

Sl. No	Tender Page & Para	TENDER SPECIFICATION	NAME OF THE FIRM	REPRESENTATION RECEIVED FROM THE FIRMS	COMMITTEE RECOMMENDATION
1			WIPRO GE HEALTHCARE	High frequency x-ray generator with an output of at least 80 KW or more to support continuous and sustained operation. Please give details.	
2	Page 85 Para 2.1	2. X-ray Generator 2.1 High frequency x-ray generator with an output of at least 50 KW or more to support continuous and sustained operation. Please give details	Siemens Healthcare	Request you to amend as " High frequency x-ray generator with an output of at least 80 KW or more to support continuous and sustained operation. Please give details. " Justification: High capacity generators are required for uncompromised imaging in any scenario, challenging or routine and offers excellent stability during trying workloads. The generator output should be atleast 80KW or more, which is evident looking at the comparison of big bore systems offerings from all the vendors .	no change
3	Page 85 Para 3.1	3. X-ray Tube 3.1 Tube current: 30-400mA or more. The mA rating at peak generator power must be mention.	WIPRO GE HEALTHCARE	Tube current: 30-600mA or more. The mA rating at peak generator power must be mention	no change
4	Page 85 Para 3.4	3. X-ray Tube 3.4 The x-ray tube should have anode heat storage capacity of 5 MHU or more.	WIPRO GE HEALTHCARE	The x-ray tube should have anode heat storage capacity of 8 MHU or more.	no change
5	Page 85 Para 3.5	3. X-ray Tube 3.5 The anode peak heat dissipation rate should be 700 KHU/min or more angular dose modulation.	WIPRO GE HEALTHCARE	The anode peak heat dissipation rate should be 2000 KHU/min or more angular dose modulation.	no change
6	Page 85 Para 3.6	3. X-ray Tube 3.6 The x-ray tube should have dual focal spot (please specify the size of each focal spot). The automatic selection of focal spot should be possible.	Siemens Healthcare	Request you to amend as " The x-ray tube should have single/dual focal spot (please specify the size of focal spot). "	3. X-ray Tube 3.6 The x-ray tube should have single/dual focal spot (please specify the size of each focal spot).
7	Page 85 Para 3.7	3. X-ray Tube 3.7 Filter and beam limiting device: Their Al equivalent (at least 5mm) and other specific features to reduce radiation dose to the patient must be specified.	WIPRO GE HEALTHCARE	Filter and beam limiting device: The X ray beam tracking features to reduce radiation dose to the patient must be specified.	3. X-ray Tube 3.7 Filter and beam limiting device: Their Al equivalent (at least 5mm) and X ray beam tracking feature or any other specific features to reduce radiation dose to the patient must be specified.
8	Page 85 Para 4.8	4. Gantry 4.8 Green laser patient alignment system with (gantry and external wall /ceiling mounted) stationary and mobile for radiotherapy planning should be provided.	WIPRO GE HEALTHCARE	laser patient alignment system within gantry and Green color 3 moving external wall /ceiling mounted for radiotherapy planning should be provided.	4. Gantry 4.8 deleted.
9	Page 85 Para 5.1	5. Patient Table 5.1 The scanning table should be universally flat with flat table top and should be compatible with tables of linear accelerators installed. The table should have patient positioning index system on carbon fiber table top.	WIPRO GE HEALTHCARE	please specify LINAC model.	clarified as : Commercially available LINAC from either M/s Elekta or M/s. Varian.
10	Page 86 Para 5.7	5. Patient Table 5.7 The table should have total free floating facility	WIPRO GE HEALTHCARE	please provide details.	clarified during pre-bid.
11	Page 86 Para 6.3	6. CT scanning parameters 6.3 Maximum true scan field of view should be at least 60 cm or	WIPRO GE HEALTHCARE	Maximum true scan field of view should be at least 50 cm or more	6. CT scanning parameters 6.3 Maximum true scan field of view should be at least 50 cm or

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12	more		Siemens Healthcare	Request you to amend as "Maximum true scan field of view should be at least 50 cm or more"	more
13	Page 86 Para 6.4	6. CT scanning parameters 6.4 Extended reconstruction FOV of at least 70cm should be possible.	WIPRO GE HEALTHCARE	Extended reconstruction FOV of at least 80cm should be possible.	no change
14		6. CT scanning parameters	WIPRO GE HEALTHCARE	software only? Or hardware and software both. If hardware is to be supplied, please specify the hardware make/model for compatibility.	6. CT scanning parameters 6.10 Prospective and Retrospective respiratory compensated/gated CT to generate 4D datasets must be compatible with all commercially available hardware and software for motion management to localize the tumor in motion. Specify the details.
15	Page 86 Para 6.10	6.10 Prospective and Retrospective respiratory compensated/gated CT to generate 4D datasets must be compatible with all commercially available hardware and software for motion management to localize the tumor in motion. Specify the details.	Siemens Healthcare	Request you to clarify the requirement.	Required software and hardware to generate/acquire 4D CT imaging should be provided. Also required compatible hardware with commercially available LINAC based image acquisition solutions.
16	Page 86 Para 8.7	8. Data Acquisition system 8.7. Vendor should provide the 4DCT acquisition system as applicable to the offered System.	WIPRO GE HEALTHCARE	software only? Or hardware and software both. If hardware is to be supplied, please specify the hardware make/model for compatibility.	
17	Page 87 Para 10.1	10. Image Quality 10.1 High Contrast Spatial Resolution: It should be 15 lines pair per cm or better (for 60 cm FOV) maximum at 0% MTF for a slice of 1 cm thickness. Clearly specify the phantom used, scan time, mA, filter for image reconstruction, scan field, dose and MTF.	WIPRO GE HEALTHCARE	High Contrast Spatial Resolution: It should be 15 lines pair per cm or better (for 50 cm FOV) maximum at 0% MTF for a slice of 0.05mm thickness. Clearly specify the phantom used, scan time, mA, filter for image reconstruction, scan field, dose and MTF.	10. Image Quality 10.1 High Contrast Spatial Resolution: It should be 15 lines pair per cm or better (for 50 cm FOV) maximum at 0% MTF. Clearly specify the phantom used, scan time, mA, filter for image reconstruction, scan field, dose and MTF.
18			Siemens Healthcare	Request you to amend as "High Contrast Spatial Resolution: It should be 15 lines pair per cm or better (for 50 cm FOV) maximum at 0% MTF for a slice of 1 cm thickness. Clearly specify the phantom used, scan time, mA, filter for image reconstruction, scan field, dose and MTF."	
19	Page 87 Para 10.2	10. Image Quality 10.2 Low Contrast Detectability: The low contrast resolution for CATPHAN should be at least 5mm or less at 0.3% using 20cm CATPHAN phantom on 10mm slice thickness.	WIPRO GE HEALTHCARE	Low Contrast Detectability: The low contrast resolution for CATPHAN should be at least 5mm or less at 0.3% using 20cm CATPHAN phantom on 5mm slice thickness.	no change
20	Page 87 Para 10.3	10. Image Quality 10.3 Spiral parameters: Different selection of pitch should be possible, from 0.5 to 3 in 0.1 increments. Inter scan delay in different group of spiral should not be more than 5 seconds.	Siemens Healthcare	Request you to amend as "Spiral parameters: Different selection of pitch should be possible, from 0.5 to 1.5 in 0.1 increments. Inter scan delay in different group of spiral should not be more than 5 seconds."	10. Image Quality 10.3 Spiral parameters: Different selection of pitch should be possible, from 0.5 to 1.5 or more in 0.1 increments. Inter scan delay in different group of spiral should not be more than 5 seconds.
21			Philips India	Kindly amend "Different selection of pitch should be possible, from 0.5 to 2 in 0.1 increments"	
22	Page 87 Para 10.4	10. Image Quality 10.4 CT number accuracy must be better than +4HU for water and +10 HU for air. All necessary phantoms to check the spatial resolution of the scanner should be provided. A phantom to check the electron density to HU relationship for different body tissues must be provided.	WIPRO GE HEALTHCARE	CT number accuracy must be better than +4HU for water and +10 HU for air. All necessary phantoms to check the spatial resolution of the scanner should be provided. A phantom to check the electron density to HU relationship for different body tissues must be provided. please specify PHANTOM NAME	10. Image Quality 10.4 CT number accuracy must be better than +4HU for water and +10 HU for air. All necessary phantoms to check the spatial resolution of the scanner should be provided. CATPHAN with appropriate module should be supplied.
23			Philips India	Kindly specify the make of the required electron density phantom	
24			Siemens Healthcare	Request you to specify the specification of phantoms.	

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25	Page 87 11. CT Control Console	WIPRO GE HEALTHCARE	It should have 19" or more TFT flat screen LCD colour monitor for display of 1024 x 1024 matrix or more.	11. CT Control Console
26	Page 87 Para 11.1 11.1 It should have 20" or more TFT flat screen LCD colour monitor for display of 1024 x 1024 matrix or more.	Philips India	Kindly amend the screen size to 19" or more	11.1 It should have 19" or more TFT flat screen LCD colour monitor for display of 1024 x 1024 matrix or more.
27		Siemens Healthcare	Request you to amend as "It should have 19" or more TFT flat screen LCD colour monitor for display of 1024 x 1024 matrix or more."	
28	Page 87 Para 11.2 11.2 Computer CPU systems should be running on a high-end workstation platform with UNIX/Window of latest configuration. RAM size must be atleast 8GB or better.	WIPRO GE HEALTHCARE	Computer CPU systems should be running on a high-end workstation platform with UNIX/Window/Linux of latest configuration. RAM size must be atleast 24GB or better.	11. CT Control Console 11.2 Computer CPU systems should be running on a high-end workstation platform with UNIX/LINUX/ Window of latest configuration. RAM size must be atleast 8GB or better.
29	Page 87 Para 11.4 11.4 Image storage of 500 GB or more for at least 2, 50,000 or more images in 512 x 512 matrixes uncompressed or better (quote the latest configuration)	Siemens Healthcare	Request you to amend as "Image storage of 250 GB or more for at least 2, 50,000 or more images in 512 x 512 matrixes uncompressed or better (quote the latest configuration)."	11. CT Control Console 11.4 Image storage of 250 GB or more for at least 2, 50,000 or more images in 512 x 512 matrixes uncompressed or better (quote the latest configuration)
30		Philips India	Kindly amend the storage capacity to 290GB or more	
31		WIPRO GE HEALTHCARE	An on-line Archival with total storage capacity of 10 Terra bytes with fully loaded media for data storage should be provided.	
32	Page 87 Para 11.8 11.8 An on-line juke-box with total storage capacity of 1.5 Terra bytes with fully loaded media for data storage should be provided	Siemens Healthcare	Request you to amend as "A client server based advanced visualization solution with storage upto 2.5TB and to support 3 clients for CT Simulation." Justification: Juke box is an obsolete technology and no longer available. Client server solution can provide storage upto 2.5TB and can support the advance CT simulation workstations as asked in point 13.7	11. CT Control Console 11.8 : A client server based advanced visualization solution with storage upto 2.5TB and to support 3 clients for CT Simulation.
33	Page 87 Para 12.1 12. Laser System 12.1 The CT-Simulator laser systems should have at least three computer controlled moving lasers for marking the isocenter without moving the table top. Following the isocenter localization in the CT-Simulation workstation, the isocenter coordinate will be sent directly to the computer system that is controlling the movements of the lasers. This computer in turn should drive all the lasers, so that without moving table, the laser point to the isocenter. The laser must be GREEN LASER system. Complete quality assurance tools must be provided.	Siemens Healthcare	Request you to clarify the exact requirement to help to remove bidder ambiguity. There are wide variety of configurations available for CT simulation varying in the number of lasers, movable/fixed, color of lasers etc which have differing financial implication.	12. Laser System 12.1 The CT-Simulator laser systems should have at least three moving lasers, computer controlled, for marking the isocenter without moving the table top. Following the isocenter localization in the CT-Simulation workstation, the isocenter coordinate will be sent directly to the computer system that is controlling the movements of the lasers. This computer in turn should drive all the lasers, so that without moving table, the laser point to the isocenter. The laser must be GREEN LASER system. Complete quality assurance tools must be provided.
34	Page 87-88 Para 13.7 13. CT-Simulation/Virtual Simulation System 13.7 Three CT simulation workstation must be provided in addition to the CT workstation.	Siemens Healthcare	Request you to amend as "A client server based advanced visualization solution with 3 clients for CT Simulation"	13. CT-Simulation/Virtual Simulation System 13.7 A client server based advanced visualization solution with Three CT simulation workstations must be provided in addition to the CT workstation.
35	Page 90 Para 20.5 20. Equipment Warranty and Service Facilities 20.5 During the warranty period, all the software updates and upgradation should be provided without asking for free of charge.	Siemens Healthcare	Request you to amend as "During the warranty period, all the software updates should be provided without asking for free of charge."	20. Equipment Warranty and Service Facilities 20.5 During the warranty period, all the software updates should be provided without asking for free of charge.

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36	Page 90 Para 20.6	20. Equipment Warranty and Service Facilities 20.6 Please quote the rates of consumables recommended as well as other necessary consumables valid for 5 years block	WIPRO GE HEALTHCARE	please clarify "consumables", Is it consumables for patient scan or system maintenance?	20. Equipment Warranty and Service Facilities 20.6 : Deleted
37	Page 90 Para 21.3	21. Standards, Safety and Training 21.3 The vendor should provide comprehensive training on CT-Simulator in a well advanced center in any developed country for two persons (one for Radiation Oncologist, one for Medical Physicist). The training period should be at least for two weeks.	WIPRO GE HEALTHCARE	The vendor should provide comprehensive training on CT-Simulator in a well advanced center within the country for two persons (one for Radiation Oncologist, one for Medical Physicist). The training period should be at least for two weeks.	21. Standards, Safety and Training 21.3 The vendor should provide comprehensive training on CT-Simulator in a well advanced center where the system is in clinical use, for two persons (one for Radiation Oncologist, one for Medical Physicist). The training period should be at least for One week.
38	Page 90 Para 21.3		Siemens Healthcare	Request you to clarify the requirement.	
39	Page 91 Para 4	4. THE ELECTRICAL WORKS: 4. Earthing: Double-Earthing shall be provided with copper plate for the CT SIMULATOR and all accessories like UPS. The earthing for the AC should also be done by the suppliers. The earthing cable/wire shall be routed end-to-end through an insulated conduit.	Siemens Healthcare	Request you to amend as "4 No of Earthing shall be provided with copper plate for the CT SIMULATOR and all accessories like UPS."	no change
40	Page 92 Para 1	AIR CONDITIONING WORKS: (10 TR HVAC) 1. The area marked for Site Modification work needs to be air-conditioned. Package Air Conditioners may be used according to room requirement and suitability. Humidity control should be provided to effectively eliminate moisture condensation on the equipment. The Air conditioning system should be designed with standby unit(s) to provide uniform air-conditioning 24 x 7.	Siemens Healthcare	Request you to amend as "AIR CONDITIONING WORKS: (16 TR HVAC) The area marked for Site Modification work needs to be air-conditioned. 16 TR of Ductable Split Units / Split Air Conditioners may be used according to room requirement and suitability. Humidity control should be provided to effectively eliminate moisture condensation on the equipment. The Air conditioning system should be designed with standby unit(s) to provide uniform air-conditioning 24 x 7."	AIR CONDITIONING WORKS: (16 TR HVAC: 10 TR + 6 TR backup) 1. The area marked for Site Modification work needs to be air-conditioned. Package Air Conditioners / Split Air Conditioners may be used according to room requirement and suitability. Humidity control should be provided to effectively eliminate moisture condensation on the equipment. The Air conditioning system should be designed with standby unit(s) to provide uniform air-conditioning 24 x 7.
41	Page 93 Para 2	WALL FINISHING & PAINTING 2. Wall Tiles-High quality density Vitrified Tiles clad on the side walls up to a uniform height of 1200 mm in all rooms; except UPS & equipment rooms. Colour to be approved by institute. Note: Providing all tools, tackles, materials, manpower for applying plastic enamel paint over	Siemens Healthcare	Request you to amend as "Wall Tiles-High quality density Vitrified (size: 600 x 600 mm) Tiles clad on the side walls up to a uniform height of 1200 mm in all rooms; except UPS & equipment rooms. Colour to be approved by institute."	no change
42	Page 93 Para 1	MISCELLANEOUS: 1. The CT SIMULATOR room shall be provided with wall-mounted storage cupboards within CT SIMULATOR room; to store: Phantoms, QA Items, CT SIMULATOR accessories.	Siemens Healthcare	Request you to amend as "The CT SIMULATOR room shall be provided with 2 nos of wall-mounted storage cupboards (approx 1800mm length; 750 mm height; 300 mm depth) each, within CT SIMULATOR room; to store: Phantoms, QA Items, CT SIMULATOR accessories."	no change
43	Page 93 Para 2	MISCELLANEOUS: 2. Sufficient number of Open Racks of high Quality vendors should be provided to house the immobilization materials; within CT SIMULATOR room	Siemens Healthcare	Request you to amend as "2 number of Open Racks of high Quality (approx 1100mm length; 700 mm height; 2000 mm depth) each to be provided to house the immobilization materials; within CT SIMULATOR room"	no change

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44	Page 94 Para 2	FURNITURE: 2. "Workstation/Tables for Console room & TPS room: The Console room and TPS room should be provided with suitable workstations(s) of reputed brand, to accommodate the various Terminals in Console Room, TPS Room. The Workstation shall be providing with enough power sockets, LAN sockets etc. to enable smooth functioning of the CT SIMULATOR and TPS."	Siemens Healthcare	Request you to amend as "1. No Workstation/Tables for Console room & TPS room to be provided The Console room and TPS room should be provided with 2 nos of workstation tables of Godrej or eq brand, to accommodate the various Terminals in Console Room, TPS Room. The Workstation shall be providing with enough power sockets, LAN sockets etc. to enable smooth functioning of the CT SIMULATOR and TPS."	no change
45		Suggested by Bidder	Siemens Healthcare	To be added in the tender Fire detection system – Comprises of fire panel, smoke / heat detectors.	To be added in the tender Fire detection system – Comprises of fire panel, smoke / heat detectors.
46		Suggested by Bidder	Siemens Healthcare	To be added in the tender Location for installation of UPS along with batteries to be added in layout plan	site layout may be collected from NCI Project office, first floor, DBRAIRCH building. Clarified during pre-bid
47		Suggested by Bidder	WIPRO GE HEALTHCARE	UPS & Battery room is not mentioned in layout Please specify UPS & Battery room in layout	site layout may be collected from NCI Project office, first floor, DBRAIRCH building. Clarified during pre-bid
48		Suggested by Bidder	WIPRO GE HEALTHCARE	opening paragraph <add> Year of introduction should be within last 5 years	no change

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