site offered by the Consignee Institute in which the Mammography system has to be installed and they are required to submit the plan for the complete Mammography Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of Mammography Centre	1. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of Mammography Centre
	3. The cost of Turnkey for the area of 600sq.ft and Air-conditioning of Tonnage 6 TR will be considered for Ranking / Evaluation purpose	3. 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
	4. Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work	4. Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification Work
	Scope of work for turnkey Mammography system:	Scope of work for Site Modification Mammography system:
	The supplier should inspect the proposed site and submit all the detailed structural and architectural drawings and BOQ for the proposed DR Centre along with technical bid of the tender.	Deleted
6	Furniture:	Furniture:
	h. Any other essential furniture item as per requirement.	Deleted
7	Miscellaneous:	Miscellaneous:
	b. Fire extinguisher Dry CO2 type as required for the building safety.	b. Fire extinguisher Dry CO2 ABC type as required for the building safety. - 2 nos
		BOQ
5	Large paddle- 24x31cm - 1 Nos	Large paddle- 24x31cm (+/-2cm) - 1 Nos
6	19x23 cm sliding paddle - 1 Nos	19x23 cm +/- 2 cm sliding paddle - 1 Nos
7	Spot sliding compression paddle 1 Nos	Spot compression paddle - 1 Nos
10	UPS for power supply & backup of 30 minutes -1 Nos	UPS for power supply & backup of 30 minutes for the entire system -1 Nos

11	Dry view camera: 500 DPI or more, with 500 films - 1 Nos	Dry view camera: 508 DPI or more, with 300 films each (size 18 X 24cm and 24X30cm) - 1 Nos
12	Quality control toolkit 1 Nos	Deleted
	Turnkey Work as per specification	Site Modification Work as per specification

Sch No. 11 Portable Colour Doppler unit		
Para No.	Tender Specification	Amended as:
2	The unit should be compact, lightweight and portable. Weight should not exceed 7kg including battery (excluding cart and accessories).	The unit should be compact, lightweight and portable. Weight should not exceed 7.5kg including battery (excluding cart and accessories).
4	Minimum grey scale resolution to be 256 with 128 or more digital processing channels.	Minimum grey scale resolution to be 256
5	Scanning depth to be 30 cm or more.	Scanning depth to be 24 cm or more.
8	Transducers (Frequency tolerance ± 1 MHz)	Transducers (Frequency tolerance ± 1 MHz)
c	Endocavitary probe (5-12MHz) with 140 deg FOV or more .	Endocavitary probe (5-9MHz) with 120 deg FOV or more .
12	The System must have integrated high – resolution TFT/LCD/Single monitor of 12” Inches or more.	The System must have integrated high – resolution TFT/LCD/LED of 11.5” Inches or more.
13	The system should have cine loop review facility of not less than 60 sec/1000 frames.	The system should have cine loop review facility of not less than 20 sec/1000 frames.
14	The system should have the facility of digital storage and retrieval of B/W and colour image data on built-in CD/DVD Drive. Provision for USB port and LAN transfer of data should also be present.	The system should have the facility of digital storage and retrieval of B/W and colour image data on USB and LAN transfer of data should also be present.
15	Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler and Power (energy) Doppler, Tissue Harmonic Imaging with contrast to be quoted as standard feature.	Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler and Power (energy) Doppler, Tissue Harmonic Imaging and spatial compounding
21	Facility for storage on DVD should be available, System should be DICOM 3.0 Compliant.	System should have DICOM 3.0
24	In built battery backup should be at least one hour or more.	In built battery backup should be at least 30 min or more.
BOQ		
4	Endocavitary probe (5-12MHz) with 140 deg FOV - 1 no	Endocavitary probe (5-9MHz) with 120 deg FOV or more - 1 no

SCH NO. 12. COLOUR DOPPLER (2D)		
Para No.	Tender Specification	Amended as:
1	User Interface & Ergonomics	User Interface & Ergonomics
1.1	The system shall support backlight keys or provide an integrated light for ease of use in darkened work areas. The backlighting shall be tri-state to further simplify ease of use and indicate function selected.	The system shall support backlight keys or provide an integrated light for ease of use in darkened work areas.
2.3	System shall support the ability of post image acquisition optimization to optimize imaging parameters such as B Gain, TGC, Colour Gain, Dynamic Range, Doppler Gain, Doppler Base Line on image recalled from the image archive.	Deleted
2.6	System should be able to reconstruct 3D image from 2D image data.	System should be able to reconstruct 3D image using 2D probe

3	Tissue Harmonic imaging with contrast should be available as standard feature.	Tissue Harmonic imaging should be available as standard feature.
4	Post-acquisition Data Processing.	Post-acquisition Data Processing.
4.1	The system shall allow for post-storage image manipulation to provide maximum image flexibility, review and productivity. It shall include, at a minimum the ability to change the: Overall B-Mode gain, dynamic range and grey scale maps. Overall Doppler gain, base line shift, sweep speed and inverted spectral waveform.	Deleted
13	Transducers (freq tolerance: ± 1 MHz)	Transducers (freq tolerance: ± 1 MHz)
b)	Transvaginal / Intracavitary Probe with Biopsy attachment. : 6- 12 MHz	Transvaginal / Intracavitary Probe with Biopsy attachment. : 4- 9 MHz
c)	Linear Probe with biopsy attachment. : 5 – 12 MHz FOV minimum 140 Deg.	Linear Probe with biopsy attachment. : 5 – 12 MHz
d)	Sector Probe (TCD):2-5MHz (Optional)	Sector Probe (TCD): 2-4MHz (Optional)
BOQ		
3	Transvaginal / Intracavitary Probe with Biopsy attachment. : 6- 12 MHz - 1 no.	3. Transvaginal / Intracavitary Probe with Biopsy attachment. : 4- 9 MHz - 1 no.
4	Linear Probe with biopsy attachment. : 5 – 12 MHz FOV minimum 140 Deg - 1 no	Linear Probe with biopsy attachment. : 5 – 12 MHz - 1 no
5	Sector Probe (TCD):2-5MHz (Optional) - 1 no	Sector Probe (TCD): 2-4MHz (Optional) - 1 no

Sch No.13. Colour Doppler (4D)		
Para No.	Tender Specification	Amended as:
1	User Interface & Ergonomics	User Interface & Ergonomics
1.1	The keyboard should have Height adjustment. The adjustment should also include Keyboard rotation Side to Side.	The keyboard should have Height adjustment. The adjustment should also include Keyboard rotation
2	Productivity	Productivity
2.3	System shall support the ability to store digital data, which allows optimizing imaging parameters such as B Gain, TGC, Colour Gain, Dynamic Range, Speckle Reduction levels, Doppler Gain, Doppler Base Line on old Images & old loops recalled from the image archive.	Deleted
5	Elastography should be available in convex , Linear Probes.	Elastography should be available in Linear Probe
6	Contrast Ultrasound Capability (CEUS) with Times Intensity Curve Graphs.	Contrast Ultrasound Capability (CEUS)
8	Data Processing.	Data Processing.
8.1	8.1. The system shall allow for Post-Storage image manipulation to provide maximum image flexibility, review and productivity. It shall include the ability to change all following on recalled old Stored Images/Loops: a. Overall B-Mode gain, dynamic range and gray scale maps. b. Overall Doppler gain, base line shift , sweep speed and inverted spectral waveform. c. Anatomical M-Mode	8.1. The system shall allow for Post-Storage image: a. Overall B-Mode gain and gray scale maps. b. Overall Doppler gain, sweep and inverted spectral waveform. c. Anatomical M-Mode

9	Scanning Parameters	Scanning Parameters
9.3	The system shall provide the ability to scan in the compound imaging mode with up to 9 lines on all linear and convex probes.	The system shall provide the ability to scan in the compound imaging mode with 7 lines or more on all linear and convex probes.
9.4	The system shall provide scan depth at least 30 cm .	The system shall provide scan depth of 2 - 30 cm or more
16	Transducers (freq tolerance: ± 1 MHz)	Transducers (freq tolerance: ± 1 MHz)
c	Trans-vaginal Probe with Biopsy attachment, Operating Frequency : 5-12 MHz	Trans-vaginal Probe with Biopsy attachment, Operating Frequency : 4-9 MHz
d	3D / 4D Volume Convex Probe	3D / 4D Volume Convex Probe with post processing softwares such as MPR, SSD, Fetal cardiac evaluation etc
e	Pediatric micro convex probe for Neurosonogram.	Pediatric micro convex probe for Neurosonogram 5-8MHz
BOQ		
4	Trans-vaginal Probe with Biopsy attachment, Operating Frequency : 5-12 MHz - 1 no.	Trans-vaginal Probe with Biopsy attachment, Operating Frequency : 4-9 MHz - 1 no.
5	3D / 4D Volume Convex Probe - 1 no.	3D / 4D Volume Convex Probe with post processing softwares such as MPR, SSD, Fetal cardiac evaluation etc - 1 no.
6	Pediatric micro convex probe for Neurosonogram - 1 no	Pediatric micro convex probe for Neurosonogram (5-8MHz) - 1 no

Sch-14 -Computed Radiography with Dry Imager		
Para No.	Tender Specification	Amended as:
2	Image reader (CR reader/ digitizer)	Image reader (CR reader/ digitizer)
	1. Image recording system (cassettes & imaging plates). d. Mammography cassette 8" X 10": 1 nos.(Optional)	1. Image recording system (cassettes & imaging plates). d. Mammography cassette 18 X 24cm: 1 nos.(Optional) e. Mammography cassette 24 X 30cm: 1 nos.(Optional)
BOQ		BOQ
5a	Mammography cassette 8" X 10": 1 nos.(Optional)- 1 no	Mammography cassette 18 X 24 cm: 1 nos.(Optional)- 1 no
5b		Mammography cassette 24 X 30cm: 1 nos.(Optional)- 1 no

Sch-15 - Single Loader CR Unit		
Para No.	Tender Specification	Amended as:
2	Image reader (CR reader/ digitizer) Single loader	Image reader (CR reader/ digitizer) Single loader
	b. CR reader / digitizer must be able to handle phosphor image plates. CR reader capable of handling latest Dual side /needle/structured/ columnar image plates will be preferred.	b. CR reader / digitizer must be able to handle phosphor image plates.
	c. It should have a resolution of 6 pixels/mm (minimum) for standard resolution cassettes & 10 pixel/mm (minimum) for high resolution cassette reading.	c. It should have a resolution of 5 pixels/mm (minimum) for standard resolution cassettes & 10 pixel/mm (minimum) for high resolution cassette reading.

	e. It should have two trays	Deleted
4	Dry imager	Dry imager
		AddedPara: It should have minimum 2 online trays

Sch No. 16 - Mammography (Analog/Conventional)		
Para No.	Tender Specification	Amended as:
1	Image recording system (cassettes & imaging plates).	1. Image recording system (cassettes & imaging plates).
		Added para: Bucky: Should have Potter Bucky (patient table) capable of accepting both the sizes 18x24cm and 24X30cm
c	Rotation should be iso-centric	c) Rotation should be possible .
	The following items have to be supplied as standard:	The following items have to be supplied as standard:
5	Suitable online UPS with at least 30 min back up.	Suitable online UPS with at least 30 min back up for entire system .
		BOQ
6	Suitable online UPS with at least 30 min back up. 1 no.	Suitable online UPS with at least 30 min back up for entire system.
7	Turnkey requirement: LS	Site Modification Work - LS
		Added Para: Bucky: Should have Potter Bucky (patient table) capable of accepting both the sizes 18x24cm and 24X30cm - 1 No

Sch-17 - Mobile X-Ray machine		
Para No.	Tender Specification	Amended as:
	The unit should be operative on mains voltage from single phase 180-260 V AC with automatic main compensation.	The unit should be operative on mains voltage from single phase 180-240 V AC with automatic main compensation.
1	Generator:	Generator:
iii	m AS Range : 250 mAs or more.	Deleted
v	Exposure Time: 10 ms to 5 sec.	Exposure Time: 10 ms to 2 sec .
4	Tube stand:	Tube stand:
	The tube stand should be fully counterbalanced with rotation in all directions.	The tube stand should be fully counterbalanced/ Spring Balanced with rotation in all directions.
5	Collimator:	Collimator:
	Collimator rotation should be +90 to -90 degrees with auto shut off lamp facility.	Collimator rotation should be +45 to -45 degrees with auto shut off lamp facility.

Sch-18- MRI- 1.5 Tesla		
Para No.	Tender Specification	Amedned as
1	MAGNET	MAGNET
e	Homogeneity of magnet should be less than 3.5 ppm over 45cm DSV	Homogeneity of magnet should be less than 3.5 ppm over 40cm DSV
8	COIL SYSTEM	COIL SYSTEM
b	Multichannel Head coils with at least 15 channel for high resolution brain imaging.	Deleted
d	Neck phased array coil 8 channel or more.	Deleted
g	Dedicated Cardiac Coil / equivalent with atleast 18 channels.	Deleted
h	Suitable coil with atleast 32 channels for peripheral angiography application	Dedicated 32 channel Peripheral Angio Coil or 32 channel whole body coil with coverage of minimum 80 cm with max combination of 2 coils
i	Bilateral Breast Coil with at least 8 channels.	Bilateral Breast Coil with at least 16 channels.
j	SHOULDER coils – Multi channel (minimum 8 channel) flex loop or rigid type -1 no. Large FOV & 1 no. SMALL FOV	j SHOULDER coils a. Dedicated Shoulder coil – Multi channel - 1 No b. Flex coils – 2nos. (One large and one small)
10	Workstation	Workstation
1	One server with 2 node with concurrent licenses to be supplied with the system. Licenses: 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 3 Tera bytes , minimum 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	One server with 2 node with concurrent licenses to be supplied with the system. 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 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 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
	The workstation should have the following features: a. Cardiac perfusion analysis, quantitative T1 mapping & Processing of Real Time BOLD imaging data, with colour metabolite mapping, quantification of the CSF flow data.	The workstation should have the following features: a. Cardiac perfusion analysis, quantitative T1 mapping with colour metabolite mapping, quantification of the CSF flow data.
	Cardiac Package:	Cardiac Package with one Licence:
16	ACCESSORIES	ACCESSORIES
2	MR Compatible Dual Syringe Pressure injector : Independent dual-Syringe Pressure injector with following Features; Non-ferrous, automatic syringe size detection, performs single and dual phase	MRI Compatible Dual Syringe Pressure injector : Independent dual-Syringe Pressure injector with following Features; Non-ferrous, automatic syringe size detection, performs single and dual phase contrast

	contrast injections, provides Saline flush delivery and allows timed contrast delivery Must be compatible with 10, 15, 20 & 30ml pre-filled contrast syringes and 50 ml syringes for both saline & contrast (20 Nos of 50 ml Syringes with 100 nos. of tube connectors should be provided) Must be able to observe progress of injection and view injection result	injections, provides Saline flush delivery and allows timed contrast delivery Must be compatible with 5, 7.5 & 10ml pre-filled contrast syringes and 50 ml syringes for both saline & contrast (20 Nos of 50 ml Syringes with 100 nos. of tube connectors should be provided) Must be able to observe progress of injection and view injection result
3	MRI Compatible ECG leads (with 100 no.s Disposable Electrodes for MRI Image gating)	MRI Compatible ECG electrodes (100 no.s Disposable Electrodes for MRI Image gating)
17	TRAINING	TRAINING
	Qualified personnel nominated by the deptt, should be given application training by the vendor at their cost at site.	Qualified personnel nominated by the deptt, should be given application training by the vendor in India for 2 weeks
22	TURN KEY INSTALLATION	SITE MODIFICATION WORK
	The Turnkey Scope of Work - MRI The Supplier should inspect the proposed site offered by the Consignee in which the MRI system has to be installed and they are required to submit the plan for the complete MRI Scan Centre on a turnkey basis.	The Scope of Work - Site Modification Work - MRI The Supplier should inspect the proposed site offered by the Consignee in which the MRI system has to be installed and they are required to submit the plan for the complete MRI Scan Centre on a Site Modification Work basis.
	The cost of Turnkey for the area of 1500sq.ft and Air-conditioning of Tonnage 20 TR will be considered for Ranking / Evaluation purpose	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
	Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work and detailed BOQ should be mentioned.	Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification Work and detailed BOQ should be mentioned.
	Scope of Work for Turnkey MRI Work	Scope of Site Modification Work for MRI Work
1	The supplier should inspect the proposed site and submit all the detailed structural and architectural drawings and BOQ for the proposed MRI Scan Centres along with technical bid of the tender. The MRI SCAN CENTRE shall consist of the following rooms:	The MRI SCAN CENTRE shall consist of the following rooms:
	Scope of work for turnkey MRI unit works: d. Patient Preparation room	Scope of work - Site Modification Work for MRI: d. Patient Preparation room cum Change room
	The actual area of turnkey works done will be considered for payment, based on the unit rates and site measurements	The actual area of Site Modification Work done will be considered for payment, based on the unit rates and site measurements
	Civil work Any ab initio new construction or demolition of existing structure/walls etc and reconstruction is unambiguously included in the turnkey 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 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 1.5 T strength magnet.
	a) Flooring	a) Flooring Added Para: Anti static Vinyl flooring within the Magnet room
	Note:	Note:
1	Tenderers are advised to visit the site of work to acquaint themselves about the levels of sub soil water, drainage facility for dewatering, accessibility to site etc. and quote the rates accordingly.	Deleted

BILL OF QUANTITY (BOQ)		
b	Multichannel Head coils with at least 15 channel - 1 No	Deleted
d	Neck phased array coil - 8 channel or above - 1 No	Deleted
g	Dedicated Cardiac Coil / equivalent with atleast 18 channels - 1 No	Deleted
h	Suitable coil with atleast 32 channels for peripheral angiography - 1 No	Dedicated 32 channel Peripheral Angio Coil or 32 channel whole body coil with coverage of minimum 80 cm with max combination of 2 coils - 1 no
i	Bilateral Breast Coil with at least 8 channels - 1 No	Bilateral Breast Coil with at least 16 channels - 1 No
j	SHOULDER coil – Multi channel (minimum 8 channel) flex loop or rigid type - Large FOV - 1 NO	Shoulder coil: Dedicated Shoulder coil – Multi channel - 1 No
k	SHOULDER coil – Multi channel (minimum 8 channel) flex loop or rigid type - SMALL FOV - 1 No	Shoulder coil: Flex coils (Large and small)– 1 each
	ACCESSORIES	ACCESSORIES
5	MRI Compatible ECG leads - 100 No.s	MRI Compatible ECG electrodes (disposable) - 100 No.s
8	MRI compatible syringe pump - 3 nos	MRI compatible syringe pump - 2 nos
	Components of Turnkey Work:	Components of Site Modification Work:
	GENERAL TECHNICAL SPECIFICATIONS	
	"Turnkey" word	Replaced with " Site Modification Work "

Sch-19- MRI - 3T		
Para. No	Tender Specification	Amedned as
5	RF Coils	RF Coils
b	Neck phased array coil 8 channel or more.	Deleted
f	Suitable Coil / Coil combination for Peripheral Angiography 32 channels or more; with coverage of 80cm or more.	Suitable Coil / Coil combination (Max 2) for Peripheral Angiography 32 channels or more; with coverage of 80cm or more.
i	Suitable Phased array coil for faster and high resolution Cardiac imaging – 32 channels or more.	Deleted
j	Shoulder coil – Multi channel (8 channels or more) flex loop or rigid type – 2nos. (One large and one small)	j. Shoulder coil: a. Dedicated Shoulder coil – Multi channel - 1 No b. flex coils – 2nos. (One large and one small)
8	Workstation	Workstation
1	One server with 2 node with concurrent licenses to be supplied with the system. Licenses: 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 3 Tera bytes , minimum 20,000 concurrent slice processing power and at least	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 20,000 concurrent slice processing power and at least 64GB RAM. The server hardware to be included with 21" or more TFT/LCD monitor

	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	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
	The workstation should have the following features: a. Cardiac perfusion analysis, quantitative T1 mapping & Processing of Real Time BOLD imaging data , with colour metabolite mapping, quantification of the CSF flow data.	The workstation should have the following features: a. Cardiac perfusion analysis, quantitative T1 mapping, with colour metabolite mapping, quantification of the CSF flow data.
	Cardiac Package:	Cardiac Package with One Licence :
11	Imaging sequences	Imaging sequences
	cc. Non Contrast perfusion Imaging software like 2D-ASL and its post processing should be offered.	cc. Non Contrast perfusion Imaging software like 2D/3D-ASL and its post processing should be offered.
	jj. Post contrast free breathing spiral k-Space filling sequences.	jj. Post contrast free breathing radial k-Space filling sequences.
16	ACCESSORIES	ACCESSORIES
	2. MRI Compatible Dual Syringe Pressure injector : Independent dual-Syringe Pressure injector with following Features; Non-ferrous, automatic syringe size detection, performs single and dual phase contrast injections, provides Saline flush delivery and allows timed contrast delivery must be compatible with 10, 15, 20 & 30m1 pre-filled contrast syringes and 50 ml syringes for both saline & contrast (20 Nos of 50 ml Syringes with 100 nos. of tube connectors should be provided) Must be able to observe progress of injection and view injection result	2. MRI Compatible Dual Syringe Pressure injector : Independent dual-Syringe Pressure injector with following Features; Non-ferrous, automatic syringe size detection, performs single and dual phase contrast injections, provides Saline flush delivery and allows timed contrast delivery Must be compatible with 5, 7.5 & 10ml pre-filled contrast syringes and 50 ml syringes for both saline & contrast (20 Nos of 50 ml Syringes with 100 nos. of tube connectors should be provided) Must be able to observe progress of injection and view injection result
	3. MRI Compatible ECG leads (with 100 no.s Disposable Electrodes for MRI Image gating)	3. MRI Compatible ECG electrodes (100 no.s Disposable Electrodes for MRI Image gating)
17	Training: Qualified personnel nominated by the deptt, should be given application training by the vendor in India.	Training: Qualified personnel nominated by the deptt, should be given application training by the vendor in India for 2 weeks
22	TURN KEY INSTALLATION	SITE MODIFICATION WORK
	The Turnkey Scope of Work - MRI The Supplier should inspect the proposed site offered by the Consignee in which the MRI system has to be installed and they are required to submit the plan for the complete MRI Scan Centre on a turnkey basis. Prospective bidders are advised to acquaint themselves with access to site , location of work , local labour problems and any other matter relating to availability and carriage of construction materials. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Airconditioning, Fire fighting and miscellaneous works for the construction of MRI Scan Centre. While preparing the plan, the following aspects have to be addressed.	The Site-Modification Scope of Work - MRI Prospective bidders are advised to acquaint themselves with access to site , location of work , local labour problems and any other matter relating to availability and carriage of construction materials. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Airconditioning, Fire fighting and miscellaneous works for the construction of MRI Scan Centre. While preparing the plan, the following aspects have to be addressed.

	The cost of Turnkey for the area of 1500sq.ft and Air-conditioning of Tonnage 20 TR will be considered for Ranking / Evaluation purpose	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
	Moreover Bidders will have to quote the Unit Rates of the following components of turnkey work and detailed BOQ should be mentioned.	Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification Work and detailed BOQ should be mentioned.
	Scope of work for turnkey MRI unit works: d. Patient Preparation room	Scope of work - Site Modification Work for MRI: d. Patient Preparation room cum Change room
	The actual area of turnkey works done will be considered for payment, based on the unit rates and site measurements	The actual area of Site Modification Work done will be considered for payment, based on the unit rates and site measurements
	Civil work Any ab initio new construction or demolition of existing structure/walls etc and reconstruction is unambiguously included in the turnkey 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 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.
	a) Flooring	a) Flooring Added Para: Anti static Vinyl flooring within the Magnet room
	Note:	Note:
1	Tenderers are advised to visit the site of work to acquaint themselves about the levels of sub soil water, drainage facility for dewatering, accessibility to site etc. and quote the rates accordingly.	Deleted
BILL OF QUANTITY		
c	NECK phased array 8 channel - 1 no	Deleted
g	Dedicated Coil for PERIPHERAL ANGIO- 32 channels - 1 No	Suitable Coil / Coil combination (Max 2 no.s) for Peripheral Angiography 32 channels or more - 1 No
h	BREAST coil - minimum 7 channel - 1 no	BREAST coil - 16 channel or more - 1 no
i	SHOULDER coil – Multi channel (minimum 8 channel) flex loop or rigid type - Large FOV - 1 No	Shoulder coil: Dedicated Shoulder coil – Multi channel - 1 No
j	SHOULDER coil – Multi channel (minimum 8 channel) flex loop or rigid type - SMALL FOV - 1 No	Shoulder coil: Flex coils (Large and small)– 1 each
k	High resolution knee coil - minimum 12 channel - 1 no	Deleted
n	High resolution foot/ ankle coil – minimum 8 channel - 1 no	Deleted
	ACCESSORIES	ACCESSORIES
5	MRI Compatible ECG leads - 100 No.s	MRI Compatible ECG electrodes (disposable) - 100 No.s
8	MRI compatible syringe pump - 3 nos	MRI compatible syringe pump - 2 nos
	Components of Turnkey Work:	Components of Site Modification Work:
GENERAL TECHNICAL SPECIFICATIONS		
	"Turnkey" word	Replaced with " Site Modification Work "

GENERAL TECHNICAL SPECIFICATIONS

Existing:

1-b) 98% up time Warranty of complete equipment with extension of Warranty period by double the downtime period on 24 (hrs) X 7 (days) X 365 (days) basis.

Read as:

1-b) **95%** up time Warranty of complete equipment with extension of Warranty period by double the downtime period on 24 (hrs) X 7 (days) X 365 (days) basis.

Existing:

4-e) There will be 98% uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.

Read as:

4-e) There will be **95%** uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.

NB:

The word '**Turnkey**' wherever appears in the tender enquiry shall be read as '**Site Modification Work**'.

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

Note:

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