



JANAKPURI SUPER SPECIALITY HOSPITAL SOCIETY – JSSH

TENDER ENQUIRY DOCUMENT

Establishment of Radiology Unit at JSSH on PPP Basis

Janakpuri Super Speciality Hospital Society – JSSH, New Delhi invites E – tender (Two Bid System) for establishment, operation & management of Radiology Unit (consisting of MRI 1.5T machine and CT 128 slice scanner) in the Department of Radiology in the premises of its Janakpuri Super Speciality Hospital. Reputed, experienced and financially sound organization interested in ‘Public Private Partnership’ model are invited to submit their offers through e-tender on terms and conditions given in the following document.

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SECTION – I

INTRODUCTION

This 'Public Private Partnership' shall represent the agreement between Janakpuri Super Specialty Hospital Society (JSSHS) (hereby 'First Party') and the Private Party (hereby 'Second Party'), to be selected from the bidders, on the basis of a e – tender as per Government of Delhi specified procedure, for establishment, operation & management of Radiology Unit (consisting of MRI 1.5T machine and 128 slice CT scanner) at the premises of the Hospital for five years and further continued on yearly basis (till a total contract period of ten years; including initial five years) upon satisfactory performance and fulfilment of contract terms and conditions.

The term 'First party', JSSHS, Hospital, authority or purchaser have been used interchangeably in the document and represent to Janakpuri Super Specialty Hospital Society.

The term 'Second Party', Private Party, Selected Bidder or service provider have been used interchangeably in the document and represent to the bidder who would be successfully selected during the two stage bidding process.

It is anticipated that this arrangement will result in more efficient operations, improved utilization of resources and introduction of best in class radiology facility in the hospital.

This arrangement of engaging private party through PPP mode is intended to provide a framework for establishing a cooperative and productive working relationship between the First party and the Second party.

Selection shall be done looking into overall merit of the project proposal and not on any single criteria alone. In nutshell, the First Party will provide the space for installation of the said facility only. Second party will provide High-level Clinical equipment, expertise and management (both as per pre-designated and mutually agreed upon terms & conditions), in order to achieve the under-mentioned 'goals' and 'objectives'.

The project will be initially for a period of 5 years, further continued on yearly basis (till a total contract period of ten years; including initial five years) upon satisfactory performance and mutual consent of both parties. Further, the contract will be assessed on yearly basis for performance, quality and patient satisfaction. The first party has right to discontinue the services after issuing one month notice in case of deficiency of services.

SECTION – II

STATEMENT OF PURPOSE

In the wake of increasing need for articulating proper and timely treatment protocols by the medical professionals for the benefit of the patients, strengthening of services with an extensive range of investigation and diagnostic facilities at the Government Health Facilities is becoming more and more important. Janakpuri Super Specialty Hospital is a tertiary care teaching hospital that has acknowledged this need and initiated measures to reinforce the investigation facilities at the institute thus enabling access to a broad range of diagnostic services by the patients.

- a. Access to advance diagnostic facilities is one of the important initiatives that JSSHS has undertaken for the benefit of the population at large. Already, JSSHS has fully automated NABL accredited laboratory running which provides its diagnostic services to the patients. JSSHS has also added feather in its cap by recently starting fully automated ESR and HbA1C analysers at its laboratory.
- b. JSSHS has fully functioning world class state-of-the art Cardiac Cath Lab, Endoscopy Unit and Neurology Lab. JSSHS is also in process of starting modular operation theatres and recruitment of faculty under various disciplines.
- c. Expansion of JSSHS will lead to more stress and importance on existence of a world class state-of-the-art Radiology Unit. For fulfilment of this requirement, JSSHS invites reputed, experienced and financially sound partners for establishment of such unit which should include 1.5T MRI and 128 Slice CT scanner.

SECTION – III

NOTICE INVITING TENDERS (NIT)

JANAKPURI SUPER SPECIALITY HOSPITAL SOCIETY – JSSHS

Address: C – 2B, JANAKPURI, NEW DELHI – 110 058

URL: www.jsshs.org <https://govtprocurement.delhi.gov.in/>

Email: janakpurijssh@gov.in

Phone: 011 – 2850 4100

NOTICE INVITING TENDERS

1. On behalf of the Director, Janakpuri Super Specialty Hospital Society, NCT of Delhi invites e-Tenders (online tenders) from eligible service providers for supply of services as given in Section-IV of this document for the period as per tender document
2. Schedule of Events:

S. No.	Details	Scheduled Dates
1.	Date of release of advertisement of tenders through e-procurement web site & start date for downloading tenders	As per e-tender
2.	Date/Venue for Pre-Bid Meeting	As per e-tender
3.	Last Date & Time for downloading Tender Documents from e-Procurement web site	As per e-tender
4.	Last Date & Time for submission of online Tenders	As per e-tender
5.	Last Date & Time for submission of EMD, in physical form and original undertaking.	As per e-tender
6.	Date & Time of Opening of Tenders (Pre-Qualification / Technical Bids)	As per e-tender
7.	Date & Time of Opening of financial bid (tentative)	As per e-tender

3. Interested bidders may obtain further information about this requirement from the above office. Tender Enquiry Documents will be available at www.govtprocurement.delhi.gov.in or website of e-procurement Govt. of Delhi.
4. Bidder may also download the tender enquiry documents (a complete set of document is available on website) from the web site www.jsshs.or or <https://govtprocurement.delhi.gov.in/> and submit its tender by using the downloaded document. The tender paper will be rejected if the bidder changes any clause or Annexure of the bid document downloaded from the website.

5. All prospective bidders may attend the Pre Tender meeting. The venue, date and time are indicated in NIT of e-procurement website.
6. Bidders shall ensure that their tenders, complete in all respect, are dropped in the Tender Box located at The Medical Superintendent Office, JSSHS on or before the closing date and time indicated in NIT of e-procurement website, failing which the tenders will be treated as late tender and rejected. The tenders sent by post/ courier must reach the above said address on or before the closing date & time indicated in NIT of e-procurement website, failing which the tenders will be treated as late tender and rejected.
7. In the event of any of the above mentioned dates being declared as a holiday/closed day for the hospital, the tenders will be received/opened on the next working day at the appointed time.
8. The Tender Enquiry Documents are not transferable.
9. All Tenders must be accompanied by EMD as mentioned in NIT. Tenders without EMD shall be rejected.

The Director
Janakpuri Super Specialty Hospital Society – JSSHS

SECTION – IV

INSTRUCTIONS TO BIDDERS

1. General Instructions

- a) The bidder must bid for both CT and MRI services. Bidder who bids for single service/facility will be liable for disqualification.
- b) The bidder should prepare and submit its offer as per instructions given in this section.
- c) The tenders shall be complete with all documents. Those submitted by fax or by email with or without attachments shall not be considered.
- d) The tenders which are for only a portion of the components of the job /service shall not be accepted. (The tenders /bids should be for all components of the job /service.)
- e) The prices quoted shall be firm and shall include all applicable taxes and duties. This shall be quoted in the format as per attached Appendix 'E' only. Only one figure of discount must be quoted which shall be applicable on the rates of all the procedures mentioned in Appendix 'L'. Quoting multiple figures/separate figures will lead to bid being rejected.
- f) The technical bid shall be submitted (with covering letter as per Appendix 'C' & 'D') before the last date of submission. Late tenders / bids shall not be considered.

2. Inspection of Site and Equipment

The interested bidder, after taking prior appointment, may inspect the location where the services are to be rendered during 10:00 AM TO 3:00 PM on all working days till last date of submission of tender as per the tender schedule. The Director, JSSHS shall not be liable for any expenditure incurred in such inspection or in the preparation of the bid(s).

3. Earnest Money Deposit (EMD)

- a) The tender shall be accompanied by Earnest Money Deposit (EMD) as specified in the Notice Inviting Tender (NIT) of Rs.5,00,000 (Rupees Five Lakh Only) in the shape of FDR/Bank Guarantee from any Schedule Bank in favour of "Director, JSSHS" payable at New Delhi", which shall be valid for a period of at least One Year from the last date of submission of tender.

- b) It may be noted that no tendering entity is exempt from deposit of EMD. Tenders submitted without EMD shall be rejected.
- c) The EMD of unsuccessful bidder will be returned to them without any interest, after conclusion of the resultant contract. The EMD of the successful bidder will be returned without any interest, after receipt of performance security as per the terms of contract.
- d) EMD of a bidder may be forfeited without prejudice to other rights of the hospital, if the bidder withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender or if it comes to notice that the information /documents furnished in its tender is incorrect, false, misleading or forged. In addition to the aforesaid grounds, the successful bidders' EMD will also be forfeited without prejudice to other rights of hospital, if it fails to furnish the required performance security within the specified period.

4. Preparation of Tender:

The bids shall be made in TWO step procedure i.e. PQ/Technical Bid and Financial Bid.

a) PQ/Technical Bid:

- i. Scanned copies of all documents required for Technical bid must be uploaded on e-Procurement site and hard copies along with EMD amount must be submitted to the purchaser's office before the closing date & time of submission of E-Bid tender failing which the tender shall be rejected straight away.
- ii. The envelope containing technical bid shall be sealed and marked in bold letter as "PRE-QUALIFICATION & TECHNICAL BID" which shall be sent along with forwarding letter ("Appendix-D") and shall include the following:
 - * E.M.D. in form of FDR/Bank Guarantee.
 - * Original tender document duly stamped and signed in each page along with the Forwarding Letter confirming the performing the assignment as per "Appendix D".
 - * Particulars of the bidder along with all supporting documents as per "Appendix-C".
 - * Copy of the Income Tax Returns acknowledgement for last three financial years.
 - * Copy of audited accounts statement for the last three financial years.

- * Power of attorney in favour of signatory to tender documents.
- * Copy of the certificate of registration of GST with the appropriate authority valid as on date of submission of tender documents.
- * A duly notarized declaration from the bidder in the format given in the “Appendix-G” to the effect that the firm has currently neither been declared as defaulter or black-listed by any competent authority of Government of India OR Government of any State. A declaration that the bidder are presently not involved in any ongoing litigation with any State Govt./ Union Territory / Govt. of India / Govt. Organisation / Govt. Health Institutions.
- * A letter unconditionally agreeing to all the terms and conditions of the tender.

In addition to the above documents,

- i. The tender of any authorized agents of manufacturers of CT/MRI machines willing to participate in the tender process shall include the manufacturer’s authorization letter as per perform given in “Appendix -A”.
- ii. The tender of others (i.e. those who are neither manufactures nor authorized agents) shall include a statement regarding similar services performed by them in last three years and user’s certificate regarding satisfactory completion of such jobs as per proforma given in “Appendix -B”.

b) Financial Bid:

- i. The financial bid must be uploaded on eProcurement website only. **NO HARD COPIES TO BE SUBMITTED FOR FINANCIAL BID.** The Bidder must upload their financial bids in Percentage of discount applicable on cost of procedures (as per Appendix ‘L’). Final applicable prices shall be inclusive of all taxes & duties and quoted in the proforma enclosed at “Appendix E” as per scope of work / service to be rendered.

2. Tender Validity Period and renewal of contract

The tender rates shall remain valid for 5 years after acceptance and the prices quoted shall remain valid for the duration of the contract or till DGEHS/CGHS revises the rates for the said procedures; whichever is earlier. The contract may be extended for another term based on review of performance and with mutual consent.

3. Tender Submission

The envelope containing PQ/Technical bid shall be put in a big envelope, which shall be sealed and superscripted with “TENDER NO <as per NIT> due for opening on <Insert due date for Opening>.

The offer shall contain no interlineations or overwriting except as necessary to correct errors, in which cases such correction must be initialled by the person or persons signing the tender. In case of discrepancy in the quoted prices, the price written in words will be taken as valid.

4. Opening of Tenders

The technical bid will be opened at the time & date specified in the schedule. The bidders may attend the bid opening if they so desire.

SECTION – V

EVALUATION OF TENDERS

1. Scrutiny of Tenders

The tenders will be scrutinized by the selection committee appointed by the authority to determine whether they are complete and meet the essential and important requirements, conditions and whether the bidder is eligible and qualified as per criteria laid down in the Tender Enquiry Documents. The bids, that do not meet the aforesaid requirements, are liable to be treated as non-responsive and may be ignored. The decision of the purchaser as to whether the bidder is eligible and qualified or not and whether the bid is responsive or not shall be final and binding on the bidders. Financial bids of only those bidders, who qualify on technical bid, will be considered and opened.

2. Infirmary / Non-Conformity

The purchaser may waive minor infirmity and/or non-conformity in a tender, provided it does not constitute any material deviation. The decision of the purchaser as to whether the deviation is material or not, shall be final and binding on the bidders.

3. Bid Clarification

Wherever necessary, the purchaser may, at its discretion, seek clarification from the bidders seeking response by a specified date. If no response is received by this date, the purchaser shall evaluate the offer as per available information.

SECTION – VI

SCOPE OF THE WORK

The Service Provider shall be responsible for establishment, operation & management of Radiology Unit (consisting of MRI 1.5T machine and 128 slice CT scanner) in the Department of Radiology in the premises of Janakpuri Super Speciality Hospital for providing quality radiology services to the patients referred by various departments of JSSHS only. The selected bidder shall be responsible for the following tasks under the project:

1. Adequate built up space for installation of Radiology Unit would be provided by the first party in the premises of Hospital. The second party shall be solely responsible for any civil work (if required) at the allocated space as per specifications by the vendor with no liability on the part of the first party. All civil, electrical, air-conditioning provisions (considered essential for installation of MRI and CT scanner) shall be the responsibility of the second party. The second party will be responsible for creating wall thickness and internal furnishings as per AERB guidelines. The first party will not be responsible for any loss / damage to machine or property due to natural calamity or otherwise.
2. The Service Provider shall be responsible of designing, redesigning, and renovation of the radiology unit space provided to them by the Hospital on turnkey basis as per specifications in Appendix-M. The second party will have to do such development, designing, redesigning and renovation after taking due permission from first party and to complete satisfaction of the first party. Second party will have to comply with all suggestions/requirements given by the first party in this regards.
3. The space with all the renovations, modifications by the second party shall remain the property of the first party, after expiry of agreement/MOU period. All expenses on account of electricity, maintenance of premises and the equipment or any other expenses incurred in day to day running of Radiology Unit shall be borne by the Service Provider.
4. Ownership status of all movable assets created from the investments made by the Service Provider shall remain with the Service Provider.
5. The security arrangement, cleanliness of the equipment and house-keeping of the facility shall be sole responsibility of the service provider.
6. The service provider shall be responsible for payment of electricity & water charges to the Hospital on actual basis (sub-meter will be installed by the first party).
7. The service provider shall be responsible for setting up of Radiology unit in the designated area as per the specification provided in Technical Specification. The

Radiology unit shall be made functional within 90 days from the date of award of the contract. Failing which a penalty of INR 2,000 shall be levied for each delayed day for a maximum of 30 days. Upon delay beyond 30 days, the order would stand automatically cancelled and security deposit shall stand forfeited.

8. Equipping radiology unit with state of the art NEW Machines, computers with accessories and other required equipment as per given technical specifications to undertake required investigations. Detailed list of equipment along with their technical specifications, which the successful bidder need to install in the radiology unit have been provided in Appendix-I and Appendix-M.
9. The bidder shall provide brochures of the machines, Monitors and radiology management software with the technical specifications.
10. The technical features and specifications of MRI and CT System, to be installed by the second party, shall NOT be of lower configuration as mentioned in the Tender document; otherwise the bid shall be rejected. Please be informed that if any of the points in the technical specifications is manipulated/ over sighted or neglected in the technical bid and, the same is proven after the installation of the facility, the Second Party shall take expeditiously suitable measures to rectify the challenged clause entirely at its own cost. The First Party shall bear no responsibility to this effect and the extra expenditure would show nowhere against the first party liabilities.
11. Provide trained and experienced manpower for conducting and reporting complex radiology investigations and to manage operations of the radiology unit. A list of complete manpower requirement along with minimum qualification has been provided in Appendix-J. Any deviation from the same would be taken as a breach in agreement and be liable for suitable actions.
12. The MRI Unit shall run on 6 days of the week (Monday – Saturday). During the week days the Radiology Unit shall run from 9:00AM to 4:00 PM (Initially for OPD hours). Functioning in expanded hours may be started as per the need of patients or expansion of hospital services.
13. The Service provider shall provide 24x7 emergency CT scan services to the patients needing emergency CT scan, on instructions of the hospital and should have provision for emergency investigation of patient from their side. The coordination for investigation of serious patients will be done between the doctors of first party and the second party.
14. In case of very sick patients, the service provider shall make provision to provide CT/MRI scanning services to a patient on mechanical ventilation support also. Adequate arrangements (MRI compatible oxygen cylinders, monitors, suction machine, equipment

etc.) must be made in the Radiology Unit.

15. The Radiology Unit must be equipped to undertake all the investigations mentioned under Appendix 'L' and any other CT/MRI investigations that a comparable state-of-the-art radiology unit would be expected to undertake.
16. The Service Provider shall time to time, on instructions of Hospital, arrange training programs for the clinical staff and doctors of the Hospital for training purposes at no extra cost to the first party.
17. The service provider must provide full and uninhibited access to all the data as well as console/reporting/viewing systems to any doctor deputed by the first party. Such doctors deputed by the first party may visit the radiology unit for studying/reviewing scans or data of any patient at any time during working hours; and staff (clinical as well as non-clinical) employed by the service provider must assist such doctors in all possible ways.
18. The doctors deputed by the first provider may visit the radiology unit for discussion of complex cases with doctors employed by the service provider and all assistance must be extended by the service provider to the doctors deputed by JSSHS.
19. It is pertinent to note that first party is likely to refer some patients with medico-legal registration to the service provider. Hence privacy and protection of data of such patients, generated in the Radiology Unit, would be of prime importance. The service provider would be liable for documentation and preservation of such data and must provide the same as and when demanded by the first party or any other legal body like court, tribunal etc.
20. The Service Provider shall ensure efficient and smooth functioning of the radiology unit at all times and provide sufficient qualified manpower for the same (Minimum requirements are mentioned in Appendix-J).
21. The Service Provider shall provide all the consumables whatsoever as required in the advised investigative procedure and shall not charge anything extra to the patient. The service provider must issue a no-fee receipt to every patient.
22. In the best interest of patient management, prompt reporting of MRI/CT done at the radiology unit would be of paramount importance. The service provider must ensure that report of any routine scan done at the radiology unit shall be provided within 24 hours of the investigation. If there is a holiday on the next day of the investigation, the report must be provided on the next working day.
23. In case of urgent scans, for example (including but not limited to) to rule out Acute

CVA, Head Injury and Abdominal Trauma etc. a provisional report shall be provided to the treating physician/surgeon within 30 minutes. Patients advised “urgent/life-saving” scans, must be given top priority by the service provider and must be accommodated urgently no matter how long the waiting list of the patients. Under no circumstances such patients should be given a later date.

24. The Service provider shall install radiology unit management software.
25. The Ownership of all the clinical data generated at the radiology unit shall remain with the Hospital and the service provider shall be a custodian of the clinical data collected during the project period. The service provider shall transfer all the collected data to the Hospital at the end of the contract.
26. When the first party starts Hospital Information Management System (HIMS) and Picture Communication and Archiving System (PACS), the patients’ data available in the radiology unit would have to be made accessible to these systems by the Second Party.
27. MRI/CT scans are extremely important investigations and play a major role in deciding treatment modalities and strategies. Results of such scans can sometimes be of paramount importance to patient’s survival chances. Thus, the hospital shall have full right to decide modality, mode, duration of investigation and type of consumables as per requirement and benefit of the patient. All the consumables to be used in the Radiology unit will be done only after the consent of the Hospital. Second Party is obliged to provide the services as desired by the Department in the existing contract period. Failing such compliance will be considered breach of contract and liable for suitable action.
28. Radiology as a science is an ever growing field and modification, up gradation, newer modalities in terms of patient management and need of consumables are likely in future. The JSSHS is a tertiary care hospital and Second Party is obliged to comply with the hospital for such changes and modifications. Failing to undertake such changes and modifications according to need of patient management as desired by the hospital will be considered as breach of contract and liable for suitable action.
29. The service provider will have to procure a suitable stand-by source of power (UPS backup for complete system), capable of catering the power requirement of radiology unit with all accessories and facility as such, so that services remain available uninterrupted.
30. The approved rates of various CT/MRI investigations to be conducted by the second party on MRI machine would include: (i) Cost of good quality imaging films, (ii) Cost of

CD/DVD, (iii) Cost of disposables of standard & safe brand, and (iv) Eco-friendly carry-bag for keeping investigation films & report. All patients must be provided with good quality films and CD/DVD of investigation.

31. Poor quality CT/MRI scans or poor quality films will have to be repeated & replaced at no extra cost. As far as the doubtful observations or incomplete studies are concerned, a repeat scan will only be carried after review by consultant/in-charge appointed by the authority.

32. Unlisted investigations:

- Even though all due care has been taken by CGHS/DGEHS department in preparing list of CT/MRI investigations but still on occasion a situation may arise where the treating physician, for appropriate management of a patient, would require an investigation that is unlisted in the provided list of investigations (Appendix L). For example: MRS, CSF flow, MR Perfusion study, DTI, Tractography, Neurography etc. Under such circumstances, such investigation will be done at 1/3rd the cost of 'ordered primary region' (and would be performed only along with another 'ordered primary region'). For example: If MRI Brain + MRS are ordered by the treating physician; as MRS is an unlisted investigation, it will attract a cost of 1/3rd of that of MRI Brain and will be added to the cost of MRI Brain. MRS alone will not be ordered.
- Conditions where an unlisted investigation is ordered with contrast, additional charges of Rs.1000/- (Rupees One Thousand Only) will be reimbursed to the service provider as contrast charges. For example: CT Chest is a listed investigation but "Contrast enhanced CT Chest" is unlisted. Thus, if "Contrast Enhanced CT Chest" is prescribed by doctor at JSSHS, then Cost of CT Chest + Rs.1000/- will be reimbursed to the service provider.
- Still, in case of un-foresighted ambiguous situation (regarding charges), the matter shall be amicably sorted out by the head of the hospital and the second party.

33. Minimum assurance: JSSHS believes in a mutually beneficial association with the service provider. The first party understands that the service provider will be spending a significant amount of money towards running costs of the unit, for example: Electricity charges, Helium boiling charges, staff salary etc. Under such circumstances, the first party shall provide a minimum assured number of investigations to the second party. Such assurance would be as under on monthly basis:

MRI scans: 200 (This figure is as per the present services available in the hospital)

CT scans: 50 (This figure is as per the present services available in the hospital).

Such assurance will be calculated on three monthly average basis. In case the first party fails to provide the minimum assured number of scans to the second party, it will reimburse the second party with remaining numbers multiplied by the cost of MRI Brain without contrast (in case of MRI) and CT Brain without contrast (in case of CT).

For example: If in a period of three months first party provides 800 MRI and 250 CT referrals to the second party, then first party will additionally reimburse the second party with amount equalling

$(600 - 500) \times \text{Cost of MRI Brain without contrast, \&}$
 $(150 - 100) \times \text{Cost of CT Brain without contrast.}$

Minimum assurance will cease to exist if there is any downtime of CT/MRI machines in the corresponding quarter used for calculation.

34. The Hospital is in process of obtaining NABH accreditation and the service provider shall have to comply with all the NABH requirements. The Hospital may ask the service provider to get Primary/Basic NABH accreditation qualification within a stipulated time frame.
35. At all instances, where the identity of the facility is concerned, the name of the department and Hospital shall precede that of the Service Provider.
36. The Second Party shall abide by all the guidelines issued by the Government of India and the First Party from time to time during the contract period.

SECTION – VII

ROLE OF HOSPITAL

The Hospital shall have following role and responsibilities during the period of contract:-

1. The Hospital shall provide required space to the Service Provider to make a state of the art radiology unit along with all required areas on the same floor of the radiology unit.
2. The Hospital shall provide uninterrupted water supply to the radiology unit with a separate sub-meter to be installed by vendor.
3. The Hospital shall provide electricity connection till the door step of the radiology unit, which shall further be extended by the service provider within the radiology unit as per their requirement with a separate sub-meter installed by the vendor.
4. The Hospital shall identify and provide approval to the service provider to provide investigative services to identified patients. The service provider must not treat any outside/non-registered hospital patient.

SECTION – VIII

ELIGIBILITY CRITERIA

The eligibility criteria for application of intending organizations for consideration of selection of the Organization for establishment, operation & management of Radiology Unit (consisting of MRI 1.5T machine and CT 128 slice scanner) under PPP are provided as under:

1. The Bidder shall be a sole provider or a group of providers (maximum 3) coming together as Consortium to implement the Project, represented by a lead partner. A bidder cannot bid as a sole provider as well as a partner in a consortium. No bidder can place more than one bid in any form. In support of this, the bidder's letter shall be submitted as per proforma in Appendix 'A'. The Service provider should be registered as a legal entity.
2. The Bidder shall have a minimum of three years of experience in carrying out similar type of assignment / service in private or public sector. In support of this, a statement regarding assignments of similar nature successfully completed during last three years should be submitted as per proforma in 'Appendix B'. Users' certificates regarding satisfactory completion of assignments should also be submitted. The assignment of Govt. Depts. / Semi Govt. Depts. should be specifically brought out. (The decision of the hospital as to whether the assignment is similar or not and whether the bidders possess adequate experience or not, shall be final and binding on the bidders.)
3. The Organization must have a valid Clinical Establishment Licence of the existing Hospital/Nursing Home or the Diagnostic and Investigation Centre for CT scan, Digital X-Ray (CR or DR), at present.
4. The Organization should have been operating and managing a Hospital/Nursing Home for last three years and having in-house investigation facilities for CT scan , Digital X-Ray (CR or DR) and MRI services at present

Or

The Organization should have been operating and managing a Diagnostic and Investigation Centre for last three years and having in-house investigation facilities for CT scan, Digital X-Ray (CR or DR) and MRI services at present

5. The above experience could be demonstrated by the single bidder or the lead member of the consortium. In case of consortium bidding, aggregate financial turnover of only those members of consortium would be considered who qualify the technical eligibility independently.

6. The annual turnover of the Organization (in Rupees) shall be considered for being eligible to apply are as under.:

Rs. Four (4) Crore in aggregate of last two financial years ending March 2017 or of last two financial years ending March 2018 in case the Organization has been running a Hospital or Nursing Home as mentioned under point 4 above

Or

Rs. Two (2) Crore in aggregate of last two financial years ending March 2017 or of last two financial years ending March 2018 in case the Organization has been running a Diagnostic and Investigation Centre as mentioned under point 4 above.

7. In case of audited financials not being available for the financial year 2017-2018, CA certified provisional financials should be provided.
8. The Bidders must not presently be Blacklisted/Debarred by the Purchaser; or by any State Governments or its organizations; or by Govt. of India or its organizations as on bid submission date. The Bidders must not presently be involved in any ongoing litigation with any government agency/state/central department as on bid submission date. The bidder should not have been convicted/charge-sheeted in any criminal case in respect to the nature of work involved in the contract with any of the State Government or Union Government or any public institution for any quality or other reason against patient welfare. The bidder should not have been indicted / charge/ penalized financially on account of non-performance or poor performance by any govt institution/ PSU / autonomous body. JSSHS shall have power to cancel the bid or/and terminate the agreement on discovery of such facts at any time.
9. The principal bidder/lead partner shall be legally responsible and shall represent all consortium members, if any, in all legal matters.

Applicant failing to fulfil any of the above-mentioned Eligibility Criteria will not be considered for selection. However, the selection committee may relax one or more of the eligibility criteria except criteria no.8 in case of deserving applicants.

SECTION – IX

SELECTION PROCESS

Selection of the bidder will be finalized through Combined Quality Cum Revenue Based System (CQCRBS) method. CQCRBS uses a competitive process among the prima facie qualified bidders, objectively taking into account the quality of a product (in this tender referred to the Technical parameters of the prospective bidders) and its cost of procurement (in this tender referred to the financial bid i.e. the single discount percentage to be offered by the prospective bidder). Evaluation of the offers would be carried out in two stages - first the technical, and then the financial. Evaluators of technical proposals shall not have access to the financial proposals until the technical evaluation is concluded. Financial proposals submitted by the bidders shall be opened only after completion of the technical evaluation, strictly in terms of the provisions contained in the Bid Document.

The total score of a bidder would be obtained by multiplying the Quality and Cost Scores of the bidder by the pre-defined weightage assigned, and adding them together. The weightage assigned for Technical Score and Financial Score would be 40 and 60 respectively. The bidder securing the highest total score would ordinarily be selected as H1 bidder.

The following steps will be followed during evaluation of the bids

An illustrative example is provided below:

Technical marks of the bidders would be converted to a “Technical Score” by dividing the marks of the bidder with the highest technical marks and then multiplying it by 100. Further, this “Technical Score” will be converted to “Weighted Technical Score” by giving decided weightage of 40% to it. An illustration of conversion of Technical marks into score has been given in the table below:

Weighted technical score sheet (applicable for a technically qualified candidate whose total marks in Technical Evaluation is 60 or above as per technical criteria’s score)

Bidder	Marks obtained on Technical Evaluation (TM)	Technical Score (TS) [TM/HTM*100]	Weighted Technical Score @40%
Bidder 1	90 (HTM)	100	40
Bidder 2	65	72.2	28.9
Bidder 3	75	83.3	33.3

HTM = Highest Technical Marks

Method of calculation of Marks obtained on Technical Evaluation is provided under sub-section “Criteria of Technical Score” of this section.

Evaluation of Financial Bid:

Financial bids will be opened after the technical evaluation is concluded and uploaded on the e-tender portal. Financial quotes of the bidders would be converted to a “Financial Score” by dividing the quote of the bidder with the highest financial quote and then multiplying it by 100. Further, this “Financial Score” will be converted to “Weighted Financial Score” by giving decided weightage of 60% to it. An illustration of conversion of Financial Quote into score has been given in the table below:

Bidder	Financial quote/Discount percentage quoted in percentage (FQ)	Financial Score [(FQ/HFQ)*100]	Weighted Financial Score @60%
Bidder 1	6 (percent)	92.3	55.38
Bidder 2	6.5 (percent) – HFQ	100	60
Bidder 3	4 (percent)	61.5	36.9

HFQ = Highest Financial Quote

Selection of Bidder:

The bid of a Bidder will be ranked in the Combined Quality Cum Revenue Based System(CQCRBS) method based on the total score obtained by the bidder in the evaluation of Technical Criteria and as well as in the evaluation of Financial bid using the weights of 40% and 60% for the " Technical Criteria " and the " Financial bid " respectively.

A ready reckoner for Combined Quality Cum Revenue Based System (CQCRBS) with weightage 40:60 is given in the table below:

Bidder	Weighted Technical Score @ 40%	Weighted Financial Score @60 %	Combined Technical and Financial Score	Remarks
Bidder 1	40	55.38	95.38	H1 bidder
Bidder 2	28.9	60	88.88	H-2 bidder
Bidder 3	33.3	36.9	70.22	H-3 bidder

The bidder obtaining Highest Combined Technical and Financial Score would be selected as the H1 bidder and awarded the contract.

SUB-SECTION: CRITERIA OF TECHNICAL SCORE

Sl. No.	Criteria	Marks
1.	The Organization has experience of running the existing Hospital/Nursing Home/Diagnostic Centre for last three years and above. (To provide relevant proofs)	a. 03 – 05 years = 6 marks b. > 05 – 10 years = 8 marks c. > 10 years= 10 marks
2.	Annual Turnover (in Rupees) of the Organization having hospital or Nursing Home in aggregate of last two financial years ending March 2017 or two financial years ending March 2018 Or Annual Turnover (in Rupees) of the Organization having diagnostic & investigation centre in aggregate of last two financial years ending March 2017 or two financial years ending March 2018. (To submit audited financials or CA certified financials)	04 crore – 08 crore = 15 marks > 08crore - 12 crore = 20 marks > 12 crore = 25 mark Or 02 crore - 04 crore = 15 marks > 04 crore - 06 crore = 20 marks > 06 crore = 25 marks
3A.	The Organization is having investigation facilities for Digital X- Ray (CR or DR), CT scan & MRI in their existing centre (To submit relevant proof)	Having any one investigation facility: 8 marks Having two investigation facilities: 12 marks. Having all three investigation facilities: 15 marks.
3B.	Present deployment of Medical Personnel and Technician for CT Scan / Digital X-Ray in the existing centre of the Organization (To submit relevant proof)	Number of Radiologists: 1 = 0 marks, 2 = 5 marks, 3 = 10, > 3 = 15 marks Number of Technicians: 2 = 5 marks, > 2 - 5 = 8 > 5 = 15

4.	The Organization is having investigation facilities for Digital X- Ray (CR or DR) / CT scan in their existing centre and is functional 24X7 [to be supported by relevant document]	a. If yes: 5 marks b. If no: 0 marks.
5.	<p>The organization is at present running PPP (Public Private Partnership Services) unit as under:</p> <ul style="list-style-type: none"> a. Under PPP partnership (either O&M or EOM mode) in any hospital under the Government of NCT of Delhi with a valid agreement as on the date of application. b. Under PPP partnership (either O&M or EOM mode) in any hospital in any other state of India with a valid agreement as on the date of application. c. The organization under PPP partnership (both O&M and EOM mode) in any hospital under the Government of NCT of Delhi with a valid agreement as on the date of application have cleared 100% of their dues including electricity/water bills as per terms and conditions of the agreement till the last completed quarter before issuance of this tender. (A valid certificate from the Head of the Institutions of all the units under agreement regarding the same has to be submitted for the respective units running under PPP). <p>Note: For organization that are under PPP partnership (both O&M and EOM mode) with any government hospital under the DoHFW, Government of NCT of Delhi, submission of documents related to clearance of dues, duly certified by the hospitals as detailed above is mandatory. The organization will be considered technically disqualified if relevant documents are not submitted.</p>	<p>If yes for only a or b: 5 marks</p> <p>If yes for both a & b: 10 marks.</p> <p>c. If 100% of dues to be payable to hospitals are cleared as in point 5C: 5 marks.</p> <p>If < 50% of all dues are not cleared: 15 marks will be deducted from the total technical score of the respective PPP partner before calculating the final weighted score</p> <p>If > 50% of all dues are not cleared: 25 marks will be deducted from the total technical score of the respective PPP partner before calculating the final weighted score)</p>

The maximum possible marks, which may be scored by an applicant, are 100. Minimum qualifying marks are 60 out of 100 (i.e. 60 % of the total possible marks). Financial bid will be evaluated only for the Organizations scoring 60 and above in technical qualifications as stated above. The final selection of the bidder will be based on the total score obtained as per CQCRB system of scoring mentioned in the tender document.

SECTION –X

TERMS AND CONDITIONS

1. Signing of Contract

The purchaser shall issue the Notice for Award of Contract to the successful bidder within the bid validity period. And the successful bidder will be required to sign and submit the contract unconditionally within 15 days of receipt of such communication.

2. Modification of Contract

The contract when executed by the parties shall constitute the entire contract between the parties in connection with the jobs / services and shall be binding upon the parties. Modification, if any, to the contract shall be in writing and with the consent of the parties.

3. Performance Security

- a) The successful bidder shall furnish a performance security in the shape of a Bank Guarantee/FDR issued by a Nationalised Bank in favour of Tender Inviting Authority for an amount equal to INR Twenty Five Lakh (Rs.25,00,000/-). The Bank guarantee/FDR shall be as per proforma at “Appendix F” and remain valid for a period, which is six months beyond the date of expiry of the contract. This shall be submitted within 30 days of receiving of Notice for Award of Contract, failing which the EMD may be forfeited and the contract may be cancelled.
- b) If the firm / contractor violate any of the terms and conditions of contract, the Performance Security shall be liable for forfeiture, wholly or partly, as decided by the Purchaser and the contract may also be cancelled.
- c) The Purchaser will release the Performance Security without any interest to the firm / contractor on successful completion of contractual obligations.

4. Compliance of Minimum Wages Act and other statutory requirements

The bidder shall comply with all the provisions of Minimum Wages Act and other applicable labour laws. The bidder shall also comply with all other statutory provision including but not limited to provisions regarding medical education and eligibility criteria of human resources used by the bidder for providing the services, biomedical waste management, bio-safety, occupational and environmental safety.

Legal liability of the services provided by the bidder shall remain with the service

provider but in case of any death the certificate shall be issued by the government doctor. The Service provider shall maintain confidentiality of medical records and shall make adequate arrangement for cyber security.

5. Income Tax Deduction at Source

Income tax deduction at source shall be made at the prescribed rates from the bidder's bills. The deducted amount will be reflected in the requisite Form, which will be issued at the end of the financial year.

6. Periodicity of Payment

The payment will be made on monthly basis. The bidder will raise its invoice on completion of services during this period duly accompanied by evidences and satisfactory performance of services provided. The payment will be subject to TDS as per Income Tax Rules and other statutory deductions as per applicable laws.

7. Penalty of non payment of dues

If the service provider does not make payments of due water/electricity bills to the authority within the stipulated time, then a penalty of Rs.1000/- per week will be applicable on the total payment. A delay in payment of beyond one month would be considered as a breach in contract and will be viewed strictly.

8. Damages for Mishap/Injury

The purchaser shall not be responsible for damages of any kind or for any mishap/injury/accident caused to any personnel/property of the bidder while performing duty in the purchaser's / consignee's premises. All liabilities, legal or monetary, arising in that eventuality shall be borne by service provider.

9. Termination of Contract

The hospital may terminate the contract, if the successful bidder withdraws its tender after its acceptance or fails to submit the required Performance Securities for the initial contract and or fails to fulfil any other contractual obligations. In that event, the hospital will have the right to purchase the services from next eligible bidder and the extra expenditure on this account shall be recoverable from the defaulter. The earnest money and the performance security deposited by the defaulter shall also be recovered to pay the balance amount of extra expenditure incurred by the hospital.

10. Arbitration

- a) If dispute or difference of any kind shall arise between the purchaser and the service provider in connection with or relating to the contract, the parties shall make every effort to resolve the same amicably by mutual consultations.
- b) If the parties fail to resolve their dispute or difference by such mutual consultations within thirty days of commencement of consultations, then either the purchaser or the service provider may give notice to the other party of its intention to commence arbitration, as hereinafter provided. The applicable arbitration procedure will be as per the Arbitration and Conciliation Act, 1996 of India. In that event, the dispute or difference shall be referred to the sole arbitration of an officer to be appointed by the Director, JSSHS as the arbitrator. If the arbitrator to whom the matter is initially referred is transferred or vacates his office or is unable to act for any reason, he / she shall be replaced by another person appointed by The Director, JSSHS to act as Arbitrator. Such person shall be entitled to proceed with the matter from the stage at which it was left by his predecessor.
- c) Work under the contract shall, notwithstanding the existence of any such dispute or difference, continue during arbitration proceedings and no payment due or payable by the Purchaser or the service provider shall be withheld on account of such proceedings unless such payments are the direct subject of the arbitration.
- d) Reference to arbitration shall be a condition precedent to any other action at law.

11. Applicable Law and Jurisdiction of Court:

The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force. The Court located at the place of issue of contract shall have jurisdiction to decide any dispute arising out of in respect of the contract. It is specifically agreed that no other Court shall have jurisdiction in the matter.

12. Other Terms & Conditions

- a) The Project will be awarded initially for a period of 5 years and the Service Provider will be obliged to establish, manage and operate the Project in accordance with the provisions of a Contract Agreement and terms and conditions therein. It could be cancelled at any time after providing an opportunity of hearing by the Authority, in case the contractor does not follow the rules, regulations and terms and condition of the contract.
- b) The Authority will provide the required space, for establishing the Project.
- c) New Installation & continuation: The service provider shall commission the

Radiology Unit within 90 days of the signing of the contract by both parties. In case of continuation of the service provider for the subsequent contract period, this time period shall not be valid.

- d) Technology Up gradation: The machine shall be suitably upgraded by the service provider under following conditions:
 - (i) Review by a board appointed by JSSHS Authority upon assessing the need for a technology up gradation.
 - (ii) Upon declaration of any national or international guideline accepted by the Government prohibiting the use of earlier (currently installed) technology.
 - (iii) After completion of 10 years of contract period, the entire Equipment machinery shall be replaced.
- e) All the pre-requisites such as civil, electrical, air-conditioning, computer or any other changes in the site for installation of machine will be executed by the service provider at its own cost, with due permission of the hospital. The hospital administration will not be responsible for any loss/ damage to the machine/property due to natural hazard and service provider will take adequate insurance cover at his own risk & liability for all damages arising out due to any unprecedented reasons. The service provider shall provide round the clock security services for the Radiology Unit at its own cost for the entire period of contract. The contract and terms thereof shall be governed by indemnification clause.
- f) All expenses on account of man power, electricity, water and other maintenance of premises and the machine, sanitation, security or any other expenses incurred in the day to day running of the machine shall be borne by the provider.
- g) The service provider shall provide for storage of soft copy and hard copy of all records at the Hospital at its own cost. In case of change of service provider for any reason, the stored data must be transferred to the new provider for continuation of storage.
- h) Monitoring & Reporting:
 - (i) The service provider shall provide fortnightly and monthly reports on number of investigations, new patients registered on approval of Hospital, complications specific to investigations etc. to the Hospital in desired and mutually finalized formats.

- (ii) The Hospital shall have right to inspect the radiology unit, clinic records, staff registers etc. from time to time at its own discretion.
- (iii) The service provider shall from time to time conduct patient satisfaction surveys as mutually decided and submit reports of the surveys to the hospital.
- (iv) The JSSHS may appoint an auditor to access the investigation quality and provide report to the Hospital.
- i) Review of performance and observance of terms & conditions shall be carried out by a committee which shall include The Director, JSSHS and other members nominated by the Director. The report of this review shall form the basis for extension of the contract annually within the contract period.
- j) The service provider will have to maintain an uptime of 95% with maximum 7 days of downtime at a stretch of any single machine of the facility. In case the service provider fails to do so, the provider shall pay a sum equivalent to cost of a single CT or MRI Brain (depending on the non-functioning machine) multiplied by total number of CT or MRI Brain done per day during the given month, for each day of shutdown beyond 7 days. The service provider shall make alternative arrangements for provision of investigations (including free transportation of patients) in case the machine is out of order/ broken down. The rates at which the Authority has engaged the service provider shall not change in any case, subject to CGHS/DGEHS rates and policy.
- k) JSSHS shall make payment to the service provider for its services on monthly basis through ECS for all invoices raised for the previous month.
- l) A no-fee receipt shall be provided by the service provider to every patient. A copy of all such receipts shall be submitted on a weekly basis by the service provider to the Designated Hospital Authority. This will form the basis of monthly payment by purchasing authority to the service provider for the said services.
Advertisement/Information of No Fee/Charges to be displayed in Radiology Unit at prominently visible points as well as in other parts of the Hospital after consultation with JSSHS.
- m) The following records shall be maintained on a daily basis by the service provider:
 - (i) Daily patients register including OPD as well as for indoor patients referred by the Hospital to be separately maintained. Online daily data to be submitted to JSSHS.

- (ii) Log book for record of any breakdown/shut down of the machine/facility.
- n) The service provider shall not sell or transfer any proprietary right or entrust to any other third party for running the facility.
- o) The second party shall take a third party insurance policy or similar existing scheme in the market, to cover all the patients subjected to MRI/CT investigations, against any mishap during patient transport, inside the radiology unit and for consequences arising due to reporting error. Conforming to the provision of the 'Consumer Protection Act (1986)' shall be the sole and absolute responsibility of the Second Party and the First Party will share no liability in this regard. Privacy and other ethical values of patients under investigation shall have to be maintained in individual cases by the Second Party.
- p) After closure of the contract agreement between the service provider and the authority, the service provider shall vacate the space occupied, within a period of 15 days.
- q) The service provider shall provide resuscitation facilities with crash cart for providing lifesaving support if required by patients within the radiology unit.
- r) Service provider shall arrange for appropriate and adequate signage and IEC (Information-education-communication) activities for facility as decided by the hospital.
- s) The service provider shall abide by all the guidelines issued by the Authority and statutory bodies. In case of violation the contract could be terminated after providing an opportunity of hearing to the contractor, at one month's notice. Dispute resolution shall be as per arbitration clause given in the contract.
- t) The service provider shall be obligated to provide 24X7 (round the clock) radiology services, if required to meet the work load ensuring that no patient has a wait time of more than 48 hours from the time when requisition of investigation has been made.

APPENDIX - A

BIDDER'S AUTHORIZATION LETTER

(To be submitted by authorized customer)

To,
The Director,
Janakpuri Super Speciality Hospital Society,
C2 – B, Janakpuri
New Delhi – 110 058

Ref. Your TE document No.-----, dated-----

Dear Sirs,

We,..... are the suppliers of -----
----- (name of services(s) and hereby conform
that;

1. Messrs ----- (name and address of the agent)
is our authorized agents for -----
2. Messrs ----- (name and address of the agent) have fully trained
and experienced service personnel to provide the said services.
- 3.

Yours faithfully,

[Signature with date, name and designation]

For and on behalf of Messrs _____
[Name & Address of the Manufacturers]

Note:

1. This letter of authorization should be on the letterhead of the manufacturing firm and should be signed by a top executive of the manufacturing firm.
2. Original letter shall be attached to the tender.
3. Service providers that are neither manufactures nor authorized agents may not attach this authorization letter.

APPENDIX - B

ASSIGNMENT OF SIMILAR NATURE SUCCESSFULLY COMPLETED DURING LAST THREE YEARS

Attach users' certificates (in original) regarding satisfactory completion of assignments (minimum three):

Sr. No.	Assignment contract No. & Date	Description of work/services provided	Number of functional units/machine installed for the contract	Date of commencement	Date of completion	Was assignment satisfactorily completed	Address of organization with Phone No. where assignment done
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							

Note: Attach extra sheet for above Pro forma if required.

Signature.....

Name

APPENDIX - C

PARTICULARS OF THE BIDDER'S COMPANY

(To be submitted by all bidders)

1. Name of the Organization:
2. Registered Address:
3. Phone/Fax/Mail ID:
4. Type of Organisation: Prop./Partnership Company/Consortium/Trust/Not for Profit Organisation
5. Nature of business activities of the applicant:
 - (a)
 - (b)
6. Registration details of the Organization:
(Registered under the Company's act/ Society act etc.)
7. Number of years of experience in Health Care:
8. Name and Address of the Hospital /Nursing Home /Diagnostic centre (State all, if more than one): (If the name/address is different than that of the Organization as stated under 1 above)
9. Year of Incorporation of the Hospital /Nursing Home / Diagnostic Centre:
10. Date and validity of registration of clinical establishment under relevant act:
11. Annual turnover of the Organization for the last two financial years ending March 2018 or ending March 2017:
Aggregate of two financial years ending March, 2018:
Aggregate of two financial years ending March, 2017:
12. Services/facilities provided in house (provide relevant proof):

Name of services	Availability	Year of starting the services	Make/model of machines
CT Scan facilities:	Yes/No		
MRI Scan facilities	Yes/No		
Digital X-Ray (CR/DR)	Yes/No		

13. Information regarding existing CT/MRI/Digital X-Ray (CR or DR) services:

(a) Performance:

Number of scans done in existing centres	2015 (January – December)	2016 (January – December)	2017 (January – December)	Remarks
CT Scan				
MRI Scan				
Digital X-Ray				

(b) Man power for existing units (please provide relevant proofs):

Personnel	Numbers	Remarks
Medical Personnel		
a. Radiologist		
b. Other Medical Personnel		
c. Technicians		
d. Other staff		
Total		

(c) Whether CT Scan and/or MRI Scan services are functional 24x7 (if yes, provide relevant documents: Yes/No

14. Number of service personnel:

Name	Post	Qualification	Experience

15. The organization is at present running CT scan unit /MRI scan or both through PPP with a valid agreement as on the date of the application:

(a) Under PPP partnership (both O & M and EOM mode) in any Hospital under the Government of NCT of Delhi with a valid agreement as on the date of application. (If yes, name of the hospital and name of the services): YES/NO

(b) Under PPP partnership (either O&M or EOM mode) in any hospital in any other state of India with a valid agreement as on the date of application. (If yes, name of the hospital and name of the services): YES/NO

(c) The organization under PPP partnership (both O&M and EOM mode) in any hospital under the Government of NCT of Delhi with a valid agreement as on the date of application have cleared 100% of their dues including electricity/water bills as per terms and conditions of the agreement till the last completed quarter before issuance of this tender. (A valid certificate from the Head of the Institutions of all the units under agreement regarding the same has to be submitted for the respective units

running under PPP).: YES/NO

[To be supported by duly certified documents from hospital authorities of all the hospitals where the organisation is under PPP partnership (both O & M and EOM mode)]

16. Whether the bidder has NABL/NABH/ISO or any other accreditation?
(If yes/ whether documents attached with technical bid).

17. Registration. Nos.:

- (a) EPF
- (b) ESI
- (c) GST
- (d) PAN No.
- (e) Audited Accounts statement for past three financial years
- (f) Copy of income tax returns for past three financial years
- (g) Experience certificate of Bidder regarding existing Radiology Units

18. Brief write-up about the firm/company. (use extra sheet if necessary)

Signature of Bidders

Date:

Place:

Name:

Office Seal:

APPENDIX - D

FORWARDING LETTER FOR TECHNICAL BID

(To be submitted by all bidders in their letterhead)

Date:.....

To,
The Director,
Janakpuri Super Speciality Hospital Society,
C2 – B, Janakpuri
New Delhi – 110 058

Sub: Tender for supply of services of Radiology Unit (MRI & CT) on PPP Mode

Sir,

We are submitting, herewith our tender for providing Radiology Unit services for your esteemed hospital.

We are enclosing FDR/Bank Guarantee
No.....Dated..... (Amount.....) towards Earnest Money
Deposit (EMD), drawn on..... Bank in favour of The Director, Janakpuri Super
Speciality Hospital – JSSHS.

We agree to accept all the terms and condition stipulated in your tender enquiry. We also agree to submit Performance Security as per Clause No.3 of Section X of Tender Enquiry document.

We agree to keep our offer valid for the period stipulated in your tender enquiry.

Enclosures:

- 1.
- 2.
- 3.

Signature of the Bidder.....

Seal of the Bidder.....

APPENDIX - E

FINANCIAL BID

We hereby agree to provide (In Numbers) percentage discount on DGEHS/CGHS approved rates on procedures in Appendix – L of original tender document to be carried out under the PPP project as mentioned in the tender document.

We hereby agree to provide (In Words) percentage discount on DGEHS/CGHS approved rates on procedures mentioned in Appendix – L of original tender document to be carried out under the PPP project as mentioned in the tender document.

In case of any typing mistake or errors quotation mentioned in words shall be considered as final.

Name.....

Signature.....

Company Seal.....

APPENDIX - F

PROFORMA FOR BANK GUARANTEE

To
The Director,
Janakpuri Super Speciality Hospital Society,
C2 – B, Janakpuri
New Delhi – 110 058

WHEREAS.....(Name and address of the Service Provider) (Hereinafter called “ the Service provider” has undertaken, in pursuance of contract No..... dated (Herein after “the contract”) to provide Radiology services. AND WHEREAS it has been stipulated by you in the said contract that the service provider shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give such a bank guarantee on behalf of the service provider;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the service provider, up to a total of Rs.25,00,000/- (Rupees TWENTY FIVE LAKH ONLY), and we undertake to pay you, upon your first written demand declaring the service provider to be in default under the contract and without cavil or argument, any sum or sums within the limits of Rs.25,00,000/- (Rupees TWENTY FIVE LAKH ONLY) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the service provider before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the service provider shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid up to 6 months after the contract termination date(indicate date)

.....
(Signature with date of the authorized officer of the Bank)
.....

Name and designation of the officer
.....

Seal, name & address of the Bank and address of the Branch

APPENDIX - G

DECLARATION BY BIDDER

I / We agree that we shall keep our price valid for a period of five years and further extensions by JSSHS from the date of approval or till DGEHS/CGHS revises the rates for the said procedures whichever is earlier. I / We will abide by all the terms & conditions set forth in the tender documents No. /

I / We do hereby declare I / We are presently not de-recognized / black listed by any State Govt./ Union Territory / Govt. of India / Govt. Organisation / Govt. Health Institutions.

I / We do hereby declare I / We are presently not involved in any ongoing litigation with any State Govt./ Union Territory / Govt. of India / Govt. Organisation / Govt. Health Institutions.

I / We do hereby declare I / We have never been convicted/charge-sheeted in any criminal case in respect to the nature of work involved in the contract.

Signature of the bidder:

Date :

Name & Address of the Firm:

Affidavit before Executive Magistrate / Notary Public in Rs.100.00 stamp paper.

APPENDIX - H

RECORDS FOR PROCEDURE

Radiology Unit shall maintain a record system to provide readily available information on:

1. Patient care
 - a. Investigation requisition forms
 - b. Physician's order
 - c. Completed consent form
 - d. Patient's monitoring sheet (during investigation with and without contrast)
 - e. Standing order for contrast
 - f. Complication or hypersensitivity reaction list
 - g. Transfer/referral slip (for patients that needed to be transferred or referred to another health facility)
 - h. Details of cases done under anaesthesia or sedation
2. Incident and accident (in logbooks)
 - a. Complications related to Radiology Unit
 - b. Complications related to vascular access
 - c. Complications related to disease process
 - d. Death of any patient with cause
3. Facility and equipment maintenance schedule
 - a. Preventive maintenance
 - b. Corrective measures

APPENDIX - I

EQUIPMENT LIST

Emergency equipment: The following equipment should be provided for by the service provider and all equipment should be new in every aspect and not refurbished ones:

S. No.	Name of Equipment
1.	Resuscitation equipment including Laryngoscope, endotracheal tubes, suction equipment, xylocaine spray, oropharyngeal and nasopharyngeal airways, Ambu Bag-Adult & Paediatric (neonatal if indicated). All these items must be installed on a Crash Cart – SS
2.	Oxygen cylinders with flow meter/ tubing/catheter/face mask/nasal prongs
3.	MRI Compatible: Oxygen Cylinders, flow meters, face mask/nasal prongs, suction machines, cardiac monitors, pulse oximeter, contrast injector
4.	MRI compatible Defibrillator with accessories
5.	Metal detector before MRI room
6.	Basic diagnostic equipment- Blood Pressure Apparatus, Stethoscope, weighing machine, thermometer, height meter
7.	Pulse Oximeter
8.	Nebulizer with accessories
9.	Multi para monitors
10.	All required consumables for adult and paediatric patients

Other necessary equipment (Service provided is free to add into the lists as required):

S. No.	Name of Equipment
1.	Stretcher – Simple with oxygen cylinder case below
2.	Wheelchairs
3.	Colour coded dustbins for BMW management along with sharps containers. Bed side dustbins for bed side waste management.
4.	Bed pans
5.	Linen bucket
6.	Computer systems, TV Sets, UPS
7.	Work station to be developed for doctors to view scans and report
8.	Waiting area as designated by hospital authorities to be developed by service provider which should include furniture. Audio/Visual, Tea/Coffee dispenser etc. in consultation with JSSHS.

APPENDIX - J

MINIMUM STAFF REQUIREMENT

It is recommended to have the following minimum standards and staffing pattern for the Radiology unit.

S. No.	Designation	Qualification	Number required (per shift)
1.	Center Manager	Any graduate with PG Diploma in Finance / Materials Management / Marketing Management / CA with experience of 3 years in managing contracts / procurement functions / project management (radiology unit experience preferable)	1 (One)
2.	CT/MRI Technician	<p>a) B.Sc. (Radiography/Radiology) – 3 Years Course with certified exposure in cross sectional imaging (CT Scan, MRI); an additional certified work experience especially in an institution/hospital/center having MRI would be preferred</p> <p>OR</p> <p>b) Diploma (Radiography/Radiology) – 2 Years Course with certified experience in cross sectional imaging (CT Scan, MRI): Additional certified experience in MRI of 3 Years is a must for this qualification</p> <p>OR</p> <p>c) Diploma (CT Scan and/or MRI) – 2 Years Course with certified experience of 3 years in MRI if the candidate holds a Diploma (CT Scan & MRI) or Diploma (MRI) or with certified experience of 5 years in MRI if the candidate holds a Diploma (CT Scan Technology)</p>	2 (Two)
3.	Staff Nurse	GNM/B.Sc. Nursing from recognized institute. Should be registered with the local Nursing Council. (1 year exposure in radiology unit preferred)	1 (One)
4.	Sweeper/Ward Boys	Must have passed Matriculation or equivalent exam with a recognized board	1 (One)
5.	Emergency Medical Officer	MBBS or equivalent qualifications, registered with DMC and at least 3 months experience in a Radiology/ICU/ICCU Unit	1 (One)
6.	Consultant Radiologist	MD Radiology with at least 1 year experience in a reputed Hospital/Diagnostic Centre with CT/MRI facility.	1 (One) Unit In-charge

APPENDIX - K

Technical Bidding Format (Check List)

S. No.	Document to be Attached	Yes/No
1.	EMD FDR/Bank Guarantee	
2.	Qualification Documents	
	1. Forwarding Letter for Technical Bid as per Appendix 'D'	
	2. Particular of the Bidder's company as per Appendix 'C'	
	3. Copy of ITR acknowledgment for last three financial years	
	4. Audited Balance sheet and Profit & Loss account for FY 2013-14, 2014-15, 2015-16.	
	5. Certificate of Incorporation showing existence of bidder for last 3 years as on 31 st March 2017	
	7. Declaration of Non-Blacklisted as per Non-Blacklist clause as per Appendix 'G'.	
	8. Completion and Satisfaction certificate of all the projects where the bidder has been awarded radiology PPP Projects along with details as per Appendix 'B'.	
3.	Technical Specification checklist along with Brochures of CT/MRI Machines, reporting console, computers, film printers, radiology software etc.– qualifying technical specification provided in the tender.	
4.	Letter unconditionally agreeing to all the terms and conditions of the tender (as per Appendix 'D').	
5.	Original tender document duly signed by authorized signatory and stamped in each page along with forwarding letter as per Appendix 'D'	
6.	Copies of supporting documents in support of information provided regarding existing CT Scan/MRI or Digital X-ray (DR or CR) Services, 24 hour services, existing manpower in the "Application Format".	
7.	Duly certified certificate from hospital authorities where the organization is currently running services under PPP basis (as per point 15 of Appendix C)	
8.	Details of experience :Address, Date of establishing Radiology Unit, with total no. years of operation,	
9.	Solvency or Net worth certificate issued by the banker of the firm/company/LLP.	
10.	Name, address / phone no. of Authorized Signatory with written approval of the board / partner of bidding firm.	
11.	Copy of resolution of Board of Directors / Partners expressing interest to bid in present project.	

Along with above documents the bidder shall provide below documents together in PQ/Technical bid:-

1. Self - attested copy of the PAN allotment.
2. Self - attested copy of GST number.
3. Self- attested copies of any quality certification held. Eg.ISO.
4. Status whether Proprietary/Partnership firm/Pvt.Ltd. etc.
5. List & addresses along with contact landline and mobile phone no.of Partners/Directors/ proprietors.
6. Name, address and contact no. of the auditors of company/firm/LLP.

7. Details of existing other business / PPP of the firm on the letter head.
8. Memorandum and Articles of Association / Partnership agreement related to the party.
9. Bidder's authorization letter as per Appendix 'A'

APPENDIX – L

Investigations to be undertaken in CT/MRI radiology Unit for which rate in discount percentage to be given. For unlisted investigations, please clause 33, section VI.

(Prevailing NABH/Non-NABH CGHS rates also mentioned)

This list is only for illustrative purposes only. This list is frequently updated and new investigations are added to it by CGHS/DGEHS. For latest list please refer to the list available on CGHS website.

CGHS Code	CGHS PROCEDURE/INVESTIGATION LIST (DELHI/NCR)	Non- NABH/ Non-NABL Rates	NABH/ NABL Rates
	CT		
150	CT-orbit and brain	1600	1840
1637	CT Head-Without Contrast	900	1035
1638	CT Head- with Contrast (+/- CT angiography)	1350	1553
1639	C. T. Chest - without contrast (for lungs)	1700	2000
1640	C. T. Scan Lower Abdomen(incl. Pelvis) With Contrast	1700	1955
1641	C. T. Scan Lower Abdomen(Incl. Pelvis) Without Contrast	1500	1725
1642	C. T. Scan Whole Abdomen Without Contrast	3000	3450
1643	C. T. Scan Whole Abdomen With Contrast	4500	5175
1644	Triple Phase CT abdomen	4500	5175
1645	CT angiography abdomen/ Chest	4500	5175
1646	CT Enteroclysis	6000	6900
1647	C. T. Scan Neck – Without Contrast	1500	1725
1648	C. T. Scan Neck – With Contrast	1870	2200
1649	C. T. Scan Orbits - Without Contrast	1190	1400
1650	C. T. Scan Orbits - With Contrast	1615	1900
1651	C. T. Scan of Para Nasal Sinuses- Without Contrast	900	1035
1652	C. T. Scan of Para Nasal Sinuses - With Contrast	1600	1840
1653	C. T. Spine (Cervical, Dorsal, Lumbar, Sacral)-without contrast	1500	1725
1654	CT Temporal bone – without contrast	893	1050
1655	CT - Dental	1275	1500
1656	C. T. Scan Limbs -Without Contrast	1700	2000
1657	C. T. Scan Limbs -With Contrast including CT angiography	2253	2650
1658	C.T. Guided intervention –FNAC	1200	1380
1659	C.T. Guided Trucut Biopsy	1200	1380
1660	C. T. Guided intervention -percutaneous catheter drainage / tube placement	1305	1535
	MRI		
151	MRI- Orbit and brain	3450	3968
604	Cardiac MRI	2444	2811
605	Stress Cardiac MRI	3000	3450
1636	MRI Mammography	2550	3000
1661	MRI Head – Without Contrast	1998	2350
1662	MRI Head – With Contrast	2848	3350
1663	MRI Orbits – Without Contrast	1445	1700
1664	MRI Orbits – With Contrast	2000	2300

1665	MRI Nasopharynx and PNS – Without Contrast	2450	2818
1666	MRI Nasopharynx and PNS – With Contrast	3500	4025
1667	MR for Salivary Glands with Sialography	3000	3450
1668	MRI Neck - Without Contrast	3000	3450
1669	MRI Neck- with contrast	5000	5750
1670	MRI Shoulder – Without contrast	2000	2300
1671	MRI Shoulder – With contrast	2600	3000
1672	MRI shoulder both Joints - Without contrast	3000	3450
1673	MRI Shoulder both joints – With contrast	4000	4600
1674	MRI Wrist Single joint - Without contrast	2125	2500
1675	MRI Wrist Single joint - With contrast	4000	4600
1676	MRI Wrist both joints - Without contrast	2125	2500
1677	MRI Wrist Both joints - With contrast	5000	5750
1678	MRI knee Single joint - Without contrast	2125	2500
1679	MRI knee Single joint - With contrast	5000	5750
1680	MRI knee both joints - Without contrast	2125	2500
1681	MRI knee both joints - With contrast	5000	5750
1682	MRI Ankle Single joint - Without contrast	2125	2500
1683	MRI Ankle single joint - With contrast	5000	5750
1684	MRI Ankle both joints - With contrast	5000	5750
1685	MRI Ankle both joints - Without contrast	2500	2875
1686	MRI Hip - With contrast	2500	2875
1687	MRI Hip – without contrast	2125	2500
1688	MRI Pelvis – Without Contrast	2125	2500
1689	MRI Pelvis – with contrast	5000	5750
1690	MRI Extremities - With contrast	5000	5750
1691	MRI Extremities - Without contrast	2125	2500
1692	MRI Temporomandibular – B/L - With contrast	4000	4600
1693	MRI Temporomandibular – B/L - Without contrast	2125	2500
1694	MR Temporal Bone/ Inner ear with contrast	4000	4600
1695	MR Temporal Bone/ Inner ear without contrast	2500	2875
1696	MRI Abdomen – Without Contrast	2125	2500
1697	MRI Abdomen – With Contrast	5000	5750
1698	MRI Breast - With Contrast	4250	5000
1699	MRI Breast - Without Contrast	2125	2500
1700	MRI Spine Screening - Without Contrast	1000	1150
1701	MRI Chest – Without Contrast	2125	2500
1702	MRI Chest – With Contrast	4000	4600
1703	MRI Cervical/Cervico Dorsal Spine – Without Contrast	2125	2500
1704	MRI Cervical/ Cervico Dorsal Spine – With Contrast	4000	4600
1705	MRI Dorsal/ Dorso Lumbar Spine - Without Contrast	2125	2500
1706	MRI Dorsal/ Dorso Lumbar Spine – With Contrast	4000	4600
1707	MRI Lumbar/ Lumbo-Sacral Spine – Without Contrast	2125	2500
1708	MRI Lumbar/ Lumbo-Sacral Spine – With Contrast	5000	5750
1709	Whole body MRI (For oncological workup)	5100	6000
1710	MR cholecysto-pancreatography.	5500	6325
1711	MRI Angiography - with contrast	5000	5750
1712	MR Enteroclysis	2125	2500

APPENDIX - M

MRI/CT MACHINES & ASSOCIATED SYSTEMS

The specifications of machines are as per Govt. Of India, Ministry of Health and Family Welfare, Tender No. HITES/PCD/PMSSY-III/04/RAD/17-18 through HLL Infra Tech Services Limited and Rajendra Institute of Medical Sciences, Tender notice no. RIMS/Stores/ME(4)/ 8647, Dated 12.12.2017

MRI 1.5T Specifications

1.5 Tesla MRI System with state-of-the-art latest features commercially available at the time of supply should be provided. The bidder should submit an undertaking that the installed system and any part thereof are not recycled/refurbished. The system should be European CE with four digit notified body number/ US FDA approved and certificate to be submitted. The system should be based on user friendly platform, reliable and capable of providing excellent performance for clinical imaging and research. The detailed specification that follows shall be understood to be minimum requirement.

1. MAGNET:

- a. Whole Body 1.5 Tesla Magnetic Resonance Imaging System optimized for higher performance in Whole Body and Vascular examinations with superconducting magnet, high performance gradients and digital Radio Frequency System.
- b. 1.5T active shielded super conductive magnet should be short bore and non- claustrophobic.
- c. It should have at least 70 cm patient bore with flared opening with Multi – transmit /Multi-drive /True form or equivalent.
- d. Magnet length should be less than 200cm.
- e. Best homogeneity possible should be given. Specific homogeneity in VRMS at 10cm, 20cm, 30cm & 40cm DSV and at max FOV achievable with the quoted scanner. Homogeneity of magnet should be less than 3.5 ppm over 45 cm DSV.(Guaranteed homogeneity) Homogeneity should be maintained in large FOV, fat saturation and applications like cardiac, functional MRI, diffusion tensor imaging and spectroscopy. System with the highest homogeneity to be quoted.
- f. The magnet should be well ventilated and illuminated with built-in 2 way intercom for communication with patient.
- g. Cryogen vessel to be of Helium only with appropriate super thermal shielding and refrigeration facility for minimum Helium boil-off, Specify the Helium tank capacity and boil-off rate.
- h. Helium level monitoring equipment in the magnet and facility for appropriate quick shutdown of the magnet in the event of emergency.
- i. Helium refill time should not be not less than 2 years.
- j. Active shielding/Fringe field shielding should be provided.
- k. External interference shield sufficient to house the magnet, anesthesia and physiological monitors should be provided.

2. SHIM SYSTEM:

- a. High performance, highly stable shim system with global and localized automated shimming for high homogeneity magnetic field for imaging and spectroscopy. (3D shimming for volume imaging and CSI).
- b. Auto shim should be available to shim the magnet with patient in position. It should take minimum time to shim the magnet with patient in position.

3. GRADIENT SYSTEM:

- a. Actively shielded Gradient system in all x y & z planes.
- b. The gradient should be actively shielded with each axis having independently a slew rate of at least 200 T/m/s and a peak amplitude of 44mT/m, (higher slew rate and peak amplitude will be preferred). These true slew rates should be available in each axis independently, for overall better duty cycle performance of the gradient.
- c. The system should have efficient and adequate Eddy current compensation.
- d. Effective cooling system for gradient coil and power supply.

4. RF SYSTEM:

- a. A fully digital RF system capable of transmitting power of at least 20kw or more with (dual) RF power amplifier. System should be capable of multi transmit with multi amplifier driving/ Multi-drive/true shape for better. **It should have latest software as standard.**
- b. Optical /digital RF receiver system with /high efficient RF receiver system /or its equivalent located on the magnet inside the shielded scan room.
- c. It should also have at least 32 independent RF receiver channels with each having bandwidth of 1 MHz or more along with necessary hardware to support quadrature ICP array/Matrix coils. The system should have necessary hardware to support quadrature phased array & flex coils.
- d. It should support Parallel acquisition techniques with a factor of 12 or more.
- e. Should allow remote selection of coils and / or coil elements.
- f. SAR limits should be as per FDA guidelines for all protocols, including neuro and abdominal imaging.

5. PATIENT TABLE:

- a. The table should be fully motorized, MRI Compatible computer controlled table movement in vertical and horizontal directions. Position accuracy should be +/- 1.0 mm or better.
- b. Should be able to take at least 140 kg load.
- c. The table should have facility for manual traction in case of emergency.
- d. Cushions and other patient comfort accessories. All parts of the table should be protected from liquid spill.
- e. A CCTV system with LCD display to observe the patient should be provided: Moving table angiography should be possible.
- f. The table should have patient hand-held alarm or auto-alarm system.
- g. Table Technology – Bolus chasing with the automatic/continuous moving table should be offered and should be available with fluoro triggered MR angiography for manual and fast switchover in less than 1 sec for CE-MRA. Latest table technology available with the vendor should be provided.
- h. Patient Monitoring: Patient monitoring devices for ECG, respiratory, pulse rate, oxygen saturation, at the console etc. Remote display of gating signals on magnet & at console

6. PATIENT COMFORT FEATURES:

- a. Two way patient communication with head phone, microphone & necessary accessories Patient alarm.
- b. Lighting.
- c. Music system (complete).
- d. MR compatible patient trolley (to transfer patient to the magnet table).
- e. MR compatible wheel chairs-2no.
- f. Closed circuit TV & CCD video camera for patient monitoring.
- g. Provide other standard patient comfort devices.

7. COMPUTER SYSTEM /IMAGE PROCESSOR / OPERATOR CONSOLE:

- a. The main Host computer should have a 24 inches or more high resolution LED color monitor with minimum 1920x1080 matrix display
- b. The system should have image storage capacity of at least 1 TB to store at least 200,000 images in 256x256 matrix.
- c. Additional storage of at least 25 terabytes to be offered. It should be possible to transfer the images from this storage to main console or workstations.
- d. The reconstruction speed should be at least 10,000 images per sec or more for full FOV 256 matrix.
- e. The main console should have facility for music system for patient in the magnet room. The system should have DVD / CD / Flash drive archiving facility. The system should be provided with auto DVD writer. It should be possible to record multiple cases on the DVD.
- f. Two way intercom system for patient communication. Patient monitoring devices for ECG, respiratory rate, pulse rate, O₂ saturation at console.
- g. MRI System should be enabled and networked to RIS/HIS/PACS

8. MEASUREMENT SYSTEM:

- a. Largest Field of View should be at least 45 cm in all three axis. Higher FOV will be preferred
- b. The measurement matrix should be from 128x128 to 1024x1024.
- c. Minimum 2D slice thickness mm should be equal to or less than 0.5mm
- d. Minimum 3D slice thickness mm should be equal to or less than 0.1mm

9. COIL SYSTEM:

- a. The main body coil integrated to the magnet must be Quadrature / CP. In addition to this following coils should be provided.
- b. Multichannel Head coils with at least 16 channel for high resolution brain imaging.
- c. Neuro-vascular Coil with 20 or more channels or Head / Neck Coil , capable of high resolution neuro-vascular imaging or combination of head and neck coli for similar coverage.
- d. Neck phased array coil 8 channels or more.
- e. Spine Array/Matrix Coils with at least 32 channels for thoracic and lumbar spine imaging.
- f. Body Array/Matrix coil with at least 45 cm z axis coverage for imaging of abdomen, with at least 32 channel Acquisition for body part angiograms and heart. In case one coil cannot provide this coverage then multiple coils should be provided. (The best available body coil with the vendor must be supplied).
- g. Cardiac Coil/suitable/coil combination, 32 channels or more for dedicated cardiac work. Suitable coil for carotid plaque imaging should be provided as standard

- h. Suitable surface Coil for Peripheral Angiography application of at least 32 Channel with coverage of 80 cm or more.
- i. Bilateral Breast Coil with at least 8 channels.
- j. SHOULDER coils – Multi channel (minimum 8 channel) flex loop or rigid type -1 no. Large FOV & 1 no. SMALL FOV
- k. Dedicated Knee Coils at least 12 Channels or more.
- l. High resolution foot/ ankle coil – 8 channels or more
- m. Flex Coil large
- n. Small flex coil 8 channel or more for pediatric applications and for neonatal head and neck imaging.
- o. TM Joint coil and Orbit coil
- p. The coil system should permit coverage of 200 cm.
- q. A caddy to be provided for storage of coils.
- r. Dedicated coil for Inner ear & orbit
- s. Dedicated wrist coil (8 channels or more)
- t. Endocavitary coil for prostate & uterus evaluation
- u. The system should continuously monitor the RF coils used during scanning to detect failure modes. RF coils should not require either set up time or coil tuning; Multi coil connection for up to 2 or more coils simultaneous scanning without patient repositioning i.e. like TIM4G/ GEM/FLEX stream coil combination should be provided as standard.
- v. Suitable Coil Storage Cart should be supplied for keeping the all supplied coils.
- w. The supplier should provide Coils or their combinations exclusively for 10 applications; the number of coils should be thus provided as independent and not be having overlapping applications.
- x. Computer Control System:
 - The vendor should supply the latest computer system along with the MR system to handle all the latest applications available on the MR platform.
 - During contract period any hardware updates that are launched globally should be installed.
- y. Host Computer and array processors:
 - Latest state of the art computer system with sufficient RAM (8GB or more) and computational speed to match the single short Echo Planar Imaging (EPI), interactive angiogram , multiplanar three dimensional (3D) reconstruction , surface rendering and dynamic imaging, Vascular imaging/ angiography, and adequate storage(1TB) for images and other applications.

10. APPLICATION SEQUENCES:

- a. The system should have all standard and special pulse sequence packages available with Spin Echo, Inversion Recovery, Turbo Spin Echo with high turbo factor of 256 or more, Gradient Echo with ETL of 255 or more, FLAIR.
- b. Single slice, multiple single slice, multiple slice, multiple stacks, radial stacks and 3D acquisitions for all applications.
- c. Single and Multi-shot EPI imaging techniques with ETL factor of 255 or more
- d. Fat suppression for high quality images both STIR and SPIR.
- e. High quality Fat suppression images with both inversion recovery and Dixon method/IDEAL/3D Dual Echo/m-Dixon.
- f. The system should acquire motion artifact free images in restless patients
- g. Dynamic study for pre and post contrast scans and time intensity studies

- h. MR angio Imaging: Should have 2D/3D TOF, 2D/3D PC , MTS and TONE,ceMRA, Facilities for Accelerated time resolved vascular imaging with applications like Treats/Tracks/Tricks sequences.
- i. Fat and water excitation package. Diffusion Weighted Imaging, with at least b value of 5000 or more.
- j. Bolus chasing with automatic and manual triggering from fluoro mode to 3D acquisition mode with moving table facility.
- k. Non contrast enhanced peripheral angiography for arterial flow with Native/Trance/Inhance sequences
- l. Whole body screening imaging studies for metastasis
- m. High resolution Abdominal and Liver imaging in breath-hold and free breathing modes with respirator triggered volume acquisitions
- n. The system should have basic and advanced MRCP packages including free breathing and 3D techniques.
- o. The system should have facility for flow quantification of CSF, vessel flow and hepatobiliary system.
- p. The system should have the Hydrogen, Single Voxel spectroscopy, Multivoxel, Multislice & Multiangle 2D, 3D Spectroscopy and Chemical shift imaging in 2D/3D. The complete processing/post-processing software including color metabolite maps should be available on main console. Complete prostate spectroscopy hardware and applications should be provided.
- q. Advanced Cardiac Applications: VCG gating, Morphology/wall motion; Cine perfusion imaging; Myocardial viability imaging; Arrhythmia rejection techniques, Advanced Cardiac Ventricular Measurement Analysis; Cine Cardiac Tagging Techniques; Coronary artery techniques; real time interactive imaging, 2D/3D fast field echo/balanced/steady state techniques and evaluation package on workstation
- r. Advanced Breast imaging Package.
- s. Perfusion imaging of brain.
- t. Susceptibility weighted imaging (i.e.SWI) /FMRI / Venous BOLD imaging.
- u. Multi Direction DWI and DTI with minimum of 32 directions(Complete package including quantification and tractography software).
- v. High resolution imaging for inner ear
- w. Advanced applications of Spectroscopy, Perfusion, Flow quantification, Neurography, Dynamic contrast angiography, non-contrast angio and perfusion should be available. Diffusion for whole body, DTI, cartigram, liver imaging with FATSAT, Fat quantification, breast imaging with dynamic contrast studies, SWI and 4D Traks must also be provided.
- x. Silent scanning technology should be provided for added patient comfort.

11. WORKSTATION:

- a. 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.
- b. **Hardware: Node:** The vendor has to supply the hardware in the form of CPU and Medical grade LED monitor 24” or more of at least 1920x1080 resolution.
- c. **Hardware Server:** The server (single/dual configuration) should have image storage capacity of at least 20 Tera bytes, minimum 20,000 concurrent slice

processing power and at least 64GB RAM. The server hardware to be included with 24" or more LED 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

- d. All necessary software including post-processing software for all offered applications including evaluation for fMRI, perfusion (T1 perfusion and T2* perfusion), diffusion, DTI with fibre tracking, cardiac evaluation, and other associated post processing like MIP, MPR, surface reconstruction and volume rendering technique, image fusion and 3D evaluation should be provided.
- e. The workstation should have the following features:
 - i. Cardiac perfusion analysis, quantitative T1 mapping & Processing of Real Time BOLD imaging data, with colour metabolite mapping, quantification of the CSF flow data.
 - ii. Image Fusion software should be provided for Inter-modality and Intra-modality fusion.
 - iii. Software for vascular properties like IAUC, KEP as standard.
 - iv. DSA images should be viewable in Subtraction mode.
 - v. Necessary and adequate hardware and software for sending and receiving the patient data {text + images}. Printing of films should be possible from both main console and workstation.
 - vi. Workstation should also be able to function independent of the main console. Post processing of the MRS data including for CSI with paramagnetic metabolic mapping
 - vii. Capability to calculate colour display of real MTT, real CBV, and real CBF
 - viii. Compatibility with data from other MRI system for post processing.
 - ix. Output in the form of jpeg, avi / equivalent formats should be possible.
 - x. **Cardiac Package:** The workstation should have display of Cardiac cine images in movie mode with rapid avi creation and should have comprehensive cardiac post processing software including for coronary MRA with regular free updates in future. Calculation of ventricular area and volume, stroke volume, ejection fraction and relative ejection fraction, Time volume diagram generation, filling rates and myocardial wall motion, Graphic display of output calculation of flow and velocity parameter with colour coded display of velocity parameters. Diffusion tensor Imaging, 3D myocardial tagging should be possible.

12. SAFETY FEATURES: The system should have the following safety features:

- a. The magnet system should include an Emergency Ramp Down unit (ERDU) for fast reduction of the magnetic field with Ramp Down time below 3 minutes
- b. The magnet should have quench bands that contain the fringe fields to a specified value in the event of a magnet quench
- c. Real time SAR calculation should be performed by software to ensure that RF power levels comply with regulatory guidelines and are displayed on each image
- d. The system shall have manual override of the motor drive for quick removal of the patients from the magnet bore
- e. Temperature sensor (built in) for magnet refrigeration efficiency must be provided.

- f. A CCTV system with colour LCD display to observe the patient should be provided:

13. DOCUMENTATION:

- a. DICOM compatible Dry Chemistry laser camera with integrated processor for filming from main console & workstation.
- b. Printing on films of 8x10, 10x12, 11x14, 14x14, 14x17 sizes (all size in inches) in a resolution of 500 or more dpi. It should be possible to connect other imaging modalities to the printer.

14. UPS:

- a. The system should be provided with UPS system for the complete system with at least 30 minute back up. Genset of adequate wattage to support the ACs and chiller to be provided. An emergency door or hatch should be provided in RF cabin.

15. SUITABLE RF ENCLOSURE:

- a. RF Cabin: The system should be supplied with the imported RF cabin with RF room shielding, RF Door, RF window, and interiors for the same should be carried out suitably.

16. ACCESSORIES:

- a. Coil storage cart/carts capable of storing all the coils offered with the system should be provided
- b. 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 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
- c. Water Chiller for Cold Head I Gradients
- d. MRI Compatible ECG leads (with 100 no.s Disposable Electrodes for MRI Image gating)
- e. 4. MRI Compatible Anaesthesia Machine with integrated Ventilator, 2 vaporiser, circle absorber
 - i. Capable of ventilating adult, pediatric and neonates.
 - ii. Software for ventilation should support Volume control, Pressure control and Pressure support modes.
 - iii. Should have oxygen, nitrous oxide and air flow meters
 - iv. Isoflurane and sevoflurane vaporisers
 - v. All safety alarms
- f. MR Compatible Defibrillator System
- g. MRI Compatible Emergency Crash Cart with all essential and lifesaving drugs for emergency management of patient. This cart must also have essential equipment like Laryngoscope, Airways, Endotracheal Tubes, LMAs, Ambu-bag (both adult as well as pediatric/neonate)
- h. MRI Compatible 1 set of Laryngoscope :4 sizes blades- Neonatal, paediatrics, adult, extra
- i. MRI compatible Magill forceps : Adult & paediatric size- Two each.
- j. Stylet for endotracheal tube : Adult, paediatric size- Three each

- k. MRI compatible Clamps 2 Nos : Either towel clip or artery forceps.
- l. MRI Compatible two IV stands.
- m. MR compatible oxygen cylinder: 2 small and 1 large
- n. Two digital patient weighing scale: range of 0 – 200 kgs
- o. Good quality air curtain at MRI entrance (for patient) to filter dust and prevent the leakage
- p. Cupboards for patients to keep metallic belongings, watch, wallet, purse etc.
- q. One MRI compatible Multiparameter Vital Signs Patient Monitor in MRI Room and One Slave monitor in console room with following modules provision to monitor the following
 - i. Heart rate
 - ii. ECG
 - iii. NIBP – Size of Cuffs (adult & pediatric neonatal)
 - iv. Respiration (Capnograph)
 - v. Two IBP – Pressure transducer with the MRI compatible stand.
 - vi. Oxygen saturation – Pulse oximeter with adult, pediatric probe, and neonatal probes - 2 sets (with the spare probes), Should have plethysmograph perfusion factor.
 - vii. ETCO2 and ETAA (end tidal anesthetic agents)
 - viii. Temperature (adult and pediatric)
- r. MRI compatible syringe pump – 2 Nos.
- s. Arrangement of Gas lines in recovery room and magnet room – MRI compatible high pressure gas outlet for :
 - i. Oxygen
 - ii. Air
 - iii. Nitrous Oxide with MRI compatible indexed system.
 - iv. Vacuum suction
- t. Two non-magnetic patient transfer trolleys and two wheel chairs of international make should be provided
- u. Two Anaesthesia bed/trolley for recovery room
- v. Metal detectors: two hand held. & One no. Metal detector: Walk-through
- w. Phantoms to be provided for regular QA studies.
- x. Complete manuals and other necessary documentation's should be provided.
- y. LED X-ray Film viewer with adjustable brightness; capable of holding 3 films of 14"x17" size. – 2 numbers

17. TRAINING:

- a. Qualified personnel nominated by the authority, should be given application training by the second party at their cost on site.

18. STANDARD AND SAFETY:

- a. Should be FDA or European CE approved product.

19. TURN KEY INSTALLATION:

- a. The system should be installed and handed over in working condition with all necessary electrical, air conditioning and civil work undertaken by the vendor in consultation with the user dept.
- b. All necessary interconnecting interfaces, cable, modules, and other hardware and software to fully integrate the system for full operational status.

20. TURN KEY – SCOPE OF WORK – MRI:

- a. The service provider should inspect the proposed site provided by the authority 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, Air-conditioning, Firefighting and miscellaneous works for the construction of MRI Scan Centre. While preparing the plan, the following aspects have to be addressed.
- b. The MRI should be sited in such a manner; in order to minimise the effect of fringe magnetic field on surrounding areas. The areas lying within 5 Gauss line should be clearly demarcated and cordoned off with adequate warning.
- c. Care should be taken to provide easy negotiation of the patient stretchers/ trolleys through corridors and doors.
- d. RF shielding for doors, walls, glass viewer etc.
- e. Furniture like desk, chairs, shelves etc.
- f. Patient stretcher and other furniture/ accessory to make the scan centre functional.
- g. Air-conditioned waiting area with tea-coffee vending machine and at least 32” LED TV with satellite connection for comfort of waiting patients/attendants.
- h. The MRI SCAN CENTRE shall consist of the following rooms:
 - i. MRI Room
 - ii. Console room
 - iii. Equipment room
 - iv. Patient preparation room
 - v. Patient waiting area
 - vi. Radiologist room
- i. **Civil Work:**
 - i. 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 1.5T strength magnet.
 - ii. Civil construction work including construction of brick wall, plastering, flooring as per the approved plan and equipment layout plan.
 - iii. Concrete bed at MRI equipment area.
 - iv. Platform for unloading and shifting the MRI should be provided if necessary.
 - v. Platform for Chiller unit would be provided. Fencing and weather protection facility should be provided for the Chiller unit.
 - vi. Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.
 - vii. All the construction work to be done as per the final plan approved by the purchaser.
 - viii. Active and passive room shielding for magnetic, fringe field should be provided as per the requirement of the equipment.
 - ix. The entire complex will be made rodent/pest proof.
- j. **Flooring:**
 - i. Providing and laying approved quality, colour, design and shade fully homogeneous 600 x 600 mm (thickness to be specified by the

manufacturer) vitrified tile flooring (Marbonite or Granamite, confirming to IS code 15622 with water absorption less than 0.08%) flooring in pattern as detailed in drawing or as directed by the EIC and grouted with matching colour approved quality readymade grout, curing, cleaning etc to required line level etc. all complete at all leads, lifts and heights to the entire satisfaction of the EIC. Providing and fixing 2-3mm thick POP protection over polythene covering sheet to flooring areas till handed over and cleaning, etc all complete as per drawings & specification and as directed by EIC with 100mm tile skirting to match in MRI room , console room , equipment room, patient preparation room, reporting room , patient waiting area and radiologist room.

- ii. 50 mm thick cement concrete flooring at all heights and locations including scaffolding , preparing the surfaces , neat cement finished to correct line or as required to receive architectural finish , level and plumb , curing wherever required complete as per requirements and drawings , with Vinyl flooring in MRI equipment / UPS room.

k. Painting:

- i. Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, MRI equipment room etc. Pre laminated particleboard wall panelling in MRI examination room.

l. False Ceiling:

- i. Acoustical tile for ceiling with light weight insulating material of high quality supported on grid or finished seamless with support above ceiling. Finished with white paint or powder coated with white paint, if metallic. Ceiling height to suit the equipment mount and clearances.

m. Plumbing work:

- i. 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.
- ii. Copper pipes to be used for plumbing the Chiller to the MRI.
- iii. 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.
 - 2. All sanitary wares & CP brass fitting & fixtures shall be of first quality with ISI mark (unless otherwise specified) and shall be of the make as per the latest approved list of materials as per list of approved make/model, if any. They shall be got approved by the Engineer-in-charge before incorporating in the work.
 - 3. All the items include testing after completion of the work. Concealed/underground GI pipe line is to be wrapped with hessian cloth and painted with two coats of anticorrosive paint.
 - 4. Disposing off: The surplus excavated materials by mechanical transport lead up to 2KM to the nearby dumping pits/dumping areas within institute campus identified by Engineer in charge, including all lifts, loading, unloading, stacking etc. complete as per specifications & as directed by the EIC.

n. Electric work:

- i. The supplier shall be required to specify the total load requirements for the MRI scan centre including the load of air conditioning , room lighting and for the accessories if any. The supply line will be provided by the Institute up to one point within the MRI Scan centre area. The distribution panel shall be provided by the vendor. Few lights in each room shall be connected to the UPS to provide emergency lighting. The electrical work shall include the following
 - ii. Wiring – All interior electrical wiring- with main distribution panel board, necessary MCBs, DB, joint box, switch box etc. the wires shall be of copper of different capacity as per the load and should be renowned make as listed below.
 - iii. Switches light and power points should be of modular type and of standard make as listed below.
 - iv. General lights – LED light fittings with 500 Lux Illumination
 - v. MRI compatible lights for MRI examination room. The bulbs used within the RF cage should be easy replaceable and locally available.
 - vi. All wires used must be FRLS (Fire Retardant with low smoke) type only.
- o. **Air Conditioning:**
- i. Total capacity of the Air-Conditioning (duct-able + split) for the entire MRI scan centre area should be at least 20 TR.(incl. standby air-conditioning)
 - ii. Ductable package air conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. . The Air conditioning should be designed with standby provision to function 24 hours a day.)
 - iii. The outdoor units of AC should have grill coverings to prevent theft and damage.
- p. **Environment specifications:**
- i. Relative Humidity range: To be maintained between 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.
 - ii. Temperature ranges: $22 \pm 2^{\circ}$ C in all areas except equipment room which shall be as per requirement of the equipment.
 - iii. Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the service provider.
- q. **Furniture:**
- i. Revolving chairs height adjustable, medium-back with hand-rest . – 6 NO.S
 - ii. Chairs for patient waiting area – Three seater (chrome plated). - 10 NO.S
 - iii. Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – 3 NO.S
 - iv. Drug trolleys for patient preparation area. - 1 NO.
 - v. Patient trolley with rubber foam mattress to be kept in the patient preparation room.
 - vi. Tables for Workstation nodes- 2 NO.S
 - vii. Changing rooms should have change lockers and dressing table.
 - viii. Dustbins (plastic with lid): 10 no.s.
 - ix. All the rooms in the complex will be signposted.
 - x. Sun film & ventilation blinds/curtain will be put up in all windows.

xi. All furniture items should be of standard make as mentioned in the table below.

r. **Miscellaneous:**

- i. Reporting room should have LED X-ray Film viewer with adjustable brightness; capable of holding 3 films of 14"x17" size. – 2 no.s
- ii. Cabling of Network (LAN) connectivity for camera system, console system, workstation and computers etc
- iii. Broadband connection: for REMOTE SERVICE of MRI system.
- iv. Dry chemical power type fire extinguisher of 5kgs capacity, with initial filling in brand new cylinder with power coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge, discharge hose, wall mounting bracket etc. complete, confirming t IS:2171 of approved make & complete as directed by EIC.

s. **List of Items and Suggested Manufacturers:**

S. No.	Items	Preferred Makes
A	Flooring vitrified tiles	Somany, Kajaria , H&R Johnson, RAK india
B	Paint	Dulux, Asian Paints , Nerolac
C	Plumbing	Kohler, Jaguar , Grohe , Roca
D	Sanitary items	CERA, Hindware, Parryware
E	Electrical	
	1. Cables	Finolex, Havells ,V-Guard
	2. Switches	Legrand, L&T, Crabtree
	3. Distribution box, MCB	Legrand, L&T, Siemens, Havells
	4. Light Fittings	Philips / Crompton / Wipro/Syska
F	Air Conditioning	Daikin, Hitachi, Blue Star, Voltas
G	Furniture	Hermen Miller , Godrej , Featherlite,Geeken

CT Scan – 128 Slice Specifications

The system should be latest state of art, independent 64 or more rows of detectors with capable of generating at least 128 slices per rotation. The bidder should submit an undertaking that the installed system and any part thereof are not recycled/refurbished. The system should be capable of integrating with any PACS/HIS system. The system should be DICOM - ready with true isotropic volume acquisition and sub millimeter resolution. The model quoted should be, AERB Type approved and should have US FDA or European CE with four digit notified body number certificate and copy of such certificate to be submitted. The detailed specification that follows shall be understood to be minimum requirement.

1. GANTRY:

- a. Aperture: 70 cms or more
- b. FOV: 50 cms or more
- c. 3-D laser lights for positioning.

2. X-RAY GENERATOR:

- a. High Frequency type.
- b. Power output: 70 kW or higher with single source. The generator with the higher power output would be preferred. Also the bidder should mention whether the system would be capable of tackling the dual energy applications if there is an upgrade.
- c. mA Range: 20-800 mA (With incremental steps of 10 mA)
- d. KV Range: 80-130KV or more

3. X- RAY TUBE:

- a. Tube Voltage: 80-130 kV or more
- b. Anode Heat Storage Capacity of at least 7.0 MHU or direct cooling tube

4. PATIENT TABLE:

- a. Load carrying capacity at least of 180 Kg with positional accuracy of 1 mm or less
- b. Metal free scan-able range of 150 cm or more
- c. Floating table top with foot pedal/hand control for positioning.
- d. Carbon fiber table top
- e. Facility of positioning aid in horizontal isocenteric positioning of the patient

5. SPIRAL ACQUISITION:

- a. Scan Time should be 0.4 sec or less for full 360 degree rotation.
- b. Minimum slice thickness should be 0.625 mm or less.
- c. Pitch Factor (volume pitch): freely selectable in auto mode and also manually variable between 0.5 to 1.5 or more. Specify all possible pitch selections.
- d. Bolus Triggered or bolus chase spiral acquisition should be available.
- e. Real time x-ray dose reduction which combines both Z axis and angular tube current modulation to adjust the dose to the size and shape of individual.
- f. Radiation dose reduction technique i.e. mA modulation in X, Y & Z axis, etc.
- g. It should have iterative image reconstruction capabilities.
- h. ECG gating triggered
- i. Real time CE fluoroscopy: at 6 to 8 frames per second with 24'' color TFT /LCD monitor

6. IMAGE RESOLUTION:

- a. High contrast resolution should be at least 15 lp/cm for axial and spiral scan at 0% MTF with full FOV.
- b. Low contrast resolution – 5mm or less at 3.0 HU using 20 cm CATPHAN phantom on 10 mm slice thickness.

7. DATA ACQUISITION SYSTEM:

- a. Detector- Capable of acquiring 64 slices per 360 degree of rotation.
- b. At least 64 rows of independent detectors with generation of at least 128 slices per rotation with Z-axis coverage of 50mm or more.
- c. Detector shall cover 40mm per rotation for standard & cardiac scan in 1:1 pitch.
- d. Solid state or rare earth detectors of latest technology of low dose and low noise like ELITE/STELLAR/ CLARITY free from repeated calibration.
- e. Inbuilt pediatric protocols. Based on infant weight.

8. IMAGE RECONSTRUCTION:

- a. High speed real time reconstruction with display matrix of 1024x1024 or more.
- b. Reconstructed slice thickness should be sub-millimeter to 10mm freely selectable.
- c. Latest iterative reconstruction technique to reduce noise and reduce radiation dose. The image reconstruction rate should be at least 16 images/sec with this reconstruction technique.

9. OPERATOR CONSOLE:

- a. High resolution medical grade LED color monitors of at least 24” size.
- b. Should perform Registration, scheduling, protocol selection, Volume rendering, volume measurements, Multi-planar Reconstruction, and standard evaluation application and all available post processing functions without the help of the satellite workstation.
- c. Raw Data storage with at least 4TB Hard disc having image storing capacity of 2,00,000 or more in 512x512 format.
- d. Auto-voice capability with custom designed key board and mouse.
- e. Archiving options: CD-R, DVD, should be available.
- f. Additional storage of 25 terabytes to be offered. It should be possible to transfer the images from this storage to main console or workstations

10. 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.

11. CLIENT HARDWARE SPECIFICATION: 2 numbers Workstations with licence: Dual quad core processors, 16 GB RAM, 1TB hard drive, DVD Writing with medical grade monitor of at least 24” size with minimum 1920x1080 resolution & 3 button mouse.

12. APPLICATION SEQUENCES: The system should be able to undertake following minimum applications and features:

- a. The system should have standard features like 3D Volume rendering , MPR, Minimum & maximum intensity projection., 3D SSD (Shaded Surface Display), CT angiography, Colour angiography Display, Advanced vessel analysis, Auto

bone removal, Lung nodule assessment, Virtual endoscopy, Dedicated colonoscopy, Time point comparison and Whole organ (brain & body) perfusion CT should be available as standard on the system

- b. The following software should be offered as standard (MPR, ROI, VOLUME CALCULATION, CT NUMBER DISPLAY, WINDOW WIDTH, WINDOW LEVEL, TOPOGRAM DISPLAY, CINE DISPLAY, HRCT LUNG, DYNAMIC SCAN)
- c. Cardiac Scan Attachment with ECG Gated Segmented Recon , Calcium score , Vessel Flythrough of the Coronaries should be available with software package.
- d. Coronary tree analysis: automated 3D processing of coronary arteries, calcium scoring, stent analysis, LV analysis.
- e. Automatic display of MPR Images after scan will be preferred.
- f. Bolus triggered Brain Perfusion CT study (at least 3-level) with automatic CBF, CBV, MTT, TTP maps, ROI placing, comparing ROI, saving maps
- g. Neuro DSA with automatic bone removal software
- h. Fusion CT: fusion of morphological data obtained on CT, MR or DSA.

13. PATIENT COMMUNICATION SYSTEM:

- a. An integrated intercom and Automated Patient Instruction System (API) should be provided.
- b. Two closed circuit TV for patient monitoring.

14. ACCESSORIES:

- a. DICOM 3.0 Compatible, Dry chemistry camera of DPI 500 or more of any reputed make that must support Multiple Film Sizes: One of which must be 17x14 inches
- b. Lead Glass(As per AERB Norm) of size : 150 x 100 cm or more
- c. UPS with Maintenance free batteries capable of 30 minutes back up to run the entire CT, Computers, Dry chemistry camera, Work Stations etc.
- d. Dual Head Pressure Injector of reputed make with 50 sets of Syringes & 200 sets of tubings.
- e. Multi Para monitor 10 inch monitor, ECG , SPO2 , NIBP module of a reputed make for monitoring vitals.
- f. LIGHT WEIGHT lead aprons (0.25mm lead equivalent) with hangers - 4 Nos.
- g. Lead apron stand – 1 No.
- h. Thyroid Shields – 2 nos.
- i. Gonadal Shields – 2 nos.

15. TRAINING: Qualified personnel nominated by the authority, should be given application training by the second party at their cost on site.

16. CERTIFICATIONS:

- a. Offered model should be **European CE or US FDA** approved. Copy of certifications should be submitted with bid
- b. The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid.
- c. Regular QA according to AERB norms will be responsibility of service provider during contract period.

17. TURN KEY INSTALLATION:

- a. The system should be installed and handed over in working condition with all necessary electrical, air conditioning and civil work undertaken by the vendor in consultation with the user dept.
- b. All necessary interconnecting interfaces, cable, modules, and other hardware and software to fully integrate the system for full operational status.

18. TURN KEY – SCOPE OF WORK – CT:

- a. The Supplier should inspect the proposed site offered by the authority 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.
- b. While preparing the plan, the following aspects have to be addressed.
 - i. Care should be taken to provide easy negotiation of the patient stretchers/ trolleys through corridors and doors.
 - ii. Radiation shielding for doors, walls, windows etc.
 - iii. Furniture like desk, chairs, shelves etc.
 - iv. Patient stretcher and other furniture/ accessory to make the scan center functional.
- c. The CT SCAN CENTRE shall consist of the following rooms:
 - i. CT Gantry Room
 - ii. Console room
 - iii. Equipment room
 - iv. Patient preparation room
 - v. Patient waiting area
 - vi. Radiologist room
- d. **Civil work:**
 - i. Civil construction work including construction of brick wall if any, plastering, flooring as per the approved plan and equipment layout plan.
 - ii. Concrete bed at CT equipment area.
 - iii. Platform for unloading and shifting the CT should be provided if necessary.
 - iv. Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.
 - v. All the construction work to be done as per the final plan approved by the authority.
 - vi. Active and passive room shielding for magnetic, fringe field should be provided as per the requirement of the equipment.
- e. **Flooring:**
 - i. 600 x 600 mm vitrified tiles with 100mm tile skirting to match in console room, lobby and patient preparation areas, Radiologist room etc.
 - ii. 50 mm thick cement concrete flooring with Vinyl flooring in CT equipment / UPS room.
- f. **Painting**
 - i. Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, CT Gantry

& Equipment room etc.

g. False Ceiling:

- i. Acoustical tile for ceiling with light weight insulating material of high quality supported on grid or finished seamless with support above ceiling. Finished with white paint or powder coated with white paint, if metallic. Ceiling height to suit the equipment mount and clearances.

h. Plumbing work:

- i. 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.
- ii. Hot water service to be provided if required.

i. Electrical work:

- i. The supplier shall be required to specify the total load requirements for the CT scan centre including the load of air conditioning , room lighting and for the accessories if any. The supply line will be provided by the Institute up to one point within the CT Scan centre area. The distribution panel shall be provided by the vendor. Few lights in each room shall be connected to the UPS to provide emergency lighting.
- ii. The electrical work shall include the following:
 - Wiring – All interior electrical wiring- with main distribution panel board, necessary MCBs, DB, joint box, switch box etc. the wires shall be of copper of different capacity as per the load and should be renowned make as listed below.
 - Switches light and power points should be of modular type and of standard make as listed below.
 - General lights –LED light fittings with 500 Lux Illumination

j. Air conditioning:

- i. Ductable package air conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.
- ii. The outdoor units of AC should have grill coverings to prevent theft and damage.
- iii. Ventilation is required in toilet.

k. Environment specifications:

- i. Relative Humidity range: To be maintained between 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.
- ii. Temperature ranges: $22 \pm 2^{\circ}$ C in all areas except equipment room which shall be as per requirement of the equipment.
- iii. Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.

l. Furniture:

- i. Revolving chairs height adjustable, medium-back with hand-rest in the Control room, Radiologist room and viewing area. – 4 NO.S
- ii. Chairs for patient waiting area – Three seater (chrome plated). - 10 NO.S
- iii. Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – 3 NO.S
- iv. Drug trolleys 1 numbers for patient preparation area.
- v. Patient trolley with rubber foam mattress to be kept in the patient preparation room.
- vi. Name boards for all rooms
- vii. Tables for Workstation and Radiologist - 2 NO.S
- viii. Changing rooms should have change lockers and dressing table.
- ix. Dustbins: 10 no.s
- x. Any other furniture item as per requirement.
- xi. All furniture items should be of standard make as mentioned in the table below.

m. Miscellaneous:

- i. LED X-ray Film viewer with adjustable brightness ; capable of holding 3 films of 14”x17” size – 2 no.s
- ii. Cabling of Network (LAN) connectivity for camera system, console system, workstation and computers etc.
- iii. Broadband connection: for REMOTE SERVICE of CT system.
- iv. Fire extinguisher Dry CO2 type as required for the building safety.

n. List of Items and Suggested Manufacturers:

S. No.	Items	Preferred Makes
A	Flooring vitrified tiles	Somany, Kajaria , H&R Johnson, RAK india
B	Paint	Dulux, Asian Paints , Nerolac
C	Plumbing	Kohler, Jaguar , Grohe , Roca
D	Sanitary items	CERA, Hindware, Parryware
E	Electrical	
	5. Cables	Finolex, Havells ,V-Guard
	6. Switches	Legrand, L&T, Crabtree
	7. Distribution box, MCB	Legrand, L&T, Siemens, Havells
	8. Light Fittings	Philips / Crompton / Wipro/Syska
F	Air Conditioning	Daikin, Hitachi, Blue Star, Voltas
G	Furniture	Hermen Miller , Godrej , Featherlite,Geeken

CONTRACT FORMAT

Contract form for providing Radiology Facilities

Date:.....

To,
The Director,
Janakpuri Super Speciality Hospital Society,
C2 – B, Janakpuri
New Delhi – 110 058

CM Contract No. _____ dated _____

This is in continuation to this office's Notification for Award of contract No dated .

Name & address of the Service Provider:

.....

Reference: (i) Tender Enquiry Document No Datedand subsequent
Amendment No, dated (if any), issued by the Tender Inviting Authority (ii)
Service provider's Tender No Datedand subsequent communication(s) No
.....

Dated (if any), exchanged between the supplier and the purchaser in connection with
this tender.

THIS AGREEMENT made the Day of 20..... between (name of tender
inviting
authority) (hereinafter called the Procurer) of one part and (name of service provider)
(Hereinafter called the Service Provider) of the other part:

WHEREAS the Procurer is desirous that certain services should be provided by the Service
Provider, viz, (brief description of services) and the Procurer has accepted a tender submitted
by the Service Provider for the Services for the sum of (Contract price in words and
figures) (Hereinafter called the Contract Price),

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. The following documents shall be deemed to form part of and be read and constructed as
integral part of this Agreement, viz.:
 - (i) Terms and Conditions;
 - (ii) Location and Description of Equipment;
 - (iii) Job Description;
 - (iv) Manufacturer's Authorisation Form (if applicable to this tender);

(v) Purchaser's Notification of Award.

2. In consideration of the payments to be made by the Procurer the Service Provider hereby covenants to provide the Radiology Unit Services for the specified facilities in conformity in all respects with the provisions of the Contract.
3. The Procurer hereby covenants to pay the Service Provider in consideration of the services, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed in the Contract.
4. The bank guarantee valid till _____ [(fill the date)] for an amount of Rs. 25,00,000/- (RUPEES TWENTY FIVE LAKHS ONLY) shall be furnished in the prescribed format given in the TE document, within a period of 30 (thirty) days of issue of Notice for Award of Contract failing which the EMD shall be forfeited.
5. Payment terms: The payment will be made against the bills raised to the HOSPITAL by the SERVICE PROVIDER on monthly basis after satisfactory completion of said period, duly certified by the designated official. The payment will be made in Indian Rupees.
6. Paying authority: _____ (name of the Procurer i.e. Office, Authority)_____

(Signature, name and address of authorised official)

For and on behalf of _____

Received and accepted this contract _____

(Signature, name and address of the supplier's executive duly authorised to sign on behalf of the Provider)

For and on behalf of _____

(Name and address of the Provider)

(Seal of the provider)

Date: _____

Place: _____