BIDDING DOCUMENT

(Two Bid System for Machinery & Equipment)

FOR

NATIONAL CANCER INSTITUTE
ALL INDIA INSTITUTE OF MEDICAL SCIENCES
(JHAJJAR CAMPUS)

NIB Ref: HITES/PCD/NCI-AIIMS/10/17-18

HITES
HLL INFRA TECH SERVICES LTD

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SECTION -I

NOTICE INVITING BIDS (NIB)

ALL INDIA INSTITUTE OF MEDICAL SCIENCES
Ansari Nagar, New Delhi-110 029

NOTICE INVITING BIDS (GLOBAL)

NIB Ref: HITES/PCD/NCI-AIIMS/10/17-18 **Dated: 25.01.2018**

Procurement & Consultancy Services Division of **HLL INFRA TECH SERVICES LIMITED** (a fully owned subsidiary of HLL Lifecare Ltd., a Govt. of India Enterprise) for and on behalf of **Director, AIIMS - New Delhi,** invites e-tenders in two bid system (technical and price bid) from the reputed, eligible & qualified firms/ manufacturers for purchase/supply of following goods at **National Cancer Institute Jhajjar, Haryana (AIIMS, New Delhi-29)**.

Sl. no.	Rfx no.	Short Description of goods	Quantity	Bid Security (BS) (Rs.)	Tender Processing Fee incl. GST (Rs.)
1	3000002581	3.0 Tesla MR Scanner	1	32,00,000	5,900
2	3000002582	256 Slice Dual Energy CT	1	20,00,000	5,900
3	3000002583	Digital Subtraction Angiography	1	14,00,000	5,900
4	3000002584	Full Field Digital Mammography Unit	1	5,00,000	3,540
5	3000002585	Digital Mobile X-Ray Unit	3	5,40,000	3,540
6	3000002586	Ultrasound Machine-High End	1	2,00,000	3,540
7	3000002587	Ultrasound Machine - Mid Range	2	1,60,000	3,540
8	3000002588	Ultrasound Unit - Portable	7	2,80,000	3,540
9	3000002589	Radio-Frequency Ablation System	1	50,000	3,540
10	3000002594	HDR Brachytherapy System	1	10,00,000	3,540

Pre-bid conference meeting with prospective bidders	**Venue for pre-bid meeting**	**Sr. no. of goods**	**Date & Time of pre-bid meeting**
	Committee Room (No. 149), 1st Floor, Dr. BRAIRCH Building, AIIMS, New Delhi-29.	Item no. 01 to 09	08.02.18 at 10:00 AM
		Item no. 10	08.02.18 at 02:30 PM
Last date and time of online submission of tender		28.02.2018 at 12:00 Noon	
Last date and time of physical submission of EMD, Tender processing Fee, any other document specified in the Bidding Document		28.02.2018 at 2:00 PM	

Date of tender Opening	28.02.2018 at 2:30 PM
Contact Person	Project Officer - DVP(PCD), HITES Email: hll.ncij@hllhites.com

2. Interested bidders are advised to download the complete Tender Enquiry document from the websites www.hllhites.com or www.lifecarehll.com or www.eprocure.gov.in/cppp or https://etender.lifecarehll.com/irj/portal for complete details.
3. The prospective bidders have to register with the E-procurement system of HLL at https://etender.lifecarehll.com/irj/portal. On completion of the registration process, the bidders will be provided user ID and password within 48 hours (excluding non-working days). In order to submit the bids electronically, bidders are required to have a valid Class 3-B Digital Signature Certificate (signing and encryption/ decryption certificates).
4. Bidders are requested to read the bidders help document on e-tender web site link before proceeding for bidding.
5. Post receipt of User ID & Password, Bidders can log on for downloading & uploading tender document.
6. The bidders shall submit the required Tender Processing Fee (in form of Demand Draft or Banker's Cheque) and EMD (as per GIT clause no. 19.3) in physical form in favour of **'HLL Infra Tech Services Limited**' at the scheduled time and venue. Tender processing Fee is required from all the bidders irrespective of their registration with NSIC or any other Govt. organisation.
7. The online submission of tender(s) can only be done through https://etender.lifecarehll.com/irj/portal
8. All prospective bidders (maximum two representative of a firm bearing ID proof issued by their firm) may attend the Pre-bid conference meeting. The venue, date and time indicated above.
9. Bidders shall ensure that their tender(s), complete in all respects, are submitted online through HLL's e-portal (as described above**) ONLY. No DEVIATION is acceptable.**
10. Tender Processing Fee and Bid Security (BS) in original should be deposited within the scheduled date & time in the Tender Box located at: **HLL Infra Tech Services Limited, Procurement and Consultancy Services Division, B-14 A, Sector-62, Noida-201307, Uttar Pradesh.**
11. Prospective bidders are advised to browse the above websites regularly before submission of their bids as any further amendments will be published in these websites only.

CEO (HITES)

SECTION - II

GENERAL INSTRUCTIONS TO BIDDERS (GIB)
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GENERAL INSTRUCTIONS TO BIDDERS (GIB)

A. PREAMBLE

1. Definitions and Abbreviations

1.1 The following definitions and abbreviations, which have been used in these documents shall have the meanings as indicated below:

1.2. Definitions:

i. "Purchaser" means means HLL INFRA TECH SERVICES LIMITED (HITES) for and on behalf of The Director, AIIMS, New Delhi.
ii. "Bid" means Quotation / Tender received from a Firm / Tenderer / Bidder.
iii. "Bidder" means Tenderer/ the Individual or Firm submitting Bids / Quotation / Tender
iv. "Supplier" means the individual or the firm supplying the goods and services as incorporated in the contract/purchase order.
v. "Goods" means all articles, material, commodity, livestock, furniture, fixtures, raw material, spares, instruments, machinery, equipment, vehicles, medicines, assemblies, sub-assemblies, accessories, intangible products like software, technology transfer, licenses, patents or other intellectual properties purchased or otherwise acquired for the use of Government but excludes books, publications, periodicals, etc. for a library. The term 'goods' also includes works and services which are incidental or consequential to the supply of such goods, such as, transportation, insurance, installation, commissioning, training and maintenance.
vi. "Services" means services allied and incidental to the supply of goods, such as transportation, installation, commissioning, provision of technical assistance, training, after sales service, maintenance service and other such obligations of the supplier covered under the contract.
vii. "Bid Security" (BS) means Earnest Money Deposit / monetary or financial guarantee to be furnished by a bidder along with its tender.
viii. "Contract" means the written agreement entered into between the purchaser and the supplier, together with all the documents mentioned therein and including all attachments, annexure etc. therein.
ix. "Performance Security" means monetary or financial guarantee to be furnished by the successful bidder for due performance of the contract placed on it. Performance Security is also known as Security Deposit.
x. "Consignee" means the Center/Hospital/Department/Sections /person to whom the goods are required to be delivered as specified in the Contract.
xi. "Specification" also called Technical Specifications means the document/standard that prescribes the requirement with which goods or service has to conform.
xii. "Inspection" means activities such as measuring, examining, testing, gauging one or more characteristics of the product or service and comparing the same with the specified requirement mentioned in the contract to determine conformity.
xiii. "Day" means calendar day.

1.3 Abbreviations:

(i) "NIT" means Notice Inviting Tenders.
(ii) "GIB" means General Instructions to Bidders
(iii) "SIT" means Special Instructions to Bidders

(iv) "GCC" means General Conditions of Contract
(v) "SCC" means Special Conditions of Contract
(vi) "LC" means Letter of Credit
(vii) "DP" means Delivery Period
(viii) "BG" means Bank Guarantee
(ix) "GST" means Goods & Service Tax
(x) "CD" means Custom Duty
(xi) "BL" means Bill of Lading
(xii) "FOB" means Free on Board
(xiii) "CIF" means Cost, Insurance and Freight
(xiv) "CIP (Destinations)" means Carriage and Insurance Paid up to named port of destination. Additionally the Insurance (local transportation and storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery.
(xv) "INCOTERMS" means International Commercial Terms as on the date of Bid Opening
(xvi) "CAMC" means Comprehensive Annual Maintenance Contract (labour, spare and preventive maintenance)

2. Introduction

2.1 The Purchaser has issued these Bidding Documents for purchase of goods and related services as mentioned in Section – VI – "List of Requirements", which also indicates, *interalia,* the required delivery schedule, terms and place of delivery.

2.2 This section (Section II - "General Instructions to Bidders") provides the relevant information as well as instructions to assist the prospective bidders in preparation and submission of bids. It also includes the mode and procedure to be adopted by the bidder for receipt and opening as well as scrutiny and evaluation of bids and subsequent placement of contract.

2.3 The bidder shall also read the Special Instructions to Bidders (SIB) related to this purchase, as contained in Section III of these documents and follow the same accordingly. Whenever there is a conflict between the GIB and the SIB, the provisions contained in the SIB shall prevail over those in the GIB.

2.4 Before formulating the bid and submitting the same to the purchaser, the bidder should read and examine all the terms, conditions, instructions, checklist etc. contained in the Bidding Document. Failure to provide and/or comply with the required information, instructions etc. incorporated in these Bidding Documents may result in rejection of its Bid.

3. Availability of Funds

3.1 Expenditure to be incurred for the proposed purchase will be met from the funds available with the purchaser/consignee.

4. Language of Bid

4.1 The bid submitted by the bidder and all subsequent correspondence and documents relating to the bid exchanged between the bidder and the purchaser, shall be written in the English language. However, the language of any printed literature furnished by the bidder in connection with its bid may be written in any other language provided the same is accompanied by an English translation and, for purposes of interpretation of the bid, the English translation shall prevail**.**

5. Eligible Bidders

5.1 This Invitation for Tenders is open to all bidder who fulfil the eligibility criteria specified in these documents.

6. Eligible Goods and Services

6.1 All goods and related services to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term "origin" used in this clause means the place where the goods are mined, grown, produced, or manufactured or from where the related services are arranged and supplied.

7. Bid Expense

7.1 The bidder shall bear all costs and expenditure incurred and/or to be incurred by it in connection with its bid including preparation, mailing and submission of its bid and for subsequent processing the same. The purchaser will, in no case be responsible or liable for any such cost, expenditure etc. regardless of the conduct or outcome of the bidding process.

B. TENDER ENQUIRY DOCUMENTS

8. Content of Tender Enquiry Documents

8.1 In addition to Section I – "Notice Inviting Tender" (NIT), the Bidding Documents include:

Section II – General Instructions to Bidders (GIB)
Section III – Special Instructions to Bidders (SIB)
Section IV – General Conditions of Contract (GCC)
Section V – Special Conditions of Contract (SCC)
Section VI – List of Requirements
Section VII – Technical Specifications& General Points
Section VIII – Qualification Criteria
Section IX – Bid Form
Section X – Price Schedules
Section XI - Check List
Section XII – Bank Guarantee Form for Bid Security
Section XIII – Manufacturer's Authorization Form
Section XIV – Bank Guarantee Form for Performance Security/CAMC Security
Section XV – Contract Forms A & B
Section XVI – Proforma of Consignee Receipt Certificate
Section XVII – Proforma of Consignee Acceptance Certificate by the consignee

8.2 The relevant details of the required goods and services, the terms, conditions and procedure for bidding, bid evaluation, placement of contract, the applicable contract terms and, also, the standard formats to be used for this purpose are incorporated in the above-mentioned documents. The interested bidders are expected to examine all such details etc to proceed further.

9. Amendments to a Bidding documents

9.1 At any time prior to the deadline for submission of bids, the purchaser may, for any reason deemed fit by it, modify the Bidding Documents by issuing suitable amendment(s) to it.

9.2 Such an amendment will be notified through CPPP (eprocure.gov.in/cppp) and/or www.hllhites.com and/or www.lifecarehll.com and will be binding on them.

9.3 In order to provide reasonable time to the prospective bidders to take necessary action in preparing their bids as per the amendment, the purchaser may, at its discretion extend the deadline appropriately for the submission of bids and other allied time frames, which are linked with that deadline.

10. Clarification of Bid document

10.1 A bidder requiring any clarification or elucidation on any issue of the Bidding Documents may take up the same with the purchaser in writing. The purchaser will respond in writing to such request provided the same is received by the purchaser not later than ten days (unless otherwise specified in the SIB) prior to the prescribed date of submission of Bids.

C. PREPARATION OF BIDS

11. Documents comprising the e-Bid

11.1 The bid(s) shall only be submitted online as mentioned below:

1. Technical Bid (Consisting of Techno-Commercial bids in excel format provided with the tender enquiry along with the supporting documents i.e. scanned copies of Tender Processing Fee, BID SECURITY, Eligibility Criteria & Technical Specifications viz. Product Specification Sheets/Brochures, OEM Certificate, etc.) have to be attached in the C-folder of e-tendering module. Bidders have to ensure that the documents uploaded in pdf and/or excel format or as per format instructed elsewhere are legible.

2. Price Bid has to be submitted in the prescribed excel format provided with the tender enquiry.

Note:

a. The tender Processing fee and BID SECURITY has to be submitted in physical form as per Section – I, Notice Inviting Tender of this tender enquiry.

b. The bidders have to follow the steps listed in Bidding Manual – Attachment Modem available in the Bidder Help Documents of e-tender portal login screen for uploading the Techno-Commercial Bid.

A) Techno-commercial Bid (Un-priced Bid)

(Bidders shall furnish the following information along with technical tender in pdf and/or excel format or as per format instructed elsewhere):

i) Bid Security furnished in accordance with GIB clause 19.1 alternatively, documentary evidence as per GIB clause 19.2 for claiming exemption from payment of Bid Security.
ii) Bid Form as per Section IX (without indicating any price).
iii) Documentary evidence, as necessary in terms of clauses 5 and 17 of GIB establishing that the bidder is eligible to submit the bid and, also, qualified to perform the contract if its bid is accepted.
iv) Bidder who quotes for goods manufactured by other manufacturer shall furnish Manufacturer's Authorisation Form. While giving authorization to agent, to quote on their behalf, manufacturer has to give the reasons for

not quoting directly against this bid in the Manufacturer's Authorisation Form.

v) Power of Attorney in favour of signatory and/or who is digitally signing the bidding documents and signatory of Manufacturer's Authorization Form.

vi) Documents and relevant details to establish in accordance with GIB clause 18 that the goods and the allied services to be supplied by the bidder conform to the requirement of the bidding documents.

vii) Performance Statement as per section VIII along with relevant copies of orders and end users' satisfaction certificate.

viii) Price Schedule(s) as per Section X filled up with all the details including Make, Model etc. of the goods offered with prices blank (without indicating any prices).

ix) Documents confirming to Sole Proprietorship/Partnership/Private Limited Firm in the country of origin as the case may be.

x) Checklist as per Section XI.

xi) Copies of GST registration certificate and PAN Card.

xii) Copies of annual report, audited balance sheet and profit & loss account as per tender requirement.

xiii) Non conviction /no pending conviction certification issued by Notary on non-judicial stamp paper for preceding three years.

xiv) Notarized affidavit that bidder does not have any relation with the person authorized to evaluate technically or involve in finalizing the tender or will decide the use of tendered items.

xv) A self-declaration on Rs. 10/- non-judicial Stamp Paper that the rates quoted in the tender are the lowest and not quoted less than this to any Government Institution (State/Central/ other Institute in India).

xvi) Technical and Commercial Compliance statement in excel format provided in the e-tender portal.

xvii) Product catalogues/original Data Sheets for all quoted items.

xviii) Copies of quality certificates, if applicable, namely, BIS, ISO, FDA, CE, etc.

B) Price Tender:

Prices are to be quoted in the prescribed Price Bid format in excel provided along with the tender enquiry in the e-tender portal. The price should be quoted for the accounting unit indicated in the e-tender document.

Note:

a) The bidder has to be diligent while filling up the Techno-commercial Bid and Price Bid provided in excel formats and must not tamper the contents of the sheets.

b) It is the responsibility of bidder to go through the TE document to ensure furnishing all required documents in addition to above, if any.

c) The bidders have to follow the steps listed in Bidding Manual – Attachment Mode available in the *Bidder Help Documents of e-tender portal login screen* for uploading the Price Bid.

11.2 The authorized signatory of the bidder must sign the bid duly stamped at appropriate places and initial all the remaining pages of the bid. Individuals signing the bid or other documents connected with a contract must specify whether he signs as:

i. A 'Sole Proprietor' of the firm or constituted attorney of such Sole Proprietor.

ii. In case of partnership firm he must have authority to quote & to refer to arbitration dispute concerning the business of the partnership either by virtue of the partnership agreement or a power of attorney;
iii. Constituted attorney of the firm if it is a company.

Note:

1. In case of (ii) above, a copy of the partnership agreement duly registered with "Registrar of Firm's" or general power of attorney, in either, case, attested by a Notary Public should be furnished, or affidavit on stamped paper of all the partners admitting execution of the partnership agreement or the general power of attorney should be furnished.
2. In case of the partnership firms, where no authority to refer disputes concerning the business of the partnership has been conferred on any partner, the bid and all other related documents must be signed by every partner of the firm.
3. A person signing the bid form or any documents forming part of the contract on behalf of another shall be deemed to warrantee that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, liable for rejection of bid or cancel of contract and hold the signatory liable for all cost and damages.

11.3 A bid, which does not fulfil any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.

12. Bid Currencies

12.1 The bidder supplying indigenous goods or already imported goods shall quote only in Indian Rupees.

12.2 For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP or Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only, if such services are to be performed/undertaken in India. Commission for Indian Agent, if any and if payable shall be indicated in the space provided for in the Price Schedule and will be payable in Indian Rupees only after satisfactory supply, installation and acceptance of the goods. The rate of conversion shall be taken as on the date of placement of purchase order.

12.3 Bids, where prices are quoted in any other way shall be treated as non-responsive and rejected.

13 Bid Prices

13.1 The Bidder shall indicate on the Price Schedule provided under Section X all the specified components of prices shown therein including the unit prices, applicable taxes and total bid prices of the goods and services it proposes to supply against the requirement. All the columns shown in the Price Schedule should be filled up as required. If any column does not apply to a bidder, same should be clarified as "NA" by the bidder.

13.2 If there is more than one schedule in the "List of Requirements", the bidder has the option to submit its bid for any one or more schedules and, also, to offer special

discount for combined schedules. However, while quoting for a schedule, the bidder shall quote for the complete requirement of goods and services as specified in that particular schedule.

13.3 The quoted prices for goods offered from within India and that for goods offered from abroad are to be indicated separately in the applicable Price Schedules attached Under Section X.

13.4 While filling up the columns of the Price Schedule, the following aspects should be noted for compliance:

13.4.1 For domestic goods or goods of foreign origin located within India, the prices in the corresponding Price Schedule shall be entered separately in the following manner:

a) The price of the goods, quoted ex-factory/ ex-showroom/ ex-warehouse/ off-the-shelf, as applicable, including packing charges and GST and Custom Duty already paid or payable on the components and raw material used in the manufacture or assembly of the goods quoted ex-factory etc. or on the previously imported goods of foreign origin quoted ex-showroom etc;
b) Any taxes and duty, which will be payable on the goods in India if the contract is awarded;
c) Charges towards Inland Transportation, Insurance (local transportation and storage) would be borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery, Loading/Unloading and other local costs incidental to delivery of the goods to their final destination as specified in the List of Requirements and Price Schedule;
d) The price of Incidental Services (including installation & commissioning, supervision, demonstration and training), at the consignee site as mentioned in List of Requirements, Technical Specification and Price Schedule;
e) The prices of Turnkey Work (if any), as mentioned in List of Requirements, Technical Specification and Price Schedule; and
f) The price of CAMC, as mentioned in List of Requirements, Technical Specification and Price Schedule.

13.4.2 For goods offered from abroad, the prices in the corresponding price schedule shall be entered separately in the following manner:

a) The price of goods quoted on FOB at port/ FCA at airport of shipment, as mentioned in List of Requirements, Technical Specification and Price Schedule
b) The amount of Freight and Insurance (port of loading to port of entry) and other incidental costs.
c) The price of Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site as mentioned in List of Requirements, Technical Specification and Price Schedule.
d) The price of Extended Insurance (local transportation and storage) from port of entry to the consignee site for a period including 3 months beyond date of delivery.
e) The Unit Price on CIP Name port of Destination + Extended Insurance (local transportation and storage)
f) The price of total Price on CIP Named port of Destination +Insurance (local transportation on and storage)
g) The prices of Turnkey Work (if any), as mentioned in List of Requirements, Technical Specification and Price Schedule; and
h) The price of CAMC, as mentioned in List of Requirements, Technical Specification and Price Schedule.

13.5 Additional information and instruction on Taxes and Duties:

13.5.1 **GST (Goods & Services Tax)**

If the bidder desires to ask for GST (goods and services tax) to be paid extra, the same must be specifically stated. In the absence of any such stipulation, the price will be taken inclusive of GST and no claim for the same will be entertained later.

13.5.2 **Customs Duty**

The Purchaser will pay the Customs duty wherever applicable.

13.6 For transportation of imported goods offered from abroad, relevant instructions as incorporated under GCC Clause 10 shall be followed.

13.7 For insurance of goods to be supplied, relevant instructions as provided under GCC Clause 11 shall be followed.

13.8 Unless otherwise specifically indicated in this Bidding Document, the terms FCA, FOB, CIF, CIP etc. for imported goods offered from abroad, shall be governed by the rules & regulations prescribed in the current edition of INCOTERMS - 2010, published by the International Chamber of Commerce, Paris

13.9 The need for indication of all such price components by the bidders, as required in this clause (viz., GIB clause 13) is for the purpose of comparison of the bids by the purchaser and will no way restrict the purchaser's right to award the contract on the selected bidder on any of the terms offered.

14. Indian Agent

14.1 If a foreign bidder has engaged an agent in India in connection with its bid, the foreign bidder, in addition to indicating Indian agent's commission, if any, in a manner described under GIB sub clause 12.2 above, shall also furnish the following information:

a) The complete name and address of the Indian Agent.
b) The details of the services to be rendered by the agent for the subject requirement.
c) Details of Service outlets in India, nearest to the consignee(s), to render services during Warranty and CAMC period.

15. Firm Price

15.1 Unless otherwise specified in the SIB, prices quoted by the bidder shall remain firm and fixed during the currency of the contract and not subject to variation on any account.

15.2 However, as regards taxes and duties, if any, chargeable on the goods and payable, the conditions stipulated in GIB clause 13 will apply.

16. Alternative Models

16.1 Alternative Models are permitted. The Bidder can quote alternate models meeting the specifications of the bidding document of same manufacturer with single Bid Security.

16.2 If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same ATE for the same item/product. In a bid, either the Indian Agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same models in the same ATE.

16.3 One Principal/OEM cannot authorize two agents simultaneously for the same item against same ATE.

17 Documents Establishing Bidder's Eligibility and Qualifications

17.1 Pursuant to GIB clause 11, the bidder shall furnish, as part of its bid, relevant details and documents establishing its eligibility to quote and its qualifications to perform the contract if its bid is accepted.

17.2 The documentary evidence needed to establish the bidder's qualifications shall fulfill the following requirements:

a) In case the bidder offers to supply goods, which are manufactured by some other firm, the bidder has been duly authorised by the goods manufacturer to quote for and supply the goods to the purchaser. The bidder shall submit the manufacturer's authorization letter to this effect as per the standard form provided under Section XIII in this document.
b) In case the bidder is not doing business in India, it is duly represented by an agent stationed in India fully equipped and able to carry out the required contractual functions and duties of the supplier including after sale service, maintenance & repair etc. of the goods in question, stocking of spare parts and fast moving components and other obligations, if any, specified in the conditions of contract and/or technical specifications.

18. Documents establishing good's Conformity to Bidding Document.

18.1 The bidder shall provide in its bid the required as well as the relevant documents like technical data, literature, drawings etc. to establish that the goods and services offered in the bid fully conform to the goods and services specified by the purchaser in the Bidding Documents. For this purpose the bidder shall also provide a clause-by-clause commentary on the technical specifications and other technical details incorporated by the purchaser in the Bidding Documents to establish technical responsiveness of the goods and services offered in its bid.

18.2 In case there is any variation and/or deviation between the goods & services prescribed by the purchaser and that offered by the bidder, the bidder shall list out the same in a chart form without ambiguity and provide the same along with its bid.

18.3 If a bidder furnishes wrong and/or misguiding data, statement(s) etc. about technical acceptability of the goods and services offered by it, its bid will be liable to be ignored and rejected in addition to other remedies available to the purchaser in this regard.

19. Bid Security (BS)

19.1 Pursuant to GIB clauses 8.1 and 11.1 A (i) the bidder shall furnish along with its bid, Bid Security for amount as shown in the Notice Inviting Bids (NIB). The Bid Security is required to protect the purchaser against the risk of the bidder's unwarranted conduct as amplified under sub-clause 19.7 below.

19.2 The bidders who are currently registered with MSME for the specific goods as per bidding document specification shall be eligible for exemption from Bid Security as defined in MSE Procurement Policy issued by the department of MSME. In case the bidder falls in this category, the bidder shall enclose relevant certificate of registration issued by department of MSME.

19.3 The Bid Security shall be denominated in Indian Rupees or equivalent currencies as per GIB clause 12.2. The Bid Security shall be furnished in one of the following forms:

i) Account Payee Demand Draft/ Banker's cheque
ii) Fixed Deposit Receipt
iii) Bank Guarantee

19.4 The demand draft or banker's cheque shall be drawn on any commercial bank in India or country of the bidder, in favour of the "……."(as indicated in the NIB) payable at New Delhi. In case of Bank Guarantee, the same is to be provided from any commercial bank in India or country of the bidder as per the format specified under Section XII in these documents.

19.5 The Bid Security shall be valid for a period of forty-five (45) days beyond the validity period of the bid. As validity period of Bid as per Clause 20 of GIB is 270 days, the Bid Security shall be valid for 315 days from Techno-Commercial Bid opening date.

19.6 The Bid Security of unsuccessful bidders will be returned without any interest, after expiry of the bid validity period, but not later than thirty days after conclusion of the resultant contract. The Bid Security of successful bidder will be returned without any interest, after receipt of performance security from that bidder.

19.7 Bid Security is required to protect the purchaser's right against the risk of the Bidder's conduct, which would warrant the forfeiture of the Bid Security. Bid Security of a bidder will be forfeited, if the bidder withdraws or amends its bids or impairs or derogates from the bid in any respect within the period of validity of its bid or if it comes to the notice that the information/documents furnished in its bid is incorrect, false, misleading or forged without prejudice to other rights of the purchaser. The Bid Security of the successful bidder will be forfeited without prejudice to other rights of Purchaser if it fails to furnish the required performance security within the specified period.

19.8 In the case of Bank Guarantee furnished from banks outside India (i.e. foreign Banks), it should be authenticated and countersigned by any nationalized bank in India by way of back-to-back counter guarantee and the same should be submitted along with the bid.

20. Bid Validity

20.1 If not mentioned otherwise in the SIB, the bid shall remain valid for acceptance for a period of 270 days (Two hundred and Seventy days) after the date of bid opening prescribed in the Bidding Document. Any bid valid for a shorter period shall be treated as unresponsive and rejected.

20.2 In exceptional cases, the bidder may be requested by the purchaser to extend the validity of their bids up to a specified period. Such request(s) and responses thereto shall be conveyed by mail/fax/email. The bidders, who agree to extend the bid validity, are to extend the same without any change or modification of their original bid and they are also to extend the validity period of the Bid Security accordingly. A

bidder, who may not agree to extend its bid validity after the expiry of the original validity period, their bid will not be considered further and the Bid Security furnished by them shall be returned.

20.3 In case the day up to which the bids are to remain valid falls on/subsequently declared a holiday or closed day for the purchaser, the bid validity shall automatically be extended up to the next working day.

21. Signing and Sealing of Bid

21.1 The bidders shall submit their bids as per the instructions contained in GIB Clause 11.

21.2 Unless otherwise mentioned in the SIB, a bidder shall submit only one copy of its bid marking it as "Original". Bidders are requested to submit their Bids after binding and page numbering.

21.3 The Bid shall either be typed or written in indelible ink and the same shall be signed by the bidder or by a person(s) who has been duly authorized. The letter of authorization shall be by a written power of attorney, which shall also be furnished along with the bid.

21.4 All the documents of the bid shall be duly signed at the appropriate places as indicated in the Bidding Documents and all other pages of the bid including printed literature (if any), shall be initialled and stamped by the same person(s) signing the bid. The bid shall not contain any eraser or overwriting, except as necessary to correct any error made by the bidder and, if there is any such correction; the same shall be initialled and stamped by the person(s) signing the bid.

21.5 The bidder is to seal the bid and writing the address of the purchaser and the bid reference number on the envelopes. The sentence "NOT TO BE OPENED" before _____ (The bidder is to put the date & time of bid opening) are to be written on this envelope. If the envelope is not sealed and marked properly as above, the purchaser will not assume any responsibility for its misplacement, premature opening, late opening etc.

21.6 Bidding Document seeks quotation following "Two Bid System", in two parts. First part will be known as 'Techno-Commercial Bid', and the second part 'Price Bid' as specified in clause 11 of GIB. Bidders shall seal 'Techno-Commercial Bid' and 'Price Bid' separately and covers will be suitably super scribed. Both these sealed covers shall be than put in a bigger cover and sealed and procedure prescribed in Paras 21.1 to 21.5 be followed.

D. SUBMISSION OF BIDS

22. Submission of Bids:

22.1 Unless otherwise specified, the bidders are to drop the Bids in the tender box located at **HLL Infra Tech Services Limited, Procurement and Consultancy Division, B-14 A, Sector-62, Noida-201307, Uttar Pradesh** or the same shall be submitted by the bidder by hand to concerned Project Officer dealing hand or his nominee. The necessary entry will be made in the Bid Receipt Register.

22.2 The bidders must ensure that they submit the on-line bids within the scheduled closing date & time. They shall also ensure to submit the original Tender Processing Fee and Bid Security within its scheduled date & time. It is the

responsibility of the bidder to ensure that their Bids whether sent by post or by courier or by person, are dropped in the Tender Box by the specified clearing date and time. In the event of the specified date for submission of bid falls on / is subsequently declared a holiday or closed day for the purchaser, the bids will be received up to the appointed time on the next working day.

23. Late Bid:

23.1 A bid, which is received after the specified date and time for receipt of bids will be treated as "late bid" and will be ignored.

24. Alteration and Withdrawal of Bid

24.1 The bidder, after submitting its bid, is permitted to alter/modify its bid, within the deadline for submission of bids. Alterations/modifications to bids received after the prescribed deadline will not be considered.

24.2 No bid should be withdrawn after the deadline for submission of bid and before expiry of the bid validity period. If a bidder withdraws the bid during this period, it will result in forfeiture of the Bid Security furnished by the bidder in its bid.

E. BID OPENING

25. Opening of Bids:

25.1 The purchaser will open the bids at the specified date and time and at the specified place as indicated in the NIB.

In case the specified date of bid opening falls on / is subsequently declared a holiday or closed day for the purchaser, the bids will be opened at the appointed time and place on the next working day.

25.2 Authorized representatives of the bidder, who have submitted bids on time may attend the bid opening provided they bring with them letter of authority from their bidder. The bid opening official(s) will prepare a list of the representatives attending the bid opening. The list will contain the representatives' names & signatures and corresponding bidder's names and addresses.

25.3 Two Bid System as mentioned in Para 21.6 above will be as follows. The "Techno - Commercial Bids" are to be opened in the first instance, at the prescribed time and date as indicated in NIB. These Bids shall be scrutinized and evaluated by the competent committee/authority with reference to parameters prescribed in the Bidding Document. During the Techno-Commercial Bid opening, the bid opening official(s) will read the salient features of the bids like brief description of the goods offered, Bid Security and any other special features of the bids, as deemed fit by the bid opening official(s). Thereafter, in the second stage, the Price Bids of only the Techno-Commercially acceptable offers (as decided in the first stage) shall be opened for further scrutiny and evaluation on a date notified after the evaluation of the Techno-Commercial Bid. The prices, special discount if any of the goods offered etc., as deemed fit by bid opening official(s) will be read out.

F. SCRUTINY AND EVALUATION OF BIDS

26. Basic Principle

26.1 Bids will be evaluated on the basis of the terms & conditions already incorporated in the Bidding Document, based on which bids have been received and the terms, conditions etc. mentioned by the bidders in their bids. No new condition will be brought in while scrutinizing and evaluating the bids.

27. Scrutiny of Bids

27.1 The Purchaser will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required Bid Securities have been furnished, whether the documents have been properly signed stamped and whether the Bids are generally in order.

27.2 The Purchaser's determination of a Bid's responsiveness is to be based on the contents of the Bid itself without recourse to extrinsic evidence.

27.3 The Bids will be scrutinized to determine whether they are complete and meet the essential and important requirements, conditions etc. as prescribed in the Bidding Documents. The bids, which do not meet the basic requirements, are liable to be treated as non-responsive and will be rejected.

27.4 The following are some of the important aspects, for which a bid shall be declared non-responsive during the evaluation and will be ignored;

(i) Bid form as per Section IX (signed & stamped) not enclosed.
(ii) Bid is unsigned.
(iii) Bid validity is shorter than the required period.
(iv) Required Bid Security (Amount, validity etc.)/ Exemption documents have not been provided.
(v) Bidder has quoted for goods manufactured by other manufacturer(s) without the required Manufacturer's Authorization Form as per Section XIII.
(vi) Bidder has not agreed to give the required Performance Security of required amount in an acceptable form in terms of GCC clause 5, read with modification, if any, in Section - V – "Special Conditions of Contract", for due performance of the contract.
(vii) Bidder has not agreed to other essential condition(s) specially incorporated in the bidding document like terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism, and applicable law.
(viii) Poor/unsatisfactory past performance.
(ix) Bidders who stand de-registered/banned/blacklisted by any Central Govt. Ministries/Departments/Hospitals/Institutes.
(x) Bidder is not eligible as per Clauses 5, 6 & 17 of GIB.
(xi) Bidder has not quoted for the entire quantity as specified in the List of Requirements in the quoted schedule.
(xii) Bidder has not agreed for the delivery terms and delivery schedule.

28. Minor Informality/Irregularity/Non-Conformity

28.1 If during the evaluation, the purchaser find any minor informality and/or irregularity and/or non-conformity in a bid, the purchaser will convey its observation on such 'minor' issues, which has not price implication, to the bidders by registered/speed post/ e-mail/fax etc. asking the bidder to respond by a specified date. If the bidder does not reply by the specified date or gives evasive

reply without clarifying the point at issue in clear terms, that bid will be liable to be ignored.

29 Discrepancies in Prices

29.1 If, in the price structure quoted by a bidder, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless the purchaser feels that the bidder has made a mistake in placing the decimal point in the unit price, in which case the total price as quoted shall prevail over the unit price and the unit price corrected accordingly.

29.2 If there is an error in a total price, which has been worked out through addition and/or subtraction of subtotals, the subtotals shall prevail and the total corrected; and

29.3 If there is a discrepancy between the amount expressed in words and figures, the amount in words shall prevail, subject to sub clause 29.1 and 29.2 above.

29.4 If, as per the judgment of the purchaser, there is any such arithmetical discrepancy in a bid, the same will be suitably conveyed to the bidder by registered/speed post/email. If the bidder does not agree to the observation of the purchaser, the bid is liable to be ignored.

30. Qualification Criteria

30.1 Bids of the bidder, who do not meet the required Qualification Criteria prescribed in Section VIII, will be treated as non-responsive and will not be considered further.

31. Conversion of Bid currencies to Indian Rupees

31.1 In case the Bidding Documents permits the bidder to quote their prices in different currencies, all such quoted prices of the responsive bidder will be converted to a single currency viz., Indian Rupees for the purpose of equitable comparison and evaluation, as per the exchange rates established by the Reserve Bank of India for similar transactions, as on the date of 'Price Bid' opening.

33. Schedule-wise Evaluation

1.1 In case the List of Requirements contains more than one schedule, the responsive bids will be evaluated and compared separately for each schedule. The bid for a schedule will not be considered if the complete requirements prescribed in that schedule are not included in the bid. However, as already mentioned in GIB sub clause 13.2, the bidders have the option to quote for any one or more schedules and offer discounts for combined schedules. Such discounts wherever applicable will be taken into account to determine the lowest evaluated cost for the purchaser in deciding the successful bidder for each schedule, subject to bidder (s) being responsive.

33. Comparison of Bids

33.1. Unless mentioned otherwise in Section – III – Special Instructions to bidder and Section – VI – List of Requirements, the comparison of the responsive Bids shall be carried out on Free Delivery at consignee site basis. The quoted Turnkey Work prices and CAMC prices will also be added for comparison/ranking purpose for evaluation. "Net Present Value (NPV) of the Comprehensive Annual Maintenance Contract Charges (CAMC) quoted for 5 years after the warranty period shall be added to the bid price for evaluation and will be calculated after discounting the

quoted price by a discounting factor of 10% per annum." However the payment of CAMC shall be made to the successful bidder at approved rates.

34. Additional Factors and Parameters for Evaluation and Ranking of Responsive Tenders

34.1 Further to GIB Clause 33 above, the purchaser's evaluation of a bid will include and take into account the following:

i) In the case of goods manufactured in India or goods of foreign origin already located in India, GST which will be contractually payable (to the bidder), on the goods if a contract is awarded on the bidder; and

ii) in the case of goods of foreign origin offered from abroad, customs duty and GST which will be contractually payable (to the bidder) on the goods if the contract is awarded on the bidder.

34.2 The purchaser's evaluation of bid will also take into account the additional factors, if any, incorporated in SIB in the manner and to the extent indicated therein.

34.3 The Purchaser reserves the right to give the price preference to small-scale sectors etc. and purchase preference to central public sector undertakings as per the instruction in vogue while evaluating, comparing and ranking the responsive Bids.

35. Bidder's capability to perform the contract

35.1 The purchaser, through the above process of bid scrutiny and bid evaluation will determine to its satisfaction whether the bidder, whose bid has been determined as the lowest evaluated responsive bid is eligible, qualified and capable in all respects to perform the contract satisfactorily. If, there is more than one schedule in the List of Requirements, then, such determination will be made separately for each schedule.

35.2 The above-mentioned determination will, inter alia, take into account the bidder satisfying all the requirements of the purchaser as incorporated in the Bidding Document. Such determination will be based upon scrutiny and examination of all relevant data and details submitted by the bidder in its bid as well as such other allied information as deemed appropriate by the purchaser.

36. Contacting the Purchaser

36.1 From the time of submission of bid to the time of awarding the contract, if a bidder needs to contact the purchaser for any reason relating to NIB/Bidding Document and / or its bid, it should do so only in writing.

36.2 In case a bidder attempts to influence the purchaser in the purchaser's decision on scrutiny, comparison & evaluation of bids and awarding the contract, the bid of the bidder shall be liable for rejection in addition to appropriate administrative actions being taken against that bidder, as deemed fit by the purchaser.

G. AWARD OF CONTRACT

37. Purchaser's Right to accept any bid and to reject any or all bids.

37.1 The purchaser reserves the right to accept in part or in full any bid or reject any or more bid(s) without assigning any reason or to cancel the bidding process and

reject all bids at any time prior to award of contract, without incurring any liability, whatsoever to the affected bidder(s).

38. Award Criteria

38.1 Subject to GIB clause 37 above, the contract will be awarded to the lowest evaluated responsive bidder decided by the purchaser in terms of GIB Clause 35.

39. Variation of Quantities at the Time of Award/ Currency of Contract

39.1 At the time of awarding the contract, the purchaser reserves the right to increase or decrease by up to twenty five (25) per cent, the quantity of goods and services mentioned in the schedule (s) in the "List of Requirements" (rounded off to next whole number) without any change in the unit price and other terms & conditions quoted by the bidder.

39.2 If the quantity has not been increased at the time of the awarding the contract, the purchaser reserves the right to increase by up to twenty five (25) per cent, the quantity of goods and services mentioned in the contract (rounded off to next whole number) without any change in the unit price and other terms & conditions mentioned in the contract, during the currency of the contract.

40. Notification of Award

40.1 Before expiry of the bid validity period, the purchaser will notify the successful bidder(s) in writing, by registered / speed post or by fax/email (to be confirmed by registered / speed post) that its bid for Goods & Services, which have been selected by the purchaser, has been accepted, also briefly indicating there in the essential details like description, specification and quantity of the goods & services and corresponding prices accepted. The successful bidder must furnish to the purchaser the required Performance Security within thirty days from the date of dispatch of this notification, failing which the Bid Security will be forfeited and the award will be cancelled. Relevant details about the Performance Security have been provided in clause 5 of GCC under Section IV.

40.2 The Notification of Award shall constitute the conclusion of the Contract.

41. Issue of Contract

41.1 Promptly after notification of award, the Purchaser will mail the contract form (as per Section XV) duly completed and signed, in duplicate, to the successful bidder by registered / speed post.

41.2 Within twenty one days from the date of the contract, the successful bidder shall return the original copy of the contract, duly signed and dated, to the Purchaser/ by registered / speed post/courier.

41.3 The Purchaser reserves the right to issue the Notification of Award consignee wise.

42. Non-receipt of Performance Security and Contract by the Purchaser

42.1 Failure of the successful bidder in providing Performance Security and/or returning contract copy duly signed in terms of GIB clauses 40 and 41 above shall make the bidder liable for forfeiture of its Bid Security and, also, for further actions by the Purchaser it as per the clause 24-Termination of default of GCC under Section IV.

43. Return of Bid Security

43.1 The Bid Security of the successful bidder and the unsuccessful bidder will be returned to them without any interest, whatsoever, in terms of Clause 19 of GIB.

44. Publication of Bid Result

44.1 The name and address of the successful bidder (s) receiving the contract(s) will be mentioned in the Website of AIIMS, CPPP and HITES.

H. CORRUPT OR FRADULENT PRACTICES

45. Corrupt or Fraudulent Practices

45.1 It is required by all concerned namely the Bidder /Suppliers/Purchaser/Consignee/End User etc. to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Purchaser: -

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and

(ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition;

(b) Will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract by the purchaser if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing the contract.

SECTION – III

SPECIAL INSTRUCTIONS TO BIDDERS (SIB)

The following Special Instructions to Bidders will apply for this purchase. These special instructions will modify/substitute/supplement the corresponding General Instructions to Bidders (GIB) incorporated in Section II. The corresponding GIB clause numbers have also been indicated in the text below:
In case of any conflict between the provision in the GIB and that in the SIB, the provision contained in the SIB shall prevail.

Sl. No.	GIB Clause No.	Topic	SIB Provision	Ref. Page No.
A	1 to 7	Preamble	No Change	
B	8 to 10	Bidding Document	Change in GIB Clause no. 10.1	
	10.1	Clarification of Bid document	Changed as under	10
C	11 to 21	Preparation of Bids	Change in GIB Clause no. 21.1	
	21.1		Changed as under	17
D	22 to 24	Submission of Bids	Guiding notes given as under	18
E	25	Bid Opening	No Change	
F	26 to 36	Scrutiny and Evaluation of Bids	No Change	
	33	Comparison of Bids	Additional para 33.2 as under	20
G	37 to 44	Award of Contract	No Change	
H	45	Corrupt or Fraudulent Practices	No Change	

10. Clarification of Bid document

10.1 A bidder requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser in writing in their letter head duly signed and scanned through email to hll.ncij@hllhites.com. The purchaser will respond to such request provided the same is received 2 (two) days prior to the Pre-bid Meeting Conference. Any queries/representations received after the pre-bid meeting will not be taken into cognizance.

21. Digital Signing of e-Bid

21.1 The bidders shall submit their bids online as per the instructions contained in GIB Clause 11 and any other specific instruction mentioned in the e-Tender portal using the digital signature.

Instruction on submission of Bids

i) All the documents pertaining to the event/RFx no. may be downloaded from the e-portal by clicking on the **'Technical RFx'** option in the 'top-left portion of the web-page' when the RFx/event is in **Display Mode**.

ii) All the necessary documents as prescribed in the NIB shall be prepared and scanned in different files (in PDF and/or Excel format or as per format instructed elsewhere) and uploaded for on-line submission of Proposal.

iii) The scanned copies of Bid Processing Fee, Bid Security, all document(s)/ information(s) including the Financial Proposal should be uploaded **online only** in the prescribed format given in the designated e-tendering portal website. No other mode of submission shall be acceptable.

However, **Bid Processing Fee, Bid Security, Catalogue(s)/Data-sheet(s)** related to all quoted items must be submitted in original at the desired venue before the last date and time of physical submission as mentioned in the NIB.

iv) The prospective bidders may **scan the documents in low resolution (75 to 100 DPI)** instead of 200 DPI. The documents may be scanned for further lower resolution (if possible). This would reduce the size of the Cover and would be uploaded faster.

v) The Individual file size of uploading is restricted up to 5 MB. Bidders may upload multiple files (Not exceeding 5 MB individually) & give relevant file name indicating the contents.

vi) The file name of price bid should not be different from the price bid format uploaded by the Bid inviting Authority in the e-portal. This can be downloaded from the **Notes & Attachment** under **Details** of item when the RFx/event is in **Display Mode** or as mentioned in point no. i) above.

vii) **Bidders may simulate online bid submission (technical & financial) at least one week in advance of the bid submission deadline. No clarifications/troubleshooting regarding any problems being faced during bid submission online shall be entertained in the last week of bid submission**.

Qualification Criteria (Ref. GIB Clause 30.1)

The Purchaser reserves the right to ask for a free demonstration of the quoted equipment after giving reasonable time to the bidder at a pre-determined place acceptable to the purchaser or at site (in case of non-portable and heavy equipment) for technical acceptability as per the bidding document specifications, before the opening of the Price Bid.

33. Comparison of Bids

33.2 Unit Prices for all optional items/accessories/services (if any) asked in the tender specifications must be quoted separately by all the bidders in their price bid. Such unit prices after multiplying by the required quantity shall be added and taken into consideration for comparison and ranking of bids.

Added Para (Ref. GIB Clause 33 & 34):

The comparison of bids will be based on GIB Clause 33, 34 and if any, as specified in the Technical specification(s). However, at the time of award of contract, the value of award (bid value/contract value) shall be limited to the upfront charges payable by the exchequer for Supply, Installation, Testing & Commissioning value only on DDP basis which is inclusive of warranty (for number of years specified at section VI; List of Requirement, Part I) and any other item(s)/services detailed for upfront purchase in the technical specifications. The cost of any other parameters like CAMC price beyond the warranty period, cost of any Consumables, any other recurring expenditure, etc. which have been considered for ranking of bids or for freezing of rates shall not be part of tender/award/bid/contract value.

SECTION - IV

GENERAL CONDITIONS OF CONTRACT (GCC)
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1. Application

1.1 The General Conditions of Contract incorporated in this section shall be applicable for this purchase to the extent the same are not superseded by the Special Conditions of Contract prescribed under Section V, List of requirements under Section VI and Technical Specification under Section VII of this document.

2. Use of contract documents and information

2.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract or any provision thereof including any specification, drawing, sample or any information furnished by or on behalf of the purchaser in connection therewith, to any person other than the person(s) employed by the supplier in the performance of the contract emanating from this Bidding Document. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for the purposes of such performance for this contract.

2.2 Further, the supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC sub-clause 2.1 above except for the sole purpose of performing this contract.

2.3 Except the contract issued to the supplier, each and every other document mentioned in GCC sub-clause 2.1 above shall remain the property of the purchaser and, if advised by the purchaser, all copies of all such documents shall be returned to the purchaser on completion of the supplier's performance and obligations under this contract.

3. Patent Rights

3.1 The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, trademarks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.

4. Country of Origin

4.1 All goods and services to be supplied and provided for the contract shall have the origin in India or in the countries with which the Government of India has trade relations.

4.2 The word "origin" incorporated in this clause means the place from where the goods are mined, cultivated, grown, manufactured, produced or processed or from where the services are arranged.

4.3 The country of origin may be specified in the Price Schedule.

5. Performance Security

5.1 Within Thirty (30) days from date of the issue of notification of award by the Purchaser, the supplier, shall furnish Performance Security to the Purchaser for an amount equal to ten percent (10%) of the total value of the contract, valid up to

ninety (90) days after the date of completion of all contractual obligations by the supplier, including the warranty obligations.

5.2 The Performance security shall be denominated in Indian Rupees or in the currency of the contract as detailed below:

It shall be in any one of the forms namely Account Payee Demand Draft or Fixed Deposit Receipt drawn from any Scheduled bank in India or Bank Guarantee issued by a Scheduled bank in India, in the prescribed form as provided in Section XIV of this document in favour of the Purchaser. The validity of the Fixed Deposit Receipt or Bank Guarantee will be for a period up to ninety (90) days beyond Warranty Period.

5.3 In the event of any failure/default of the supplier with or without any quantifiable loss to the government including furnishing of consignee wise Bank Guarantee for CAMC security as per Performa in Section XIV, the amount of the performance security is liable to be forfeited. The needful will be done to cover any failure/default of the supplier with or without any quantifiable loss to the Government.

5.4 In the event of any amendment issued to the contract, the supplier shall, within fifteen (15) days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary), rendering the same valid in all respects in terms of the contract, as amended.

5.5 The supplier shall enter into Comprehensive Annual Maintenance Contract as per the 'Contract Form - B' in Section XV with respective consignees, 3 (three) months prior to the completion of Warranty Period. The CAMC will commence from the date of expiry of the Warranty Period.

5.6 Subject to GCC sub – clause 5.3 above, the Purchaser will release the Performance Security without any interest to the supplier on completion of the supplier's all contractual obligations including the warranty obligations & after receipt of Consignee wise bank guarantee for CAMC security in favour of concerned Director AIIMS/Chief of Centres/MS of Hospital/Head of the Department/Dean as per the format in Section XIV.

6. Technical Specifications and Standards

6.1 The Goods & Services to be provided by the supplier under this contract shall conform 'Technical Specification' under Sections VII of this document.

7. Packing and Marking

7.1 The packing for the goods to be provided by the supplier should be strong and durable enough to withstand, without limitation, the entire journey during transit including transhipment (if any), rough handling, open storage etc. without any damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or otherwise of transport and handling facilities at all points during transit up to final destination as per the contract.

7.2 The quality of packing, the manner of marking within & outside the packages and provision of accompanying documentation shall strictly comply with the requirements as provided in Technical Specifications under Section VII and in SCC under Section V. In case the packing requirements are amended due to issue of any

amendment to the contract, the same shall also be taken care of by the supplier accordingly.

7.3 Packing instructions:

Unless otherwise mentioned in the Technical Specification under Section VII and in SCC under Section V, the supplier shall make separate packages for each consignee (in case there is more than one consignee mentioned in the contract) and mark each package on three sides with the following with indelible paint of proper quality:

a. Contract number and date
b. Brief description of goods including quantity
c. Packing list reference number
d. Country of origin of goods
e. Consignee's name and full address and
f. Supplier's name and address

8. Inspection, Testing and Quality Control

8.1 The purchaser and/or its nominated representative(s) will, without any extra cost to the purchaser, inspect and/or test the ordered goods and the related services to confirm their conformity to the contract specifications and other quality control details incorporated in the contract. The purchaser shall inform the supplier in advance, in writing, the purchaser's programme for such inspection and, also the identity of the officials to be deputed for this purpose. "The cost towards the transportation, boarding and lodging will be borne by the purchaser and/or its nominated representative(s) for the first visit. In case the goods are rejected in the first instance and the supplier requests for re-inspection, and if same is accepted by Purchaser/Consignee, all subsequent inspections shall be at the cost of the supplier. The expense will be to and fro Economy Airfare, Local Conveyance, Boarding and Lodging of the inspection team for the inspection period."

8.2 The Technical Specification incorporated in the contract shall specify what inspections and tests are to be carried out and, also, where and how they are to be conducted. If such inspections and tests are conducted in the premises of the supplier or its subcontractor(s), all reasonable facilities and assistance, including access to relevant drawings, design details and production data, shall be furnished by the supplier to the purchaser's inspector at no charge to the purchaser.

8.3 If during such inspections and tests the contracted goods fail to conform to the required specifications and standards, the purchaser's inspector may reject them and the supplier shall either replace the rejected goods or make all alterations necessary to meet the specifications and standards, as required, free of cost to the purchaser and re-submit the same to the purchaser's inspector for conducting the inspections and tests again.

8.4 In case the contract stipulates pre-dispatch inspection of the ordered goods at supplier's premises, the supplier shall put up the goods for such inspection to the purchaser's inspector well ahead of the contractual delivery period, so that the purchaser's inspector is able to complete the inspection within the contractual delivery period.

8.5 If the supplier tenders the goods to the purchaser's inspector for inspection at the last moment without providing reasonable time to the inspector for completing the inspection within the contractual delivery period, the inspector may carry out the inspection and complete the formality beyond the contractual delivery period at the

risk and expense of the supplier. The fact that the goods have been inspected after the contractual delivery period will not have the effect of keeping the contract alive and this will be without any prejudice to the legal rights and remedies available to the purchaser under the terms & conditions of the contract.

8.6 The purchaser's contractual right to inspect, test and, if necessary, reject the goods after the goods' arrival at the final destination shall have no bearing of the fact that the goods have previously been inspected and cleared by purchaser's inspector during pre-dispatch inspection mentioned above.

"On rejection, the supplier shall remove such stores within 14 days of the date of intimation of such rejection from the consignee's premises. If such goods are not removed by the supplier within the period mentioned above, the purchaser/consignee may remove the rejected stores and either return the same to the supplier at his risk and cost by such mode of transport as purchaser/consignee may decide or dispose of such goods at the suppliers risk to recover any expense incurred in connection with such disposals and also the cost of the rejected stores if already paid for."

8.7 Goods accepted by the purchaser/consignee and/or its inspector at initial inspection and in final inspection in terms of the contract shall in no way dilute purchaser's/consignee's right to reject the same later, if found deficient in terms of the warranty clause of the contract, as incorporated under GCC Clause 15.

8.8 Principal/ Foreign supplier shall also have the equipment inspected by recognized/ reputed agency like SGS, Lloyd, Bereau Veritas, TUV etc. prior to dispatch at the supplier's cost and furnish necessary certificate from the said agency in support of their claim.

9. Terms of Delivery

9.1 Goods shall be delivered by the supplier in accordance with the terms of delivery and as per the delivery period specified in the schedule of requirement. Please note that the time shall be the essence of the contract.

10. Transportation of Goods

10.1 Instructions for transportation of imported goods offered from abroad:

The supplier shall not arrange part-shipments without the express/prior written consent of the purchaser. The supplier is required under the contract to deliver the goods under CIP (Named port of destination) terms.

11. Insurance

11.1 Unless otherwise instructed in the SCC, the supplier shall make arrangements for insuring the goods against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the following manner:

i) In case of supply of domestic goods on Free Delivery at Consignee's Site basis, the supplier shall be responsible till the entire stores contracted for arrival in good condition at destination. The transit risk in this respect shall be covered by the Supplier by getting the stores duly insured for an amount equal to 110% of the value of the goods from warehouse to warehouse (consignee site) on all risk basis. The insurance cover shall be obtained by the Supplier and should be valid till 3 months after the receipt of goods by the Consignee.

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

If the equipment is not commissioned and handed over to the consignee within 3 months, the insurance will have to be extended by the supplier at their cost till the successful installation, testing, commissioning and handing over of the goods to the consignee. In case the delay in the installation and commissioning is due to handing over of the site to the supplier by the consignee/End User, such extensions of the insurance will still be done by the supplier, but the insurance extension charges at actual will be reimbursed.

12. Spare parts

12.1 If specified in the List of Requirements and in the resultant contract, the supplier shall supply/provide any or all of the following materials, information etc. pertaining to spare parts manufactured and/or supplied by the supplier:

a) The spare parts as selected by the Purchaser/End User to be purchased from the supplier, subject to the condition that such purchase of the spare parts shall not relieve the supplier of any contractual obligation including warranty obligations; and

b) In case the production of the spare parts is discontinued:

i) Sufficient advance notice to the Purchaser/End User before such discontinuation to provide adequate time to the purchaser to purchase the required spare parts etc., and

ii) Immediately following such discontinuation, providing the Purchaser/End User, free of cost, the designs, drawings, layouts and specifications of the spare parts, as and if requested by the Purchaser/End User.

12.2 Supplier shall carry sufficient inventories to assure ex-stock supply of consumables and spares for the goods so that the same are used during warranty and CAMC period.

13. Incidental services

13.1 Subject to the stipulation, if any, in the SCC (Section – V), List of Requirements (Section - VI) and the Technical Specification (Section – VII), the supplier shall be required to perform the following services:

i) Installation & Commissioning, Supervision, Demonstration, Trial run etc. of the goods.
ii) Turnkey work (if any).
iii) Training of Consignee's/End Users Doctors, Staff, operators etc. for operating and maintaining the goods.
iv) Supplying required number of operation & maintenance manual for the goods.

14. Distribution of Dispatch Documents for Clearance/Receipt of Goods

The supplier shall send all the relevant dispatch documents well in time to enable the purchaser clear or receive (as the case may be) the goods in terms of the contract. Unless otherwise specified in the SCC, the usual documents involved and the drill to be followed in general for this purpose are as follows:

Within 24 hours of dispatch, the supplier shall notify the concerned Store Officer in AIIMS Clearing Agent and others concerned the complete details of dispatch and also supply following documents by air mail/ courier etc. with intimation by e-mail:

a) Commercial Supplier's Invoice giving full details of the goods including quantity, value, etc.;
b) Packing list;
c) Certificate of country of origin;
d) Bill of Lading/Airway Bill;
e) Insurance Certificate; (if applicable)
f) Manufacturer's guarantee and Inspection certificate; (if applicable)
g) Inspection certificate issued by the Purchaser's Inspector; (if applicable)
h) Any other document(s) as and if required in terms of the contract.

15. Warranty and CAMC

15.1 The supplier warrants comprehensively that the goods supplied under the contract is new, unused and incorporate all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials (except when the design adopted and/or the material used are as per the Purchaser's/Consignee's specifications) or workmanship or from any act or omission of the supplier, that may develop under normal use of the supplied goods under the conditions prevailing in India.

15.2 The warranty shall include all spares, labour and preventive maintenance from the date of completion of the satisfactory installation and acceptance till warranty period.

15.3 The Comprehensive Annual Maintenance Contract shall include all spares, labour and preventive maintenance from the date of completion of the satisfactory installation and acceptance till warranty period.

15.4 Warranty as well as Comprehensive Annual Maintenance Contract will be inclusive of all accessories and turnkey work and it will also cover the following, wherever applicable:-

- All kinds of Motors.
- Plastic & Glass Parts against any manufacturing defects.
- All kinds of sensors.
- All kinds of coils, probes and transducers.
- Printers and imagers including laser and thermal printers with all parts.
- UPS including the replacement of batteries.
- Air-conditioners

15.5 In case of any claim arising out of this warranty and CAMC period the Purchaser/Consignee shall promptly notify the same in writing to the supplier. The period of the warranty will be as per G.C.C clause number 15.2 unless revised in SCC in Section V of Bidding Document.

15.6 Upon receipt of such notice, the supplier shall, within 8 hours on a 24(hrs) X 7 (days) X 365 (days) basis respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non rectification will be applicable as per conditions laid down in the Bidding Document.

15.7 In the event of any rectification of a defect or replacement of any defective goods during the warranty period, the warranty for the rectified/replaced goods shall be up to the completion of the original warranty period of the main equipment.

15.8 If the supplier, having been notified, fails to respond to take action to repair or replace the defect(s) within 8 hours on a 24(hrs) X 7 (days) X 365 (days) basis, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.

15.9 During Warranty and CAMC period, the supplier is required to visit at each consignee's site at least once in 6 months commencing from the date of the installation for preventive maintenance of the goods.

15.10 The Purchaser/Consignee reserve the rights to enter into Comprehensive Annual Maintenance Contract between the Purchaser and the Supplier for the period as mentioned in Section VII, Technical Specifications after the completion of warranty period.

15.11 The supplier along with its Manufacturer, Indian Agent and the CAMC provider shall ensure continued supply of the spare parts for the machines and equipment supplied by them to the purchaser for 10 years from the date of installation and handing over.

15.12 The Supplier along with its Manufacturer Indian Agent and the CMC Provider shall always accord most favoured client status to the Purchaser vis-à-vis its other Clients/Purchasers of its equipment/machines/goods etc. and shall always give the most competitive price for its machines/equipment supplied to the Purchaser/Consignee.

16. Assignment

16.1 The Supplier shall not assign, either in whole or in part, its contractual duties, responsibilities and obligations to perform the contract, except with the Purchaser's prior written permission.

17. Sub Contracts

17.1 The Supplier shall notify the Purchaser in writing of all sub contracts awarded under the contract, if not already specified in its bid. Such notification, in its original bid or later, shall not relieve the Supplier from any of its liability or obligation under the terms and conditions of the contract.

17.2 Sub contract shall be only for bought out items and sub-assemblies.

17.3 Sub contracts shall also comply with the provisions of GCC Clause 4 ("Country of Origin").

18. Modification of Contract

18.1 If necessary, the purchaser may, by a written order given to the supplier at any time during the currency of the contract, amend the contract by making alterations and modifications within the general scope of contract in any one or more of the following:

a) Specifications, drawings, designs etc. where goods to be supplied under the contract are to be specially manufactured for the purchaser,
b) Mode of packing,
c) Incidental services to be provided by the supplier
d) Mode of dispatch,
e) Place of delivery, and
f) Any other area(s) of the contract, as felt necessary by the purchaser depending on the merits of the case.

18.2 In the event of any such modification/alteration causing increase or decrease in the cost of goods and services to be supplied and provided, or in the time required by the supplier to perform any obligation under the contract, an equitable adjustment shall be made in the contract price and/or contract delivery schedule, as the case may be, and the contract amended accordingly. If the supplier doesn't agree to the adjustment made by the Purchaser the supplier shall convey its views to the Purchaser within twenty-one days from the date of the supplier's receipt of the Purchaser's amendment/modification of the contract.

19. Prices

19.1 Prices to be charged by the supplier for supply of goods and provision of services in terms of the contract shall not vary from the corresponding prices quoted by the supplier in its bid and incorporated in the contract except for any price adjustment authorized in the SCC.

20. Taxes and Duties

20.1 Supplier shall be entirely responsible for GST incurred until delivery of the contracted goods to the purchaser.

20.2 Further instruction, if any, shall be as provided in the SCC.

21. Terms and Mode of Payment

21.1 Payment Terms

Payment shall be made through electronic transfer in NEFT/RTGS subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner:

A) Payment for Indigenous Goods (M&E) Or Foreign Origin Located Within India. Payment shall be made in Indian Rupees as specified in the contract in the following manner:

a) **On delivery**: 75% payment of the contract price shall be paid on receipt of goods in good condition and upon the submission of the following documents:
   (i) Original copies of supplier's invoice showing contract number, goods description, quantity, packing list, unit price and total amount;

(ii) Consignee Receipt Certificate as per Section XVI of bidding document in original issued by the authorized representative of the consignee;

b) **On Acceptance**: Balance 25% payment would be made against "Installation and Acceptance Certificate" of goods to be issued by the End User subject to recoveries, if any, either on account of non-rectification of defects/deficiencies not attended by the Supplier or otherwise. "Installation and Acceptance Certificate" need to be issued by the concerned End User after installation, commissioning, testing and successful trial run (if applicable).

B) Payment for Imported Goods (M&E): Payment for foreign currency portion shall be made in the currency as specified in the contract in the following manner:

a) **On Shipment**: 75% of the net FCA/CIP price (i.e. FCA/CIP price less Indian Agency commission) of the goods despatch by Sea/Air shall be paid through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the supplier in a bank in his country and upon submission of documents specified hereunder:

i) Commercial Supplier's Invoice giving full details of the goods including quantity, value, etc.;
ii) Packing list;
iii) Certificate of country of origin;
iv) Negotiable clean Bill of Lading/Airway Bill;
v) Insurance Certificate; (if applicable)
vi) Manufacturer's guarantee and Inspection certificate; (if applicable)
vii) Inspection certificate issued by the Purchaser's Inspector; (if applicable)
viii) Any other document(s) as and if required in terms of the contract.

b) **On Acceptance**: Balance payment of 25% of net FCA/CIP price of goods would be made against "Installation and Acceptance Certificate" to be issued by the End User through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the Foreign Principal in a bank in his country, subject to recoveries, if any. "Installation and Acceptance Certificate" need to be issued by the concerned End User after installation, commissioning, testing and successful trail run (if applicable).

c) Payment of Consumable Imported Goods/Reagents/Kits would be made 100% against "Installation and Acceptance Certificate" to be issued by the End User through Wire Transfer.

d) **Payment of Incidental Costs:** Incidental costs till consignee site towards Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training),if applicable will be paid in Indian Rupees to the Indian Agent on submission of "Installation and Acceptance Certificate" by the End User.

e) **Payment of Indian Agency Commission**: Indian Agency Commission (IAC) will be paid to the Authorised manufacturer's agent in Indian rupees indicated in the contract (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject to further escalation/exchange variation. The agency commission payment shall be made on submission of "Installation and Acceptance Certificate" by the End User.

C) Payment of Civil/Electrical Works at site: The payment related to Civil/Electrical Works at site will be made as indicated in the contract (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject

to further escalation/exchange variation. The payment for Civil/Electrical works shall be made on submission of "Installation and Acceptance Certificate" by the End User.

D) Payment for Comprehensive Annual Maintenance Contract Charges: The consignee will enter into CAMC with the supplier at the rates as stipulated in the contract. The payment of CAMC will be made on six monthly basis after satisfactory completion of said period, duly certified by the End User on receipt of bank guarantee for an amount equivalent to 2.5% of the cost of the equipment as per contract in the prescribed format given in Section XV of the bidding document valid till 3 months after expiry of entire CAMC period. The Performance Bank Guarantee for CAMC will be applicable in case of contract value is more than Rs. 10 lakh.

21.2 Terms of payment for imported goods

21.2.1 The supplier shall not claim any interest on payments under the contract.

21.2.2 Where there is a statutory requirement for tax deduction at source, such deduction towards income tax and other tax as applicable will be made from the bills payable to the Supplier at rates as notified from time to time.

21.2.3 Irrevocable & non-transferable LC shall be opened by the Purchaser. However, if the supplier requests specifically to open confirmed LC, the extra charges would be borne by the supplier. If LC is required to be extended and/or amended for reasons not attributable to the purchaser, the charges thereof shall be borne by the supplier.

21.2.4 The payment shall be made in the currency/currencies authorised in the contract.

21.2.5 The supplier shall send its claim for payment in writing, when contractually due, along with relevant documents etc., duly signed with date.

21.2.6 While claiming payment, the supplier is also to certify in the bill that the payment being claimed is strictly in terms of the contract and all the obligations on the part of the supplier for claiming that, payment has been fulfilled as required under the contract.

21.2.7 While claiming reimbursement of duties, taxes etc. (like GST, sales tax, excise duty, custom duty) from the Purchaser, as and if permitted under the contract, the supplier shall also certify that, in case it gets any refund out of such taxes and duties from the concerned authorities at a later date, the supplier shall refund to the Purchaser forthwith.

22. Delivery

22.1 The supplier shall deliver the goods and perform the services under the contract within the time schedule specified by the Purchaser in the List of Requirements and as incorporated in the contract. The time for and the date of delivery of the goods stipulated in the schedule shall be deemed to be of the essence of the contract and the delivery must be completed no later than the date(s) as specified in the contract.

22.2 Subject to the provision under GCC clause 26, any unexcused delay by the supplier in maintaining its contractual obligations towards delivery of goods and

performance of services shall render the supplier liable to any or all of the following sanctions:

(i) Imposition of liquidated damages,
(ii) Forfeiture of its Performance Security and
(iii) Termination of the Contract for default.

22.3 If at any time during the currency of the contract, the supplier encounters conditions hindering timely delivery of the goods and performance of services, the supplier shall promptly inform the Purchaser in writing about the same and its likely duration and make a request to the Purchaser for extension of the delivery schedule accordingly. On receiving the supplier's communication, the Purchaser shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier's contractual obligations by issuing an amendment to the contract.

22.4 When the period of delivery is extended due to unexcused delay by the supplier, the amendment letter extending the delivery period shall, interalia contain the following conditions:

(a) The Purchaser shall recover from the supplier, under the provisions of the clause 23 of the General Conditions of Contract, Liquidated Damages on the goods and services, which the Supplier has failed to deliver within the delivery period stipulated in the contract.

(b) That no increase in price on account of any ground, whatsoever, including any stipulation in the contract for increase in price on any other ground and, also including statutory increase in or fresh imposition of GST levied in respect of the goods and services specified in the contract, which takes place after the date of delivery stipulated in the contract shall be admissible on such of the said goods and services as are delivered and performed after the date of the delivery stipulated in the contract.

(c) But nevertheless, the Purchaser shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty and GST which takes place after the expiry of the date of delivery stipulated in the contract.

22.5 The supplier shall not dispatch the goods after expiry of the delivery period. The supplier is required to apply to the Purchaser for extension of delivery period and obtain the same before dispatch. In case the supplier dispatches the goods without obtaining an extension, it would be doing so at its own risk and no claim for payment for such supply and/or any other expense related to such supply shall lie against the purchaser.

22.6 Passing of Property

22.6.1 The property in the goods shall not pass to the purchaser unless and until the goods have been delivered to the consignee in accordance with the contract.

22.6.2 Where there is a contract for sale of specific goods and the supplier is bound to do something to the goods for the purpose of putting them into a deliverable state the property does not pass until such thing is done.

22.6.3 Unless otherwise agreed, the goods remain at the supplier's risk until the property therein is transferred to the purchaser.

23. Liquidated Damages

23.1 Subject to GCC clause 26, if the supplier fails to deliver or install/commission any or all of the goods or fails to perform the services within the time frame(s) incorporated in the contract, the Purchaser shall, without prejudice to other rights and remedies available to the Purchaser under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 0.5% per week of delay or part thereof on delayed supply of goods, installation, commissioning and/or services until actual delivery or performance subject to a maximum of 10% of the contract price. Once the maximum is reached Purchaser may consider termination of the contract as per GCC 24.

During the above-mentioned delayed period of supply and/or performance, the conditions incorporated under GCC sub-clause 22.4 above shall also apply.

24. Termination for Default

24.1 The Purchaser without prejudice to any other contractual rights and remedies available to it the Purchaser, may, by written notice of default sent to the supplier, terminate the contract in whole or in part, if the supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC sub-clauses 22.3 and 22.4.

24.2 The Performance Security in such cases will be forfeited.

24.3 Unless otherwise instructed by the Purchaser, the supplier shall continue to perform the contract to the extent not terminated.

25. Termination for Insolvency

25.1 If the supplier becomes bankrupt or otherwise insolvent, the purchaser reserves the right to terminate the contract at any time, by serving written notice to the supplier without any compensation, whatsoever, to the supplier, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the Purchaser.

26. Force Majeure

26.1 Notwithstanding the provisions contained in GCC clauses 22, 23 and 24, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure.

26.2 For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of the party claiming to be affected by such event and which has caused the non – performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees, lockouts excluding by its management and freight embargoes.

26.3 If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within twenty one days of

occurrence of such event. Unless otherwise directed by the Purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

26.4 If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.

26.5 In case due to a Force Majeure event the Purchaser is unable to fulfil its contractual commitment and responsibility, the Purchaser will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.

27. Termination for Convenience

27.1 The Purchaser reserves the right to terminate the contract, in whole or in part for its Purchaser's convenience, by serving written notice on the supplier at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Purchaser. The notice shall also indicate interalia, the extent to which the supplier's performance under the contract is terminated, and the date with effect from which such termination will become effective.

27.2 The goods and services which are complete and ready in terms of the contract for delivery and performance within thirty days after the supplier's receipt of the notice of termination shall be accepted by the Purchaser following the contract terms, conditions and prices. For the remaining goods and services, the Purchaser may decide:

a) To get any portion of the balance completed and delivered at the contract terms, conditions and prices; and / or
b) To cancel the remaining portion of the goods and services and compensate the supplier by paying an agreed amount for the cost incurred by the supplier towards the remaining portion of the goods and services.

28. Governing Language

28.1 The contract shall be written in English language following the provision as contained in GIB clause 4. All correspondence and other documents pertaining to the contract, which the parties exchange, shall also be written accordingly in that language.

29. Notices

29.1 Notice, if any, relating to the contract given by one party to the other, shall be sent in writing or by Facsimile/email and confirmed in writing. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.

29.2 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

30. Resolution of Disputes

30.1 If dispute or difference of any kind shall arise between the Purchaser/Consignee and the supplier in connection with or relating to the contract, the parties shall make every effort to resolve the same amicably by mutual consultations.

30.2 If the parties fail to resolve their dispute or difference by such mutual consultation within twenty-one days of its occurrence, then, unless otherwise provided in the SCC, either the Purchaser/Consignee or the supplier 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.

30.3 In the case of a dispute or difference arising between the Purchaser and a domestic Supplier relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitration to be appointed by the Director, AIIMS. The award of the arbitrator shall be final and binding on the parties to the contract subject to the provision that the Arbitrator shall give reasoned award in case the value of claim in reference exceeds Rupees One lakh (Rs. 1,00,000/-).

30.4 **Venue of Arbitration:** The venue of arbitration shall be the place from where the contract has been issued, i.e., New Delhi, India.

30.5 **Jurisdiction of the court** will be from the place where the Bidding Document has been issued, i.e., New Delhi, India.

31. Applicable Law

The contract shall be governed by and interpreted in accordance with the laws of India for the time being in force.

32 Withholding and Lien in respect of sums claimed

32.1 Whenever any claim for payment arises under the contract against the supplier the purchaser shall be entitled to withhold and also have a lien to retain such sum from the security deposit or sum of money arising out of under any other contract made by the supplier with the purchaser, pending finalization or adjudication of any such claim.

32.2 It is an agreed term of the contract that the sum of money so withheld or retained under the lien referred to above, by the purchaser, will be kept withheld or retained till the claim arising about of or under the contract is determined by the Arbitrator or by the competent court as the case may be and the supplier will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention.

33. Fall Clause

Fall clause is a price safety mechanism. The fall clause provides that if the contract holder reduces its price or sells or even offers to sell the contracted goods of identical specification and terms & conditions to that of the contract, at a price lower than the contract price, to any person or organization during the currency of the Contract, the Contract price will be automatically reduced with effect from that date for all the subsequent supplies under the Contract and the contract amended accordingly.

SECTION – V

SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract (SCC) will apply for this purchase. The corresponding clauses of General Conditions of Contract (GCC) relating to the SCC stipulations have also been incorporated below.

These Special Conditions will modify/substitute/supplement the corresponding (GCC) clauses.

Whenever there is any conflict between the provision in the GCC and that in the SCC, the provision contained in the SCC shall prevail.

Any specific clause, mentioned in the technical specification shall prevail and will supersede the similar clause mentioned anywhere in the tender.

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

SECTION- VI

LIST OF REQUIREMENTS

Part I:

Sl. no.	Rfx/ Event number	Short Description of goods	Quantity	Warranty Period	CAMC period after warranty
1	3000002581	3.0 Tesla MR Scanner	1	05 years	05 years
2	3000002582	256 Slice Dual Energy CT	1	05 years	05 years
3	3000002583	Digital Subtraction Angiography	1	05 years	05 years
4	3000002584	Full Field Digital Mammography Unit	1	05 years	05 years
5	3000002585	Digital Mobile X-Ray Unit	3	05 years	05 years
6	3000002586	Ultrasound Machine-High End	1	05 years	05 years
7	3000002587	Ultrasound Machine - Mid Range	2	05 years	05 years
8	3000002588	Ultrasound Unit - Portable	7	05 years	05 years
9	3000002589	Radio-Frequency Ablation System	1	05 years	05 years
10	3000002594	HDR Brachytherapy System	1	05 years	05 years

Part II: Required Delivery Schedule:

For Indigenous or Imported goods:

Supply, Installation and Commissioning to be completed within 120 days from the date of NOA or date of opening of LC or date of approval of layout drawing (if case applicable), whichever is later.

(In case of LC opening, necessary documents like valid Performance Security and Proforma Invoice are to be submitted within 30 days from the date of release of NOA. In case layout drawing approval is applicable, it should be submitted by the supplier within 21 days from the date of release of NOA.)

For delayed delivery and/or installation and commissioning liquidated damages will get applied as per GCC clause 23.

Part III: Scope of Incidental Services:

Installation & Commissioning, Supervision, Demonstration, Trial run and Training etc. as specified in GCC Clause 13.

Part IV: Turnkey Work (if any) as per details in Technical Specification.

Part V: Warranty period as per details mentioned in technical specification and as specified in Part I above. Warranty period will start from the date of installation, commissioning and acceptance.

Comprehensive Annual Maintenance Contract (CAMC) as per details in Technical Specification as specified in part I above. Comprehensive Annual Maintenance Contract (CAMC) will start from the date of successful completion of warranty period.

Part VI: Required Terms of Delivery and Destination.

a) For Indigenous goods or for imported goods if supplied from India:
Free Delivery at Consignee's Site(s)

b) For Imported goods directly from abroad:

The foreign bidders are required to quote their rates on CIP (Named Port of Destination Basis) giving breakup of the price as per the Proforma prescribed in the Price Schedule. Purchaser will place the order on CIP (Named Port of Destination basis).

Insurance (Local Transportation and Storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery.

c) The Consignee details are as under but the supplier is required to deliver the goods at the designated site in the floor and building of concerned Centers/Hospital/ Departments:

Consignee	Site	Contact Address.	Air Port	Sea Port
NCI-AIIMS (National Cancer Institute – All India Institute of Medical Sciences)	Jhajjar Campus	Badsha Village Jhajjar Haryana	New Delhi	ICD Tuglakabad (for containerised shipments) Or ICD Patparganj

Note: The consignee will ensure timely issue of NMIC, CDEC etc., wherever applicable to the supplier.

SECTION - VII

TECHNICAL SPECIFICATION AND GENERAL POINTS

A. TECHNICAL SPECIFICATION:

Item No. 1 (Rfx/Event number 3000002581)

3.0 Tesla MR Scanner

	TECHNICAL SPECIFICATIONS	
	The manufacturer/bidder must quote the latest 'state of the art' 3 Tesla MR System or better as per the specifications below.	
	Please mention the year of launch of the quoted model.	
	The offered model should be USFDA approved (authentic and legible certificate for the same to be annexed).	
	Also, the vendor will guarantee that the system supplied is not refurbished and the MR system quoted is the latest best available model in the segment (3T MR scanner with 70 cm or more bore) quoted, at the time of delivery and should submit an undertaking in this regard.	
Sl. No	**Features**	**Essential Specification**
1	**Magnet**	3 Tesla (superconducting) Magnet with approximately 70 cm or more bore diameter.
	a) Field Strength	Helium only 3 T (superconducting) Magnet along with Magnet Power supply Facility for quick shutdown of the magnet in case of emergency.
	b) Field Stability over time	(i) Should have active shielding, external interference shielding with good field stability.
		(ii) Mention the RF frequency of operation and the field drift.
	c) Homogeneity	(i) Best homogeneity possible should be given. Specify homogeneity in VRMS at 10 cm, 20 cm, 30 cm and 40 cm DSV and at max. FOV achievable with the quoted scanner.
		(ii) Should be very good for Single voxel and CSI spectroscopy. Specify values
		(iii) Please specify the homogeneity at 40 cm FOV (guaranteed homogeneity).
		(iv) Automatic shimming in phantom. Please quote the shim value at 10x10x10 mm3
	d) Magnet Bore	(i) 70 cm or more magnet bore diameter, after positioning of gradient, shim and RF coils.
	e) Active Shielding/ Fringe field	(i) Quote values for 5 Gauss and 1 Gauss line.
	f) Ext. Shielding	(i) Ext. interference shield (sufficient to house the Magnet, Anaesthesia and physiologic monitors) should be provided
	g) Magnet Cooling System	(i) The magnet should be having zero boil off rate
		(ii) Devices for helium level monitoring in the magnet should be supplied.
		(iii) Liquid helium should be supplied during warranty period and Comprehensive AMC.

		(iv) The vendor should include the Cold Head maintenance and replacement during warranty period and also during Comprehensive AMC.
	h) Shim System	(i) High performance and highly stable shim system with global and localized manual and auto-shimming for high homogeneity magnetic field required for imaging (MRI / fMRI), single voxel spectroscopy (MRS), and spectroscopic imaging (MRSI). 3D shimming for volume imaging and CSI.
		(ii) Auto shim (global and voxel shim) should take minimum time to shim the magnet with patient in position (specify the time).
		(iii) Specify number of shim coils including higher order.
2	**a) Patient Table**	(i) Computer controlled subject table movement in vertical and horizontal direction.
		(ii) The vendor should supply **fully motorized computer controlled table,** with movements in vertical and horizontal directions for the main MRI patient table.
		(iii) Subject table should be able to take at least 140 Kg load.
		(iv) Emergency manual traction of the subject from the magnet.
	b) Patient monitoring	(i) Patient monitoring devices for ECG, respiratory, pulse rate, oxygen saturation, at the console etc. A comprehensive solution at patient side and at main console capable of gating the sequence protocols with respect to patient's heart (ECG) and respiratory rates.
	c) Patient Comfort Features	(i) Two-way Patient communication with headphone, microphone and necessary accessories
		(ii) Patient audio alarm
		(iii) Lighting
		(iv) Music system (complete)
		(v) One MR compatible patient trolley (to transfer patient to the magnet table)
		(vi) One MR compatible wheel chair
		(vii) Closed circuit TV and CCD video camera for patient monitoring
		(viii) Provide other standard patient comfort devices, with quoted system (please specify)
3	**Gradient System a)General**	(i) Actively shielded gradient system in X, Y, Z planes.
		(ii) Minimum Gradient Strength should be **44 mT/m** or more along each axis and a slew rate of 200 T/m/s in each axis
		(iii) In case of dual gradient systems, please mention the details in each axis separately.
		(iv) Quote the minimum rise time at the maximum gradient strength offered.
		(v) Quote the Slew rate at the maximum gradient strength
		(vi) Specify the linearity of the gradients at full FOV.
		(vii) 100% duty cycle for full FOV.
	b) Resolution Parameters	(i) Specify the minimum and maximum FOV achievable for the quoted MR system (preferable to have 5 - 450 mm FOV).
		(ii) Specify min. slice thickness in 2D and 3D modes at 128x128, 256x256, 512x512 and 1024x1024 matrices
		(iii) The system should be capable of performing single shot EPI (in 64x64, 128x128, and 256 x 256 matrixes) including

		conventional and fluoroscopic imaging in the three orthogonal and also oblique planes.
		(iv) Effective cooling system for gradient coil and power supply, for uninterrupted operation during summers also. The system should have efficient and adequate provision for eddy current compensation.
4	**RF Transmitter, Receiver, Coils**	The vendor should quote the latest RF transmit technology available with them globally, as per the datasheet.
	a) RF Transmitter	(i) A fully digital RF system capable of transmitting enough power (please quote the value) (as per FDA guidelines), and the operating frequency should cover 1H, and 31P nuclei (for multinuclear spectroscopy of 1H/31P)
		(ii) Specify max. transmitter RF power available (at 50Ω impedance)
	b) RF Receiver	(i) Optical/ Digital RF receiver system with/ high efficient RF receiver system / or its equivalent located on the magnet inside the shielded scan room
		(ii) Minimum 32 independent RF receiver channels or channel independent. Please provide the list of coils/coil-combinations that use this configuration
		(iii) Specify the RF receiver bandwidth for each channel.
		(iv) The system should have necessary hardware to support quadrature phased array and flex coils
	c) RF Transmit technology	(i) Latest RF transmit system (like Multi-transmit/ Multi Drive transmit system or its equivalent/ Trueshape multi-transmit, etc) with at least two independent output channels should be offered to improve RF uniformity and signal homogeneity and to reduce patient induced in-homogeneities
		(ii) If the vendor has two RF amplifiers for producing better image quality/ features, the same should be quoted
	d) SAR limits	(i) SAR limits should be as per FDA guidelines for all protocols, including neuro/ abdominal imaging
	e) Coils *(in addition to the in-built body coil) Price to be separately for each coil , biopsy needle*	(i) The number of channels and number of elements for each coil should be the maximum that the vendor has in their product list. All coils (other than coils for exclusive spectroscopy, like surface coils) should be compatible for parallel acquisition. In case the vendor does not have or manufacture a particular coil, third party coil(s) can be provided. However, it is the responsibility of the vendor to provide necessary interface (both hardware and software) to make the coil work with appropriate RF sequences, etc
		(ii) Head coil (32-channel or more) for EPI/ DTI applications. Compatible with fMRI projection device quoted with the system.
		(iii) Neurovascular coil (20-channel or more) for neurovascular applications. If separate neck coil can work in combination with head coil, then the neck coil is to be included at no extra cost, and the vendor should make sure NV application is satisfied.
		(iv) Spine array coil **(32 Channel or more)**
		(v) Body array coil / Phased Array coil (28 Channel); If a single coil is not available with the vendor, then a combination of coils should be quoted (capable of single station Cardiac/ abdominal imaging), so that the resolution

		over 40 FOV is not compromised.
		(vi) Bilateral Breast array coil (8 Channel or more)
		(vii) Dedicated Shoulder array coil (8 Channel or more); If a dedicated coil is not available with the vendor, then the vendor has to quote equivalent coil (for eg, if Flex coil is offered, then the number should be in addition to the previously quoted coil)
		(viii) Suitable Wrist coil (8 Channel or more); If a dedicated coil is not available with the vendor, then the vendor has to quote equivalent coil (for e.g., if Flex coil is offered, then the number should be in addition to the previously quoted coil).
		(ix) Knee imaging (Transmit/Receive 15 Channel or more)
		(x) Dedicated Peripheral coil or whole body coil with a coverage of atleast 80 cm (with a maximum combination of 2 coils)
		(xi) Eye/ear coil
		(xii) Endorectal coil (quantity-10)
		(xiii) 31P surface coil for Heart/ Liver/calf muscle.
		(xiv) Flex coils in available sizes (minimum 2) for extremity imaging
		(xv) Bilateral Breast Biopsy Coil (with Grid biopsy – Core) should be compatible with the Vacuum assisted Biopsy facility (that is being procured separately), with all necessary software and hardware for integration.; Price to be separately quoted for all consumables including biopsy needle; *refer Para 13. Other accessories, point vii.*
	f) Coil technology	(i) Integrated coil technology, latest as available with the vendor to be quoted: Equivalent of TIM / GEM / DStream or equivalent to be offered.
	g) Table technology	(i) Bolus chasing with 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.
		(ii) Latest table technology available with the vendor (globally) should be offered.
5	**Computer Control System**	(i) The vendor should supply the latest computer system along with the MR system, to handle all the latest applications available on the MR platform.
		(ii) During the warranty period, any hardware updates that are launched globally should be supplied and installed.
	a) Host Computer and Array Processors	(i) Latest state-of-art computer system with sufficient RAM (8 GB or more) and computational speed to match the single shot Echo Planar Imaging (EPI), interactive angiogram, multi-planar three dimensional (3D) reconstruction, surface rendering and dynamic imaging, vascular imaging/ angiography, and adequate storage for images and other applications.
		(ii) Necessary image processor with sufficiently large RAM
		(iii) (4 GB or more) for ultra-fast image reconstruction, capable of performing real-time image reconstruction.
		(iv) Total hard disk memory capable of storing a minimum of 2,00,000 (two lakh) images
		(v) Monitor 19" or more TFT monitor with enhanced graphics accelerator.
		(vi) One measurement (Main) console capable of data acquisition and all online calculations (as required for all sequences in the tender, section 6), and Post processing (as

		required for all applications in the tender, section 7)
		(vii) Licenses for acquisition (as required for all sequences in the tender, section 6), post-processing and for special packages should be given explicitly (as required for all applications in the tender, section 7), listing all the capabilities of the vendor's quoted product (basic standard package, premium packages, etc).
		(viii) The main console/workstation should have pulse sequence software license that may be required to modify and run pulse sequences. If this is not possible, the vendor should provide the necessary hard and software necessary for such application (like laptop with system interface solution). Appropriate procedures (like research agreement) should be finalized before the installation of the equipment, so that there is no delay in operation of any requirement.
	b)Additional workstation	(i) TWO Nos. workstation with colour TFT display (19" or more) with evaluation capabilities (as required for all applications in the tender, section 7).
		(ii) Separate licenses for all the post-processing (including special packages) should be provided for this workstation also (as required for all applications in the tender, section 7).
		(iii) Specify clearly the algorithms that require extra license and list them whether these have been included or not.
		(iv) Filming also should be possible from this workstation.
		(v) The vendor should mention which are the post-processing capabilities that have been quoted with additional workstation.
		(vi) The vendor should mention which are the post-processing capabilities that are not quoted or not available with additional workstation.
	c) CD/DVD archival	(i) DVD RW drive for writing of images, spectra and raw data along with the necessary software for reading the images and spectra on DVD/CD storing capabilities.
		(ii) Provision for archival of k-space data and raw (unprocessed) images.
	d) Networking	i. The vendor should provide Level 3 network Switch (with 32 nodes) or latest, to integrate the network,
		ii. Protocol - Ethernet TCP/IP standards - based image transfer with DICOM 3.0 over standard Ethernet IEEE 903 (DICOM send, receive and DICOM query modes).
		iii. The vendor should provide the connectivity with PACS, with the user departments, as mentioned in Item No.10 of this tender.
		iv. The network speed and cables should match the latest industry standards (eg.10BaseT/100BaseT/1 GB)
		v. System should be configured with different IP series, so as not to clash with different equipment already existing in different departments.
		vi. The vendor should provide necessary networking and configuration assistance with existing PACS, HIS, RIS.
	e)Film documentation	DICOM interface to hook DICOM compatible, dockable, latest state-of-art Dry Laser Camera with more than **500 dpi**, capable of storing/printing images of 1024 x 1024 (or higher, if available) matrix size in various matrix formats (including 16 format) without loss of digital resolution to be

		made available on any of the consoles and on the films (Agfa/Fuji/Kodak), with three online tray system.
	f) Printer	Colour Laser Network Printer (PCL6/PS) for printing of colour CSI/ Perfusion/BOLD maps and images and film documentation on paper (minimum 24 ppm).
6	**a) Data Acquisition**	(i) The system should be capable of 2D and 3D acquisitions in conventional, fast & ultra-fast spin echo and gradient echo modes so that real-time online images can be observed if needed. All the sequences that are available with the vendor at the time of quote/ delivery should be provided as per their manual.
		(ii) 2D multi-slice imaging should be possible in all planes (axial, sagittal, coronal, oblique and double oblique)
		(iii) Up to 1024 x 1024 matrix acquisitions preferred for all applications. Wherever 2048 matrix available, please mention.
		(iv) Half Fourier or other techniques to reduce scan acquisition time while maintaining adequate SNR.
		(v) 3D volume, multiple contiguous slabs, multiple interleaved and multiple overlapping slabs
		(vi) Slice thickness in 2D and partition in 3D to be freely selectable.
		(vii) Dynamic acquisition (serial imaging) with capability to initiate scan sequences either from the magnet panel or from the console.
		(viii) Dynamic acquisition: number of repeat scans with delay time either identical time interval or selectable
		(ix) Auto-slice positioning from the localizer images.
		(x) Maximum-off center positioning both anterior-posterior and lateral direction and should be selectable.
		(xi) Gating: physiological signals like ECG, pulse, respiratory, External signal triggering (interface for triggering input pulse from external source). The provision should be available at the console also (for fMRI, EEG, etc).
		(xii) Simultaneous acquisition, processing and display of image data in 2D multi-slice mode.
		(xiii) Selection of voxels from oblique slices should be possible while doing spectroscopy.
		(xiv) Artefact reduction/imaging enhancement/image filtering/image subtraction/addition/multiplication/ division techniques:
		(xv) Flow: 1st and 2nd order flow artefact compensation
		(xvi) Presentation slabs: a number of relocatable saturation bands to be placed either inside or outside the region of interest
		(xvii) Graphic prescription.
		(xviii) Fat saturation techniques: frequency selective RF pulses to suppress fat signals in the measured image FOV. ROI selective (regional) fat suppression should also be given.
		(xix) Magnetization transfer saturation: Off resonance RF pulses to suppress signals from stationary tissue in FOV
		(xx) Phase contrast capability in 2D and 3D mode.
		(xxi) Image intensity correction
		(xxii) Breath hold acquisition
		(xxiii) EPI mode

		(xxiv) DTI with MDDW or equivalent with a minimum of 12 and selectable up to 128 direction encoding
		(xxv) Data acquisition in all three standard planes (axial, sagittal, coronal) and oblique and double oblique planes or more oblique planes.
		(xxvi) Higher matrix acquisition capability in single shot EPI. Acquisition time, TR, TE and slice thickness should be clearly mentioned and supported by data sheet reference.
		(xxvii) The vendor should offer multi coil acquisition in order to optimize throughput increase and increased effective FOV. Individual acquisition elements of every coil should be mentioned.
	b) Imaging Pulse sequences	(i) All standard and special pulse sequences available at the time of quote/ delivery should be offered and quoted in the bid. If the vendor does not have any particular sequence/s but offers a work in progress (WIP) sequence/s, then it should be provided without any pre-condition like asking the Institute to sign any agreement for this purpose. This also applies to any post-processing software that is offered which is WIP.
		(ii) The system should be capable of selecting TR and TEs as per requirement in majority of the pulse sequences.
		(iii) Spin echo (SE): multi-slice single echo, multi-slice multi-echo (8 echo or more), SE with symmetrical and asymmetrical echo intervals and fast spin echo. MT-SE imaging sequence.
		(iv) Inversion recovery (IR): including short TI modified IRSE, FLAIR, DIR (Double Inversion Recovery).
		(v) Gradient echo (GE): with transverse gradient/RF spoiling, and transverse gradient re-phasing, e.g., GRASE or equivalent etc. 3D gradient echo with shortest TR and TE, free choice of flip angle selection, while maintaining SNR.
	Fast sequences	(i) Fast spin echo and GE sequences in 2D and 3D mode with T1, T2 and PD contrast capable of acquiring maximum number of slices with a given TR a minimum TE, echo train should be at least 128 or more in fast spin echo mode
		(ii) Half Fourier acquisition capabilities should be available with/without diffusion gradients and in combination with fast spin echo
		(iii) Fast inversion recovery with spin echo
		(iv) Fast gradient spin echo IR multi-slice multi- echo mode with maximum ETL. Sequences should incorporate RF focusing to acquire ultra-fast gradient spin echo.
		(v) Fast gradient echo sequence should incorporate RF spoiling and other technique to acquire images in ultra-fast 2D and 3D modes.
		(vi) Fat and water suppressed imaging sequences.
		(vii) EPI optimized sequences (with and without fat suppression)
		(viii) For T1, T2, PD imaging, perfusion, regular diffusion values (at least 5b, 3 directions) EPI-FLAIR, EPI-IR, EPI-FLAIR diffusion tensor, EPI-MT-FLAIR, tensor diffusion (at least 16 b values, and 128 directions) and diffusion studies. Suitable artefact/ fat suppression techniques to be incorporated in the sequence to have optimum image quality.
		(ix) There should be capability of calculating ADC map

		(isotropic and anisotropy from the regular diffusion and tensor data).
		(x) Optimized sequences for special applications.
		(xi) Multi-band EPI: Simultaneous Multi Slice Accelerate advance applications for clinical routine .
	Optimized sequence Packages	Mention all available packages
	c) Neuro	(i) All T1 (2D, 3D), T2 (2D, 3D), IR (2D, 3D), Dual IR (2D, 3D) sequences
		(ii) Sequence for internal ear imaging for visualization of fine structures like cranial nerves (appropriate sequences like CISS, etc or equivalent). Mention the sequences provided.
		(iii) 3D sequences for internal auditory canal imaging
		(iv) Dynamic imaging of pituitary using appropriate sequence
		(v) Whole spine T1, T2, IR sequences
		(vi) Whole neuro examination with automatic planning, scanning and post-processing, with single localiser positioning, without changing the coils/ repositioning
		(vii) Synthetic MR imaging **with offline provision to reconstruct with variable TR/TE .**
		(viii) SMS (Simultaneous Multi-Slice Imaging)
		(ix) 2D or 3D ASL, **with quantitative mapping**
	d) Angiography	(i) MR angiography: 2D/3D TOF, 2D/3D Phase contrast (with and without gating) and magnetization transfer saturation, black blood angiography for cerebral, pulmonary, abdominal and peripheral vessels.
		(ii) For peripheral moving table angiography should be offered covering hip to limbs to be examined in one go with high resolution and high SNR.
		(iii) Bolus tracking software package.
		(iv) Sequences for breath hold angiography with contrast enhancement.
		(v) Sequences for time resolved angiography with contrast kinetics.
		(vi) ECG triggered non-contrast angiography
		(vii) Contrast bolus tracking (including single shot whole body MRA, interactive and automatic tracking, etc.).
		(viii) Perfusion study in organ systems like kidney, brain, heart etc. with T1 perfusion with permeability maps, and quantitation of rCBF/ rCBV, MTT, etc, with colour maps.
	e) Cardiac package	(i) Full comprehensive cardiac sequences which includes,
		MR cardiology package for evaluation of heart in long and short axis with black blood cardiac imaging.
		(ii) Package for coronary artery imaging including sequences for motion compensation - prospective and retrospective gating, etc.
		(iii) EPI based sequence for stress perfusion MRI including ability to adjust the cardiac phases required with increasing HR
		(iv) Myocardial tagging sequence
		(v) 2D and 3D Sequences enabled with delayed enhancement
		(vi) 3D sequence of cine (bright blood & dark blood options)
		(vii) Rapid acquisition of heart using acceleration techniques

		(viii) STIR sequence for cardiac use
		(ix) 3D whole heart sequence (with & without contrast for coronary imaging)
		(x) Ability to acquire multiple arterial ad venous phases on CE MRA.
		(xi) Quantitative flow analysis software
		(xii) 3D acquisition of whole heart in one breath-hold
		(xiii) 4D TRAK/ TRICKS-XV/ TWIST/ equivalent (with maximum FOV)
		(xiv) Provision for timing /Stop watch (MR compatible) for timing drug infusion
	f) Diffusion /DTI	(i) Sequence package for diffusion including DTI (tractography) study in organs like brain, kidney, muscle, heart, spine, breast, prostate, etc.
		(ii) There should be capability of calculating ADC map (isotropic and anisotropic from the regular diffusion and tensor data).
		(iii) MR diffusion tensor imaging package with tractography
		(iv) MR neuro functional imaging sequence package (incl. Mosaic, etc)
	g) Body imaging	(i) Flow quantification in vessels and CSF, hepatobiliary system
		(ii) Fly-through facility with Flow analysis including display of various velocity values.
		(iii) Optimized breath hold sequences for abdominal studies including angiogram.
		(iv) MR Cholangiography and Pancreatography: Specialized sequences and processing to perform MRCP.
		(v) Pulmonary 2D/3D MRA sequence, including single breath hold sequence.
		(vi) MR ventriculography, cisternography, myelography.
		(vii) Single sequence to acquire four different contrast (in-phase, out-of-phase water only, fat only). The same technique should be used in other sequences, for dynamic angiography/ T1 quantitative analyses.
		(viii) Parallel acquisition techniques including new sequences. Specify the technique used and the factor by which the acquisition time is reduced for similar acquisition with and without parallel imaging technique. Mention the sequences.
		(ix) Flow quantification packages for CSF with dynamic CSF flow imaging, aqueduct and spinal canal.
		(x) Radial/Spiral pulse sequences for ultrafast imaging.
		(xi) Suitable artefact/fat suppression techniques to be incorporated in all the sequences to have optimum image quality.
		(xii) A sequence for differentiation of fluid and cartilage in ortho applications (sequence like DESS or equivalent)
		(xiii) Susceptibility artefact correction techniques to be incorporated in all the sequences to have optimum image quality.
	h) SWI	(i) Sequences for susceptibility imaging
	i) Prostate imaging	(i) Sequences for imaging of prostate
	j) Breast imaging	(i) Sequences for imaging of breast (including sagittal bilateral breast imaging in a single acquisition)
	k) Whole Body Diffusion	DWIBS OR equivalent

	l) m- Dixon	(i) Provide sequences like m- Dixon for all applicable sequences, m Dixon- HD or equivalent.
	m) Relaxometry	T1 mapping and T2 mapping with necessary post-processing s/w.
	n) Motion correction	(i) Sequence for in-line motion correction for uncooperative patients/ children (with software and acquisition - sequences like BLADE, PROPELLAR, Multivane or equivalent)
		(ii) Sequence with ultra short TE
		(iii) Sequence for nullifying CSF pulsation artifacts
		(iv) Sequence enabling prospective motion correction in quick time and in real time during fMRI .
		(v) Sequence employing arterial spin labelling (ASL) technique
		(vi) Whole body imaging (using body coil and surface coils)
		(vii) Whole body diffusion weighted imaging (using body coil and surface coils)
		(viii) Automated fusion and composing for the above two (without any artefacts)
		(ix) Volume acquisitions for neuro applications
	o) MR Spectroscopy	(i) System should have capability to perform multi-planar proton and phosphorous spectroscopy (31P)
		(ii) Proton MRS Sequence for single-voxel acquisition, with selectable fat/lipid saturation bands, options of water saturation (eg. VAPOR, CHESS, etc) with all post-processing software
		(iii) Proton Multi-voxel CSI [2-D and 3-D] acquisition and metabolite mapping with all necessary RF sequences (and post-processing algorithms) with all post-processing software
		(iv) If separate coils are needed for carrying out MRS, it should be provided.
		(v) Sequences for **phosphorous spectroscopy** should be provided, with all post-processing software
		(vi) RF sequences for cardiac, prostate, breast, liver, musculoskeletal and brain (if there are any specialised/optimised sequence available, the same should be offered)- with all post-processing software
		(vii) Water and lipid suppression in automated sequences.
		(viii) The pulse sequences for 31P MRS and 1H MRS for liver, cardiac spectroscopy , etc. should have external gating provision with triggering bases on ECG/ Respiratory, with all post-processing software.
7	**Post Processing and evaluation**	(i) Licences of all the post processing and evaluation packages should be provided for the main and additional console/ workstation.
		(ii) Specify clearly number wise the algorithms that need licenses and a statement whether these have been provided in both the main console and the additional workstation (satellite console/ extended workspace).
	Special Application Packages.	(i) The vendor must provide their specialized and optimized imaging sequences **in the Main Acquisition Console; Post-processing packages in the Main Acquisition Console and additional workstation**
		a) Neuro (Smart exam/Ready Suite/ Smart Brain/ etc.),
		b) Body,

		c) Oncology,
		d) Cardiac (detailed in (j)),
		e) Angio (including DSA approach, capturing arterial, capillary and venous phases in a single acquisition with a single bolus),
		f) Ortho and MSK,
		g) Liver (including 3D T1-Fatsat for dynamic liver imaging)
		h) Pediatric
		i) Breast
		j) Prostate
		k) Necessary composing s/w for whole body applications. **Smart Exam/ Smart Brain/ Ready Suite/Brain Dot Engine/ equivalent technique** should be quoted in all available imaging packages.
	i) MPR	(i) Multi-planar reconstruction (MPR) in any arbitrary plane including curved planes with freely selectable slice thickness and slice increments.
		(ii) Surface Reconstruction and evaluation on reconstructed images with minimum time.
		(iii) MIP in displaying in cine mode 2D and 3D mode, targeted/segmented MIP in any orthogonal axis with minimum processing time and capable of displaying in cine mode.
	j) Cardiac evaluation package	Cardiac evaluation: Operator selective or automatic contour mapping and calculation of cardiac parameters like wall thickness, stroke volume, Ejection Fraction, filling rate, myocardial wall motion including display of data in table, graph and in cine mode, blood flow quantitation, velocity mapping, pressure gradient quantitation, shunt quantitation, regurgitation calculation, stenosis, blood flow, etc. These should be usable on main as well as on additional workstation/ satellite console.
	k) ADC, perfusion, etc	(i) Evaluation and display of diffusion images, ADC map, fMRI in reference of EPI optimized sequence.
		(ii) Perfusion image evaluation with time intensity graph and other statistical parameters
		(iii) Evaluation package for calculating rCBV, rCBF, MTT, perfusion map, corrected CBV calculation; Fusion of perfusion map with Contrast enhanced 3D T1 images etc. Mention the package/software offered with brochure.
		(iv) Flow quantification and evaluation for vascular (high & low) CSF, bladder outlet and cine display.
	Arterial Spin Labelling	**2D or 3D ASL** processing and quantification package **in main console/additional workstation**
	Liver Segmentation	Automatic Liver segmentation and volumetric analysis.
	l) BOLD analysis	(i) Evaluation of functional images of brain with appropriate statistical algorithms, colour display and overlay on base anatomical images.
		(ii) Software for evaluation of functional mapping [BOLD evaluation] and neuro-metabolite mapping.
	m) VBM	Voxel-based morphometry for segmentation and quantification
	n)Tractography	Post-processing package for DTI and Tractography, estimation of ADC, FA (Lamda- parallel, perpendicular separately and combined), Fiber tracking, fiber statistics, and display of fiber tracks on anatomical image(s).

	o) Image statistics	(i) Measurement of distance, area, volume, angle, mean, SD, image addition, subtraction, multiplication, division, interpolation, segmentation, threshold, histogram.
		(ii) Image filtering and Image fusion software.
		(iii) Software for co-registering MRI/ fMRI/ MRS/ Metabolite mapping images with images from CT, PET, and SPECT.
		(iv) Evaluation features like zoom, rotation, scroll, roaming, image synthesis, multi point T1 and T2 calculation (more than 8) window stretching, text dialogues graphics, sorting, searching, archiving, recalling etc.
	p) Spectroscopy	(i) Full post-processing for single-voxel MRS, CSI (multi-voxel MRS), metabolite mapping with colour coding (metabolic images) etc., for brain, breast, prostate and for other applications.
		(ii) Post processing should include FFT, base line correction, curve optimization, automatic phase correction, metabolite imaging, spectral mapping, magnetic resonance spectroscopic imaging (molecular imaging) with naming and peak integral values for all in-vivo metabolites
	q) Advanced organ specific imaging	**Any advanced organ specific imaging with automatic planning, scanning and post-processing application should be quoted.**
	r) Silent MRI	**Silent MRI for neuro protocols including T1W, T2W imaging without any loss of image quality on all sequences (like Neuro Silent/ Silenz, or equivalent), with noise less than 80 dB. The quiet scanning should be without loss of SNR.**
8	**Functional MRI accessories and post-processing**	(i) Functional Imaging with package for BOLD imaging and processing package (capable of real-time processing and display of colour overlay (in real time) using 32-channel Head coil being supplied with the system.
		(ii) Complete fMRI solution including audio-visual projection (3D capable) system, with headphones with very good noise suppression (>30dB) (Preferable to have LCD/LED monitor for projection).
		(iii) The system should be integrated with stimulus presentation/ paradigm generator software, along with permanent license (like Superlab, eprime, Presentation, etc), for task presentation to the subject.
		(iv) The paradigm presentation should be synchronised with the scanner (for starting along with measurements)
9	**Quality assurance and Phantoms**	(i) Phantoms for routine quality assurance for all coils (including body coil)
		(ii) Quality assurance as per AAMP standard for SNR for different coils and nuclei, spatial resolution, magnetic field inhomogeneity, eddy current compensation, RF power and inhomogeneity measurement. Specify the details of the QA package. It should be possible to provide the QA report quarterly to the Faculty-in-charge, MRI for records.
11	**Standard MRI Accessories**	(i) Rechargeable Hand held metal detectors (2 Nos.)
		(ii) Walk through Metal detector with multiple sensor and multiple location LED (Zone III type) - 01 no
		(iii) MR compatible **(minimum 5000 Gauss line)** cardiac and physiological monitor (ECG, NIBP, SPO2,) for neonates/

		infants and adults (with all accessories for five years) (In-vivo/Iradimed/ equivalent models)
		(iv) MR compatible (minimum 2000 Gauss line) syringe/infusion pump. (MRIdium/equivalent models) to be supplied with 50 lines.
		(v) (Unit price of lines and tubings to be quoted separately for additional requirement)
		(vi) a. MR Compatible Dual Pressure injector or Triple head (minimum 2000 Gauss line) (Ulrich/ MedRad/ better models); (vi) b. Please quote the price of the consumables for the quoted MR Compatible pressure injector (for 100 syringes/pump hoses and 500 patient tubings), valid for a period of five years. This has to be supplied in a staggered manner, after consultations with the user**. This is to be quoted separately.**
		(vii) Unit price of syringe and tubings to be quoted separately for additional requirement
		(viii) MR compatible anaesthesia machine (for Paediatric and adults use) with dual vaporisers (for isoflurane, halothane), and other accessories (minimum 1000 Gauss line) (Penlon/ Leon/equivalent models)
		(ix) Two quantity: Non-magnetic IV stand
		(x) Two quantity: Digital Patient Weighing Scale (in the range between 0 to 200 kg)
		(xi) MR compatible storage carts and wall mounted cabinets.
		(xii) Coil cabinets to be provided.
		(xiii) Network cable and other required materials for the complete installation to be provided by the supplier
		xiv) MR compatible crash-cart - 1 no.
		xv) MR compatible instrument-trolley - 1 no.
		xvi) MR compatible patient trolley (to transfer patient to the magnet table) with both vertical and horizontal movement with hydraulic operation and should take a minimum load of 150 Kg in both vertical and horizontal motion (Model: Adjustable Height Trolley: MR5501 of Wardray Premise Ltd. U.K or Adjustable Height Trolley, Ferno, UK or equivalent) - 1 no.
		xvii) MR compatible wheel chair (with cushion, back-rest and arm-rest) - 1 no.
		xix) MR Compatible Cart for biopsy handling, etc. - 1 no.
12	**Antivirus s/w and Web updates**	(i) All the Servers and Workstations in the network (MRI console, additional workstation, PACS workstation, fMRI workstation, etc) that is supplied by the vendor should be provided with antivirus software (periodically updated) for five years.
		(ii) The vendor should provide antivirus updates for five years and make sure of the updated antivirus every week (using automatic updates with internet facility by the vendor)
		(iii) The vendor should ensure that all the above modalities include necessary connection, image & work list send/receive, image & data storage, scheduling, patient registration, and synchronization functions as per DICOM standards for smooth and effective integration to RIS/PACS

13	**Other accessories**	(i) Ten Revolving chairs (Godrej Make) with ergonomic support
		(ii) Table for the MRI console, MRI additional console/ workstation, fMRI workstation.
		(iii) Necessary Desk, chair and Rack for the PACS Server & Workstation to be provided by the supplier
		(iv) All the necessary interconnecting interfaces, cables, modules and other hardware and software to fully integrate the system for full operational status.
		(v) Uninterrupted power supply (UPS) with sufficient capacity (appropriate rating as required with a minimum of 200 kVA or more UPS) for 30 minutes back up of the full load MR system and its accessories during patient MR imaging.
		(vi) Diesel Generator of 300 kVA capacity with silent enclosure, to support the MRI and all accessories.
		(vii) Complete consumable package for prostate and breast biopsy. – 20 each per annum for 5 years. (price of individual kit to be quoted separately)
		(viii) Two (quantity) MR compatible oxygen cylinders (for the anaesthesia system)
		(ix) Good quality air curtain at MRI entrance (for patient entry), to filter the dust and prevent the leakage of a/c.
14	**Training**	Advanced training to be provided by the vendor at the site for Faculty, Residents, students and Radiographers, so as to benefit the latest applications available on the system. The training should be minimum period of 12 weeks, staggered.
15	**Installation on Site - Modification basis**	(i) The system should be installed and handed over in working condition, with all the necessary electrical, air-conditioning and civil works undertaken by the vendor in consultation with the user department. Some re-arrangement of the existing place including relocation of staff place may have to be carried out.
		(ii) All the necessary interconnecting interfaces, cables, modules and other hardware and software to fully integrate the system for full operational status.
		(iii) Installation and integration of the uninterrupted power supply (UPS), as quoted in 13(v) and (vi).
		(iv) Generator with sufficient capacity for operation of MRI (including powerful gradient sequence), accessories, air-conditioning, etc (minimum capacity should be 300 KVA), The necessary cabling from the generator including the panel to be provided
		(v) The Site-Modification items, UPS, Generator and other local items have to be quoted in Indian rupees only.
		(vi) Water/ Air chiller should be of good quality, with performance guaranteed during summer months also.
	Civil works	(i) Fire alarm (along with new/existing panel) should be provided in all rooms, wherever site modification is being carried out, and in the rooms (in the MRI section), where there is no fire alarm. The vendor should discuss with the engineering section and the department before quoting for Site-Modification
	Air-conditioning works	(ii) Air-conditioning that is required for the MRI equipment, examination room, and Console areas have to be carried out by the vendor with a new unit. Proper ducting and other

		necessary work has to be carried out without damaging existing structure. The vendor should discuss with the engineering section and the department before quoting for Site-Modification.
		(iii) Necessary adequate air-conditioning units. The vendor should discuss with the engineering section and the department before quoting for Site-Modification
		(iv) The installation of the MR system should be complete with all accessories.
16	**Special Conditions**	Please see Annexure I for special conditions, including warranty and CMC.
	1.	**16.1.a : Original Product Datasheet of main unit and all accessories, including third party items to be provided.**
		All agreements should be binding on Principal. The principals should be responsible for any lacuna or deficit in service or supply.
	2.	All items in the supply order should be supplied during the time of installation. No exceptions will be allowed.
	3.	Items under Research Agreement should be finalized well in advance (after receipt of supply order), so that there is no delay in delivery of software or coil or any other accessories.
	4.	Software upgrades/ updates (where hardware upgrades are not required) like new pulse sequence, new application package, etc, should be provided within one month after release worldwide (any country, viz. North America / Europe / Germany, etc). In case, the same is not provided in time, the parent company should undertake the responsibility to implement the same. This is to make sure that the machine stays updated with similar products for at least five years.
	WARRANTY PERIOD	
	5.	The warranty period of the 3T MRI system commences from the date of handing over (from the date of issue of Inspection Note) the fully functional unit of all coils and the accessories supplied (such as UPS including batteries replacement as when required, AC, Generator etc.) to the Institute, against manufacturing defects of material and workmanship. The Helium Supply and cold head repairs (including replacement, if needed) should be included in the warranty period.
	6.	Note : any Liquid Helium filling, due to quenching or due to any other causes during the warranty period shall be borne by the firm.
	7.	If a particular coil is not working for more than 5 days and due to which patient work suffers, the firm will be asked to pay penalty of half-a-day beyond 5 days for each day that it is not working.
	POST GUARANTEE ANNUAL COMPREHENSIVE MAINTENANCE CONTRACT (CMC):	
	8.	The post- warranty (after 5 years) CMC should be comprehensive and should include helium and cold head (repair and / or replacement) + labour + spares for the complete system which includes all the accessories supplied such as UPS, Generator, AC, etc. (including all consumables like batteries for UPS, and maintenance for another 5 years. This CAMC should be quoted in Indian rupees.
	9.	Note any Liquid Helium filling due to quenching or due to any other causes during the CMC period shall be borne by the firm.

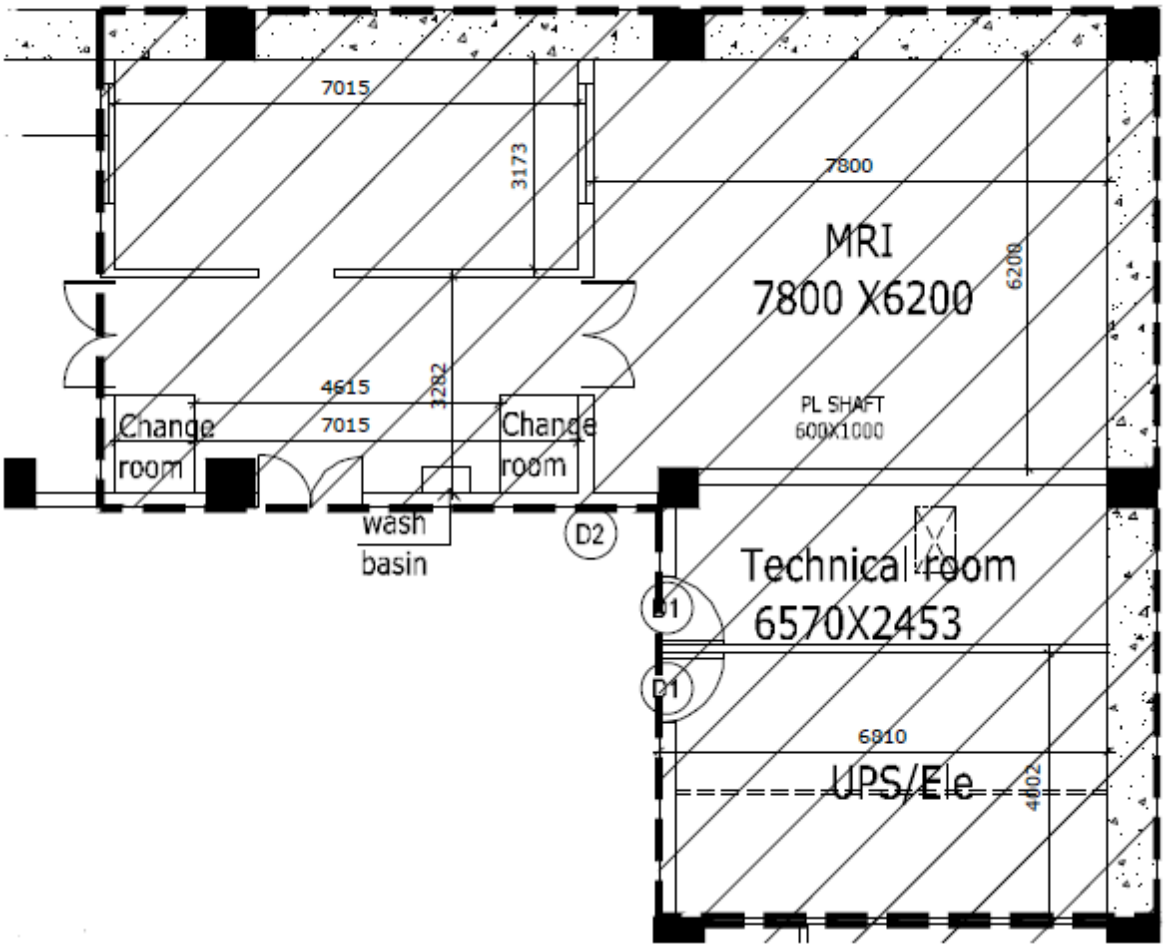
	10.	If a particular coil is not working for more than 5 days and due to which patient work suffers, the firm will be asked to pay penalty of half-a-day beyond 5 days for each day that it is not working.
	11.	A architectural drawing is attached for the vendors for their site modification price quote. The actual drawing and planning can be worked by the vendors in consultation with their architects, the user department and the engineering section of NCI.
		The vendor should quote the cost per sq. foot area for the civil work in addition to overall cost.
	12.	The vendor must fill in the details (like values, Make and model, etc,) so as to specify whether they satisfy the tender by filling each row of this compliance statement. The vendor should mark "Yes or No or Not Available" wherever applicable.
17	**SITE MODIFICATION WORK – 3 T MRI SYSTEM**	
	1. The Site Modification Scope of Work -3 T MRI	
	i.	The vendor should inspect the site at NCI, Jhajjar, before quoting and ensure that the unit can be installed in the available space without any functional compromise.
		The Site drawing of the Institute can be obtained from the Project office of NCI - AIIMS, room no. 161, Ist floor, DBRAIRCH, AIIMS campus, New Delhi.
		Complete equipment layout site plan and details of work (BOQ) should be part of technical bid.
		Provisions should be made for placing the various accessories in console room, work-station and printer locations.
		It should also include Door with glass peeping window, warning indicators and signage, false ceiling, GVT floor tiles and wall tiles/ Panelling/painting.
		All site modification works should comply with specified standards of the hospital.
	ii.	While preparing the plan, the following aspects have to be addressed.
	iii.	Care should be taken to provide easy negotiation of the patient stretchers/ trolleys through corridors and doors.
	iv.	RF shielding for doors, walls, glass viewer etc.
	v.	Furniture like desk, chairs, shelves etc.
	vi.	Patient stretcher and other furniture/ accessory to make the scan centre functional.
	vii.	**The cost of Site Modification will be considered for Ranking / Evaluation purpose.**
	viii.	***Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification work.***
	1	Civil works
	2	Electrical work
	3	Air Conditioning (HVAC)
	4	Fire Alarm & Detector
	5	Interior Furnishing & Furniture
	2. Scope of work for Site Modification MRI unit works	
		The supplier should inspect the proposed site and submit all the detailed equipment layout drawings and BOQ for the proposed MRI Scan Centre along with technical bid of the tender.
		The plan of the proposed 3T MRI site is attached below as Annexure 1.
		The MRI SCAN CENTRE shall consist of the following rooms:
	i.	MRI Room-Gantry
	ii.	Console room
	iii.	Electrical room

	iv.	UPS room/ equipment room
	v.	Patient preparation and changing room
	3. Civil work :	
	i.	Civil construction work including construction / demolition / alteration of brick wall, plastering, flooring as per the approved plan and equipment layout plan.
	ii.	Concrete reinforcement required for MRI equipment area, if required.
	iii.	Platform for unloading and shifting the MRI should be provided if necessary.
	iv.	Platform for Chiller unit if needed. Fencing and weather protection facility should be provided for the Chiller unit.
	v.	Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.
	vi.	All the construction work to be done as per the final plan approved by the purchaser.
	vii.	Active and passive room shielding for magnetic, fringe field should be provided as per the requirement of the equipment.
	viii.	False Ceiling-to-floor ceramic wall tiling in: Console room, Patient preparation room.
	4. Flooring :	
	i.	5mm Hospital grade Vinyl Flooring of reputed brands (eg. Armstrong, Gerflor, Tarkett or equivalent) for MRI Examination-Gantry room.
	ii.	600 x 600 mm vitrified tiles with 100mm tile skirting to match in other rooms.
	iii.	50 mm thick cement concrete flooring with 5mm-Vinyl flooring in MRI equipment / UPS room.
	5. Painting :	
	i.	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in MRI equipment / UPS room and electrical room etc.
	ii.	Pre laminated particleboard wall panelling in MRI examination – Gantry room.
	6. False Ceiling :	
	i.	Lightweight Aluminium ceiling panels, acoustical-treated, supported on grid or finished seamless with support above ceiling. Powder coated finish (colour to be approved by Institute). The False ceiling inside RF cage as per equipment and RF cage requirement and design. Ceiling height to suit the equipment mount and clearances.
	7. Electrical 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 mains 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.
	ii.	The electrical work shall include the following:
	iii.	Wiring – All interior electrical wiring as well as wiring for Diesel generator chiller and outdoor a/c units - 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. Electrical Earthing for all equipment & accessories supplied shall be provided by the vendor. The earth-pits should be located as per the approved by the Institute.
	iv.	Switches light and power points should be of modular type and of standard make as listed below.
	v.	LED light fittings with minimum 500 Lux Illumination.
	vi.	MRI compatible lights for MRI examination room. The lamps/bulbs used

		within the RF cage should be easy replaceable and locally available.
	8. AIR CONDITIONING: minimum 16 TR (10 TR working + 6 TR standby)	
	i.	**Duct-able split 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 be located as approved by the Institute and should have grill coverings to prevent theft and damage.
	iii.	Copper pipes and valve panel to be used for the Chiller to the MRI.
	iv.	**Environment specifications:**
	a	Humidity range: Relative humidity 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.
	b	Temperature ranges: 22 ± 2° C in all areas except equipment room which shall be as per requirement of the equipment.
	c	Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.
	9. Furniture:	
	i.	Revolving chairs height adjustable, medium-back with hand-rest in the Control room, Radiologist room and viewing area. – **8 NOS.**
	ii.	Chairs for patient waiting area – Three seater (chrome plated). - **10 NOS.**
	iii.	Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – **3 NOS.**
	iv.	Drug trolleys for patient preparation area.- **1 NO.**
	v.	Name boards for all rooms
	vi.	Tables for Workstation and Radiologist in reporting room.- **4 NOS.**
	vii.	All furniture items should be of standard make as mentioned in the table below.
	10. Fire alarm & Detector :	
	i.	(i) Fire alarm (along with new/existing panel) should be provided in all rooms, wherever site modification is being carried out, and in the rooms (in the MRI section), where there is no fire alarm.) Fire alarm shall comprise of fire panel, smoke / heat detectors. The vendor should discuss with the engineering section and the department before quoting for Site-Modification
	ii.	Fire extinguisher Dry CO2 type as required for the building safety. – One per room
	11. Miscellaneous :	
	i.	LED X-ray Film viewer with adjustable brightness; capable of holding 3 films of 14”x17” size. – 2 NOS.
	ii.	Cabling of Network (LAN) connectivity for camera system, console system, workstation, servers and computers etc.
	iii.	Cabling for Broadband connection: for REMOTE SERVICE of MRI system.
	iv.	MR compatible piping and oulets (4 lines) for Medical Air, Oxygen , Vacuum and N2O. To be provided in the Gantry room. The Hospital gas lines will be terminated outside the MRI area.
	v	Sink in Preparation room of MRI facility. – 1 NO.
	12. LIST OF ITEMS AND SUGGESTED MANUFACTURERS.	
		ITEMS PREFERRED MAKES
	i.	**FLOORING VITRIFIED TILES** -Somany, Kajaria , H&R Johnson, RAK india
	ii.	**PAINT** - Dulux, Asian Paints , Nerolac
	iii.	**ELECTRICAL**
	iv.	**CABLES** - Finolex, Havells ,V-Guard
	v.	**SWITCHES** - Legrand, L&T, Crabtree , Roma

	vi.	**DISTRIBUTION BOX , MCB** - Legrand, L&T, Siemens, Havells
	vii.	**LIGHT FITTINGS** - Philips / Crompton / Kesselec-Schreder / Wipro.
	viii.	**AIR CONDINTIONING** - Daikin, Hitachi, Blue Star, Voltas,
	ix.	**FURNITURE** - Hermen Miller , Godrej , Featherlite, Wipro.

ANNEXURE – 1



Item No. 2 (Rfx/Event number 3000002582)

256 Slice Dual Energy CT

S.No.	(A) Features	(B) Essential Specification
1.	**GANTRY**	
1.1.	Aperture	≥ 70 cm
1.2	Scan filed	≥ 50 cm
1.3	Integrated Display panel	Gantry front showing patient and/or machine information.
1.4	Laser Lights	The gantry should have 3D positioning Laser lights.
2.	**X-RAY GENERATOR**	
2.1	Output capacity (actual and not effective)	≥ 100 KW
2.2	mA range	20-740mA or more
2.3	kV	80-140 kVp minimum range
3.	**TUBE ASSEMBLY**	
3.1	Tube Voltage	80-140 kV or more
3.2	Tube current range	Min 20-740 mA range
3.3	Focal spot	1.0 X 1.0 cm or less
3.4	Heat loading capacity	The vendor certify that x-ray tube with the highest heat loading capacity and rating available at the time of shipment and the highest and available technology will be supplied (with a minimum of 5.5 MHU)
4.	**PATIENT TABLE**	
4.1	Maximum load capacity	≥ 200 kg
4.2	Scannable range	≥ 1500 mm
4.3	Longitudinal table speed	≥ 150 mm per sec
4.4	Table Positioning	Reproducibility of table positioning (mm) should be +/- 0.25 mm
4.5	Foot pedal/switch	Four pairs of foot pedals should be supplied with the system
4.6	Table dimensions	Specify the width and length of the table, distance between gantry front and table base (minimum and maximum should specified)
5.	**SCANNING MODES**	
5.1	Spiral scanning	
5.1.1	Spiral exposure	At least 60 sec or more.
5.1.2.	Scan time for full 360 degree rotation	≤ 0.3 sec
5.1.3.	Bolus triggered/bolus chase spiral acquisition	The system should be integrated with injector for auto trigger (care contrast/extreme enhanced/equivalent)
5.1.4.	Spiral length	Spiral length 150 cm or more
5.1.5.	Pitch	Pitch should be freely selectable between 0.5-1.3 or more.
5.2	**Axial Scanning**	
5.2.1.	Slice Thickness (Axial mode)	≤ 0.625 to 5mm or more, variable

5.2.2.	Cardiac Imaging	The quoted system should be able to generate image with single or multi sector reconstruction for patients with heart rates ranging between 60-100min. and with temporal resolution of <150 ms. A system with single sector reconstruction will be preferred.
6.	**DUAL ENERGY**	
6.1.1.	Dual Energy	The system must have dual energy capabilities and wide range of applications should be available.
6.1.2.	Dual energy packages	The system should have dual energy acquisition and processing capabilities for brain imaging, minimum 2 concurrent dual energy viewers for all dual energy applications.
6.2	**Dual Energy Applications (number of licenses)**	
6.2.1.	Mono-energetic imaging *(License-2Nos.)*	Mono-energetic Imaging of beam hardening artifact elimination, Contrast augmentation and tissue visualization with Mono-energetic images (2)
6.2.2.	Contrast vs Blood differentiation *(License-2Nos.)*	Differentiation of brain hemorrhage from contrast enhancement
6.2.3.	Virtual NCCT head *(License-2Nos.)*	Virtual non-contrast CT scan Brain using dual energy method
6.2.4.	Direct Neuro CTA *(License-2Nos.)*	Neuro CTA with accurate bone removal in complex body regions using dual energy method.
6.2.5.	Vascular Plaque characterization *(License-2Nos.)*	Vascular Plaque characterization using dual energy method
6.2.6.	Lung Perfusion *(License-2Nos.)*	Assessment of lung perfusion using dual energy (2 concurrent user)
6.2.7.	Gout Imaging *(License-2Nos.)*	Color coded visualization of deposited uric acid crystals in peripheral extremities
6.2.8.	Calculi Characterization *(License-2Nos.)*	Visualization of the chemical composition of kidney stones.
6.2.9.	Pulmonary Embolism *(License-2Nos.)*	Automatic detection of filling defects and automatic lesion zoom view.
6.2.10.	Advanced Lung analysis *(License-2Nos.)*	Segmentation of lungs; Evaluation; lung volume, mean lung density, and standard deviation; Calculation of emphysema index, sub-ranges, percentiles, and clusters.
6.2.11.	Automatic spine reconstruction *(License-2Nos.)*	Automatic reconstruction of CT spine
6.2.12.	Marrow Imaging *(License-2Nos.)*	Dual energy marrow imaging by calcium subtraction to look for marrow pathologies on CT.
8.	**DATA ACQUISITION SYSTEM-LATEST DETECTOR CONFIGURATION**	
8.1	z axis Detector coverage width	50 mm or more at 1:1 pitch
8.2.	Number of acquired slices per rotation	Minimum 256 slices

8.3.	Number of detector rows or elements	Number of physically independent rows of detector must be 190 or more, capable of acquiring 256 slices or more/rotation.
9.	**CT Fluoroscopy**	
9.1.	TFT Monitor	≥ 18 inch in size, suspended from ceiling.
9.2.	Frame rate	≥ 6 per sec
9.3.	Biopsy Mode	Foot-paddle controlled in room scanning.
10.	**PATIENT COMMUNICATION**	
10.1.	Integrated patient intercom	There should be integrated patient intercom
10.2.	Automatic patient instruction	A standard set of commands for patient communication before, during, and after scanning should be available in the English and Hindi language.
11.	**PATIENT REGISTRATION**	
11.1.	Pre-registration	It should be possible to do pre-registration of patient at any time prior to scans.
11.2.	Emergency registration	Special emergency registration should be possible.
11.3.	HIS & RIS integration	It must transfer patient information from departmental RIS & HIS via DICOM Get Work list.
11.4.	PACS/HIS/RIS	It must transfer examination information and images from scanner into departmental HIS & RIS and PACS
12.	**OPERATOR CONSOLE WITH TABLE**	
	Computer System & Image processor	
12.1.	CPU Processor	Minimum quad core processor, 292 GB hard disc, 8 GB RAM, The best available option to be quoted by the vendor.
12.2.	Display	One large minimum 19" high resolution LCD monitors with a display on 1024x1024 or more.
12.3.	Software	Should perform the functions like scanning image reconstruction, film documentation, MPR, CT angiography, MIP, 3D VRT 3D SSD, Fly through, readymade perfusion for stroke imaging.
12.4.	CT Angiography	Protocols to do CT angiography of any body-region and capability to perform ECG gated and non-ECG gated scans in a single examination.
12.5.	Body perfusion	Minimum 18 cm of coverage
13.	**Cardiac application and reconstruction**	
13.1.	ECG Gating	Prospective ECG trigged facility.
13.2.	ECG Gating	Retrospective ECG gated facility.
13.3.	ECG Editing	Facility for ECG editing for removing irregular or ectopic beat.
13.4.		Specify heat beat/min requiring use of beta-blocker and solution available with the system for optimization of scan with irregular heart rate.
13.5.	Single segment/sector reconstruction	Minimum temporal resolution on single segment/sector reconstruction should be 150msec or less.

14.	**IMAGE POST PROCESSING**	
14.1	Architecture	A Client Server Architecture based solution from the CT OEM.
14.1.1.	Minimum number of slices/users for concurrent processing	Minimum 24,000 slices/minimum 5 concurrent users working both on PACS in the department and on new workstations provided by vendor.
14.1.2.	User licensing scheme	Concurrent or independent license for standalone workstations.
14.1.3.	Integration	Imaging processing server/workstations must be integrated with RIS-PACS in the department.
14.2.	**Server Hardware**	
14.2.1.	Hardware	Dell/HP/IBM dual CPU; Window server 2008/2012, 64-bit OS, RAM-64 GB minimum; Data Disc: RAID level 5; Graphical processing unit: 2xNVIDIA GPU or equivalent; Image storage minimum 4 TB.
14.2.2.	In addition, a separate price quotation must be submitted by the vendor for one independent workstation with the above-mentioned configuration, as an optional item.	
14.3.	**Client hardware (3 units**) as specified below. **Unit Price of client station to be quoted separately. (For additional units if required.)**	
14.3.1.	Monitors	Two, Minimum 3 Megapixel Medical Grade Monitor
14.3.2.	CPU Unit	Z820 or equivalent CPU unit with dual six core processor, Minimum 16 GB (8 GB X 2) RAM, NVIDIA 1 GB or equivalent and 1TB hard drive, Gigabit network card.
14.3.3	UPS	Minimum 2 kVA online UPS.
Server Software		
14.4.	**Basic capabilities (Minimum 3 concurrent users for all applications)**	
14.4.1.	MPR	Real-time multi-planar reconstruction (MPR) of secondary views, with viewing perspectives in all planes including curved & orthogonal MPR,
14.4.2.	ROI evaluation	Parallel evaluation of multiple ROI in circle, irregular and polygonal forms.
14.4.3.	Statistical Evaluation	Area/volume, Standard deviation, Mean value, Image annotation and labeling, Angle measurement, Distance measurement, Histogram, Time intensity curves, Peak-enhancement images, Time-to-peak images.
14.4.4.	2D	2-D, including image zoom and pan, image manipulations, including averaging, reversal of grey-scale values, and mirroring; image filter functions, including advanced smoothing algorithm and advanced bone correction.
14.4.5.	3D	MIP, Min IP, SSD, VRT and other advanced 3D applications and color-coding for different tissues.

	Comparison	Able to compare exams with prior studies including oncology cases, neuro cases, body imaging, comparison according to RECIST criteria, PET-CT cross time point evaluation.
14.5.	Advanced Applications as specified below. (2 concurrent user licenses for each application to be provided as standard)**.** **Price of each additional concurrent user license to be quoted separately. (For additional users if required.)**	
14.5.1.	CT Angio	Automatic table and bone subtraction in CT angiography, Single click bone removal, manual vessel tracking, ability for a bone free visualization of vessels, Stenosis measurement. Time resolved image reconstructed from Dynamic CT data (4D CT Angio).
14.5.2.	CT perfusion brain	Software for advanced cerebral perfusion study with stroke protocol and summary maps of the perfused area
14.5.3.	Body CT perfusion	Multi-slice calculation of blood flow, blood volume, permeability images, tissue assessment of perfusion changes
14.5.4.	Advanced Vessel Analysis:	Automatic evaluation and quantification of angiography images of the general vessels, Plaque visualization, Calcification Removal .
14.5.5.	Lung CT:	Low dose Lung CT protocols for advanced lung nodule detection, segmentation and analysis, computer aided detection (CAD).
14.5.6.	Tumor Comparison:	Able to compare exams with previous imaging studies using RECIST criteria, PET CT cross time point evaluation – 4 time points comparison, quantification of tumor growth rates.
14.5.7.	Multimodality Image fusion:	between PET-CT, PET-MR, CT-MR, MR-SPECT, MR-MR
14.5.8.	Colonography:	Noninvasive evaluation of the entire colon, including external and endoscopic SSD views, 3D VR views and automated computer assisted reader for polyp detection
14.5.9.	Liver Segmentation:	3D mapping of vascular supply areas onto liver tissue, Virtual dissection planes and volumetric calculation.
14.5.10.	CT Segmentation:	Automatic segmentation of Tumours of Liver, Lung, lymph nodes and other organs.
15.	**IMAGE RECONSTRUCTION**	
15.1.	Recon speed	Minimum 20 images/sec.
15.2.	Recons Field of View	At least 5 to 50 cm continuous for single energy and at least 5 to 35 cm for dual energy applications.
15.3.	Recon Matrix	512 x 512

15.4.	Real time display	Real-time display (512 x 512) during spiral acquisition.
16.	**IMAGE QUALITY**	
16.1.	High contrast Spatial Resolution for entire width of the detector	It should be not less than 21 lines pair per cm or better maximum at 0% MTF X-Y axis for FOV not less than 35cm.
16.2.	Low-contrast resolution	The low contrast resolution of CATPHAN should be at least 5mm at 3 HU with 10 mm slice on 20 cm Catphan phantom.
17.	**DOSE REDUCTION TECHNIQUES**	
17.1	Radiation dose	There should be radiation dose calculation and display during the procedure; DICOM structured dose report, dose notification, dose alert.
17.2.	Pre-patient collimation	There should be pre-patient collimation to reduce unnecessary dose to the patient.
17.3.	Advanced Iterative Reconstruction	Model-based Iterative reconstruction technology for all imaging protocols including brain (ADMIRE/VEO/FIRST/IMR)
17.4.	Cardiac scanning	Step and shoot technique during cardiac scanning for dose reduction, or a similar alternative technology should be available.
17.5.	3D Dose Modulation	Provision for tube current modulation along Z-axis for different patient size and organs.
17.6.	Pediatric & infant imaging protocols	Low dose CT protocols must be provided
18.	**DOSE PERFORMANCE DATA (USING IEC STANDARD PHANTOMS)**	
18.1.	Head	Not more than 20 Gy/100 mAs.
18.2.	Body	Not more than 10 Gy/100 mAs.
19.	**NETWORKING**	
19.1.	DICOM	DICOM Storage (Send/Receive)
19.2.	DICOM	DICOM Modality Work list User
19.3.	DICOM	Modality Performed Procedure Step (MPPS)
19.4.	DICOM	DICOM Print User
19.5.	DICOM	Query/Retrieve User and Provider
19.6.	DICOM	DICOM 3 compliance
19.7.	Integration with department RIS and HIS	Integration with departmental RIS and HIS must be done. Any licenses or software needed for the same is to be provided by the vendor.
20.	**ARCHIVING**	
20.1.		Fully DICOM 3.0 compliant including capability for HIS-RIS interface.
20.2.		Service Class User & Provider (CT, MR, NM, Secondary Capture).
20.3.		Storage Commitment User
20.4.		Removable Media
20.5.		DVD-RAM archive
20.6.		DICOM CD Writer
21	**ACCESSORIES**	
21.1	LEAD GLASS	Lead glass of at least 150cm x 100cm
21.2	DRY IMAGER	Dry Chemistry Imager, 500 DPI or more, with minimum two trays: 14x17; 10 x12 film size.

21.3	UPS	Online UPS with Maintenance free batteries capable of 15 minutes back up to run the entire CT, Computers, Dry chemistry camera, Work Stations etc.
21.4	PRESSURE INJECTOR	Triple-Head Syringeless Pressure Injector of reputed make with 100 sets of Pump Hose & 500 sets of patient tubing. Specify the make of Injector. Provide original datasheet of the quoted model.
21.5	PATIENT POSITIONING ACCESSORIES	Patient Positioning Accessories: Head Rest, Head and Arm Support, Knee and Leg Support, Coronal Supine Head Holder, Paediatric immobilizer.
21.6	PATIENT COMMUNICATION	Patient Communication System: An integrated intercom and Automated Patient Instruction System (API) should be provided.
21.7	CRASH CART	Crash cart - 1 Nos.
22	**TRAINING:**	
22.1	ONSITE TRAINING	Onsite training by application specialist for a total of eight weeks (staggered manner).
23	**INSTALLATION**	
23.1	a. The unit will be installed on site-modification basis. The vendor should inspect the site before quoting and ensure that the unit can be installed in the available space without any functional compromise. Complete layout site map and details of work (BOQ) should be part of technical bid. Provisions should be made for console room, changing room, wash basin, work-station and printer locations. It should also include Lead lined door with lead glass peeping window, radiation warning indicators and signage, Aluminium false ceiling, GVT floor tiles and full height wall tiles. All work should comply with specified standards of the hospital.	
23.2	b. Necessary furniture and fixtures for comfortable working conditions, storage of system components and consumable stand for protective aprons and gonad shields. etc. should be provided.	
23.3	c. Power and Air-conditioning requirement must be mentioned. AC of adequate capacity should be provided. Power supply by the institute will be terminated at CT scanner area. All electrical provisions including earthing etc. will be vendor's responsibility.	
24	**INSTRUCTIONS**	
24.1	1. Original Product Datasheet of main unit and all accessories, including third party items to be provided.	
24.2	2. There should be at least three installations of the quoted model globally. Satisfactory performance certificate by users on their letterhead must be attached.	
25	**SITE MODIFICATION SCOPE OF WORK – 256 SLICE CT UNIT**	
25.1.1	The vendor should inspect the site at NCI, Jhajjar, before quoting and ensure that the unit can be installed in the available space without any functional compromise.	
25.1.2	The Site drawing of the Institute can be obtained from the Project office of NCI - AIIMS, room no. 161, Ist floor, DBRAIRCH, AIIMS campus, New Delhi.	
25.1.3	Complete equipment layout site plan and details of work (BOQ) should be part of technical bid.	
25.1.4	Provisions should be made for placing the various accessories in console room, work-station and printer locations.	

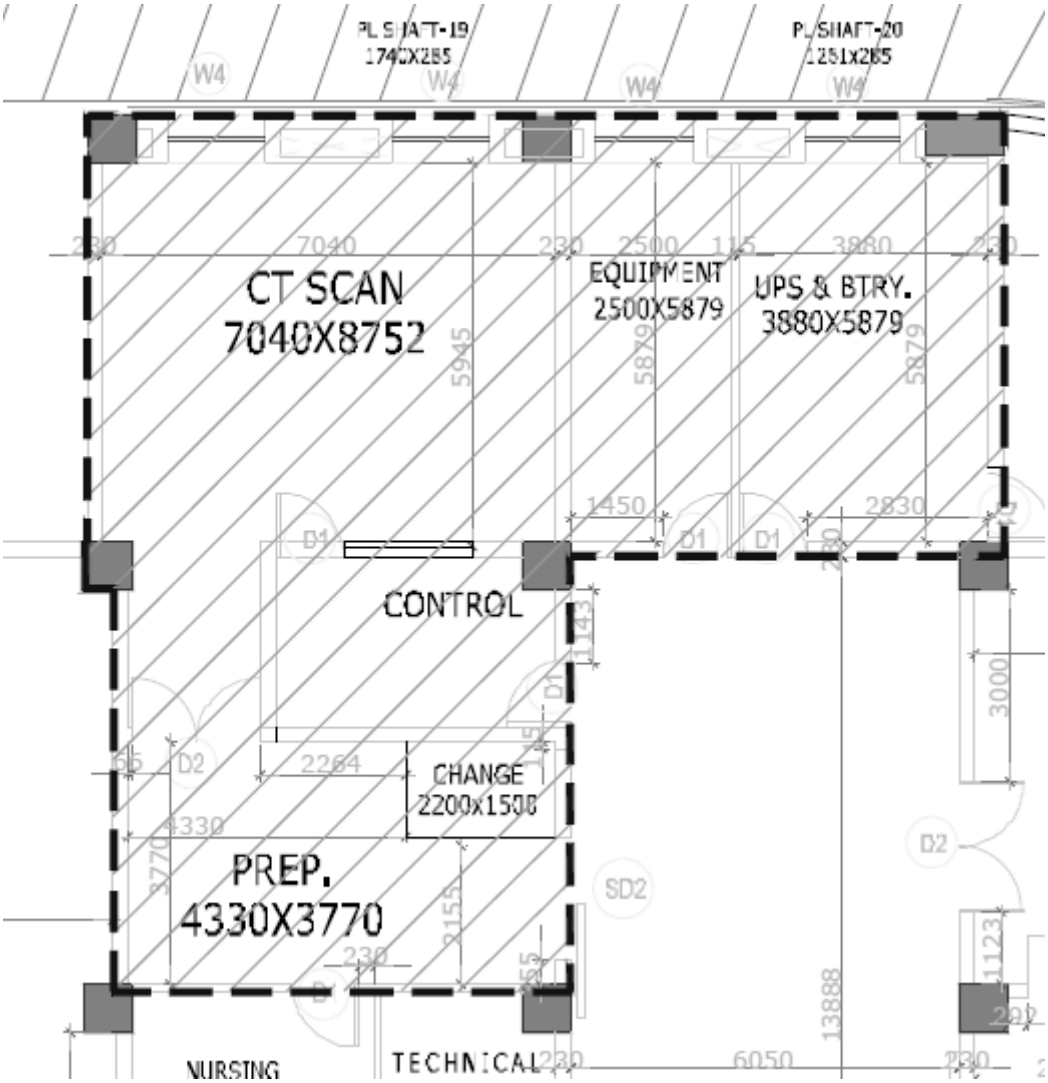
25.1.5	It should also include Lead lined door with lead glass peeping window, radiation warning indicators and signage, Aluminium false ceiling, GVT floor tiles and wall tiles/painting.
25.1.6	All site modification works should comply with specified standards of the hospital.
25.2	**While preparing the plan, the following aspects have to be addressed.**
25.2.1	Care should be taken to provide easy negotiation of the patient stretchers/ trolleys through corridors and doors.
25.2.2	Radiation shielding for doors, walls, windows etc.
25.2.3	Furniture like desk, chairs, shelves etc.
25.2.4	Patient stretcher and other furniture/ accessory to make the scan centre functional.
25.3	**The cost of Site Modification will be considered for Ranking / Evaluation purpose.**
25.4	**Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification work.**
25.4.1	Civil works
25.4.2	Electrical work
25.4.3	Air Conditioning (HVAC)
25.4.4	Interior Furnishing & Furniture
25.4.5	Miscellaneous
25.4.6	Fire alarm & Detector
25.5	**Scope of work for Site Modification CT unit :-**
25.5.1	The supplier should inspect the proposed site and submit all the detailed equipment layout drawing and BOQ for the proposed CT Scan Centres.
25.5.2	**The CT SCAN CENTRE shall consist of the following rooms:**
25.5.2.1	CT Gantry Room
25.5.2.2	Console room
25.5.2.3	Equipment room
25.5.2.4	UPS room / Electrical room
25.5.2.5	Patient preparation & Change room
25.5.3	**The actual area of Site Modification works done will be considered for payment, based on the unit rates and site measurements**
25.6	**Civil work**
25.6.1	Civil construction work including construction of brick wall if any, plastering, flooring as per the approved plan and equipment layout plan.
25.6.2	Concrete bed at CT equipment area.
25.6.3	Platform for unloading and shifting the CT should be provided if necessary.
25.6.4	Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.
25.6.5	All the construction work to be done as per the final plan approved by the Institute.
25.6.6	False Ceiling-to-floor ceramic wall tiling in: CT Gantry Room, Console room, Patient preparation & Change room.
25.7	**Flooring**
25.7.1	600 x 600 mm vitrified tiles with 100mm tile skirting to match in CT examination room, console room.
25.7.2	50 mm thick cement concrete flooring with (eg. Armstrong, Gerflor, Tarkett) CT equipment & UPS room.

25.8	**Painting**	
25.8.1	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in Equipment & UPS rooms.	
25.9	**False Ceiling**	
25.9.1	CEILING PANELS	**Lightweight Aluminium ceiling panels**, acoustical-treated, supported on grid or finished seamless with support above ceiling. Powder coated finish (colour to be approved by Institute). Ceiling height to suit the equipment mount and clearances.
25.10.	**Electrical work**	
25.10.1	ELECTRICAL LOAD	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.
25.10.2		The electrical work shall include the following:
25.10.3	WIRING	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.
25.10.4	SWITCHES	Switches light and power points should be of modular type and of standard make as listed below.
25.10.5	LIGHTING	General lights – LED light fittings with 500 Lux Illumination
25.11.	**AIR CONDITIONING: minimum 14 TR (9 TR Working + 5 TR Standby)**	
25.11.1	TYPE OF AC	**Duct-able split 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.
25.11.2		The outdoor units of AC should have grill coverings to prevent theft and damage.
25.11.3	**Environment specifications:**	
25.11.3.1	HUMIDITY CONTROL	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.
25.11.3.2	TEMPERATURE RANGE	Temperature ranges: 22± 2° C in all areas except equipment room which shall be as per requirement of the equipment.
25.11.3.3	HEAT LOAD	Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.
25.12	**Furniture:**	
25.12.1	CHAIR	Revolving chairs height adjustable, medium-back with hand-rest in the Control room, Radiologist room and viewing area. – **4 NOS.**
25.12.2	THREE SEATER	Chairs for patient waiting area – Three seater (chrome

		plated). - **10 NOS.**
25.12.3	CUPBOARD	Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – **3 NOS.**
25.12.4	DRUG TROLLEY	Drug trolleys – **1 NO.**
25.12.5	PATIENT TROLLEY	Patient trolley with rubber foam mattress - **1 NO**
25.12.6	SIGNAGE	Name boards for all rooms
25.12.7	TABLE	Tables for Workstation and Radiologist - **2 NOS.**
25.12.8	CHANGING ROOM	Changing rooms should have change lockers and dressing table.
25.12.9	DUSTBIN	Dustbins: **10 NOS.**
25.12.10	Note	All furniture items should be of standard make as mentioned in the table below.
25.13	**Miscellaneous:**	
25.13.1	FILM VIEWER	LED X-ray Film viewer with adjustable brightness; capable of holding 3 films of 14”x17” size. – **2 Nos.**
25.13.2	CABLING	Cabling of Network (LAN) connectivity for camera system, console system, workstation, servers and computers etc.
25.13.3	CABLING	Cabling for Broadband connection: for REMOTE SERVICE of CT system.
25.13.4	SINK	**1 sink in Preparation room of CT Scan facility**
25.14	**Fire alarm & Detector:**	
25.14.1	Fire alarm (along with new/existing panel) should be provided in all rooms, wherever site modification is being carried out. Fire alarm shall comprise of fire panel, smoke / heat detectors.	
25.14.2	The vendor should discuss with the engineering section and the department before quoting for Site-Modification	
25.14.3	Fire extinguisher Dry CO2 type as required for the building safety. – One per room	
25.15	**LIST OF ITEMS AND SUGGESTED MANUFACTURERS.**	
25.15.1	**ITEMS**	**PREFERRED MAKES**
25.15.2	FLOORING VITRIFIED TILES	- Somany, Kajaria , H&R Johnson, RAK India
25.15.3	PAINT	- Dulux, Asian Paints , Nerolac
25.15.4	PLUMBING	- Kohler, Jaguar , Grohe , Roca
25.15.5	SANITARY ITEMS	- CERA, Hindware, Parryware
25.15.6	ELECTRICAL	
25.15.7	CABLES	- Finolex, Havells ,V-Guard
25.15.8	SWITCHES	- Legrand, L&T, Crabtree , Roma
25.15.9	DISTRIBUTION BOX , MCB	- Legrand, L&T, Siemens, Havels
25.15.10	LIGHT FITTINGS	- Philips / Crompton / Wipro/syska
25.15.11	AIR CONDITIONING	- Daikin, Hitachi, Blue Star, Voltas,
25.15.12	FURNITURE	- Hermen Miller , Godrej , Featherlite, Geeken

ANNEXURE – 1

SITE PLAN FOR 256 SLICE DUAL ENERGY CT SCANNER



Item No. 3 (Rfx/Event number 3000002583)

Digital Subtraction Angiography

Sl.no.	The system should be the state of the art model to be quoted with feature equivalent to the latest model launched.
A	**Gantry:**
1	The system should have two gantries: one floor mounted and one ceiling suspended providing full body coverage. The lateral plane should have motorized longitudinal C-arm movement.
2	It should be possible to pre-program the gantries for multiple examination positions.
3	All movements of the gantries should be controlled from the joystick on the table side as well as from the control.
4	The system should have adequate collision protection for the safety of the patient.
5	Both gantries should have fast speed for angulations and positioning. The frontal system should have a speed of at least 15 degree/sec. for all positions and lateral plane should have a speed of at least 8 degree/sec.
6	Gantry angulations in both planes frontal and lateral should be freely user selectable to satisfy clinical imaging needs.
7	Both the gantries should have an automatic positioning capability dependent on the reference image being selected and possibility to select reference image depending on the gantry position.
B	**Patient Table:**
1	The table should have motorized longitudinal, horizontal and vertical travel.
2	It should have the facility for automatic bolus chase for peripheral angiography.
3	Table with Trendelenburg tilt facility.
4	It should be possible to swivel the table in case of emergencies.
C	**X-Ray Generator:**
1	Generator should be multi-pulse/high frequency for constant output.
2	Output should be 100 KW or more.
3	Radiography KVP range should be 40 KV – 125 kV or more.
4	Output at 100 KV should be 1000 mA or more.
5	It should have automatic exposure control device for radiographic fluoroscopy and angio mode.
6	It should have digital display or KVP & mAs.
7	Anatomical programming radiography should be possible.
8	It should have over loading protection.
9	It should have the facility for pulsed fluoroscopy at variable rates for reducing the x-ray dose to the patient during intervention procedure.
D	**X-Ray Tubes:**
1	Both planes should be provided with rotating anode high speed tubes.
	The focal spot should have the following sizes:
i	1.0 mm or less with load 80 KW or more in minimum one plane.
ii	0.5 mm or less with load 15 KW or more in minimum one plane.

2	Anode heat storage capacity should be 2.4 MHU or more having liquid bearing technology or metal lubricant.
3	The system should have adequate cooling facility for the x-ray tubes for uninterrupted performance during procedure.
E	**Collimator:**
1	One collimator for each plane is to be provided.
2	The collimator should have facility for automatic copper pre-filtration for reducing the x-ray dose.
3	The collimator leaf should have IRIS/rectangular type arrangement.
4	The collimator should have the facility for the dose measurement chamber in order to display the skin dose on the monitors in the lab.
F	**Biplane Digital System:**
1	Dynamic flat detector system with high spatial and 14 bit contrast resolution.
2	Size of frontal plane should be at least 40 cm diagonal.
3	Size of lateral plane should be at least 40 cm diagonal
4	It should provide multiple formats/fields at least of 4 sizes.
5	Spatial resolution should be at least 3.0 LP/mm in frontal plane and 2.5 LP/mm in the lateral plane.
6	Three monitors of at least 19" size TFT/LCD for each plane for display of live, reference and subtracted image with high resolution flicker free display should be provided. Monitors should have anti-glare provision.
7	Similarly 4 monitors, two for each plane (live & reference image) with high resolution display in the control room should be provided.
	Console Monitor for patient registration.
	Physiology monitor in examination room and in console with the requisite computer system for NIBP, IBP, SpO2 measurement, $ETCO_2$ display and analysis.
G	**Digital Imaging System and essential software:**
1	Road mapping facility (Real time 2D & 3D) should be available with possibility of superimposing of fluoro image on reference image. Facilities for unlimited subtracted high resolution fluoroscopy should be available.
2	It should have the capability to acquire images in 1024 x 1024 matrix with a maximum speed of 6 frames or more per second on-line subtraction. Specify the maximum image acquisition rate without subtraction.
3	Post processing software facilities with real time edge enhancement, positive/negative image display windowing, electronic shuttering, roaming, image reversal, zooming and magnifying with text and annotation junctions.
4	Rotational angiography facility (2D & 3D) at a speed of at least 30 degree/sec. with acquisition frame rate of at least 25 frames/sec in 1k matrix with facility for online display of subtracted images should be available. Specify if the rotational angiography is with on-line subtraction in 1024 matrix.
5	Rotational data acquisition with an output of cross sectional CT like images should be possible.
6	Last image hold or reference image toggling with fluoro should be available.
7	It should have minimum image storage capacity of 1,00,000 images in the 1024 x 1024/12 bit.
8	Digital subtraction angiography software of automatic pixel shift enhancement for iodine and CO2 contrast should be possible.

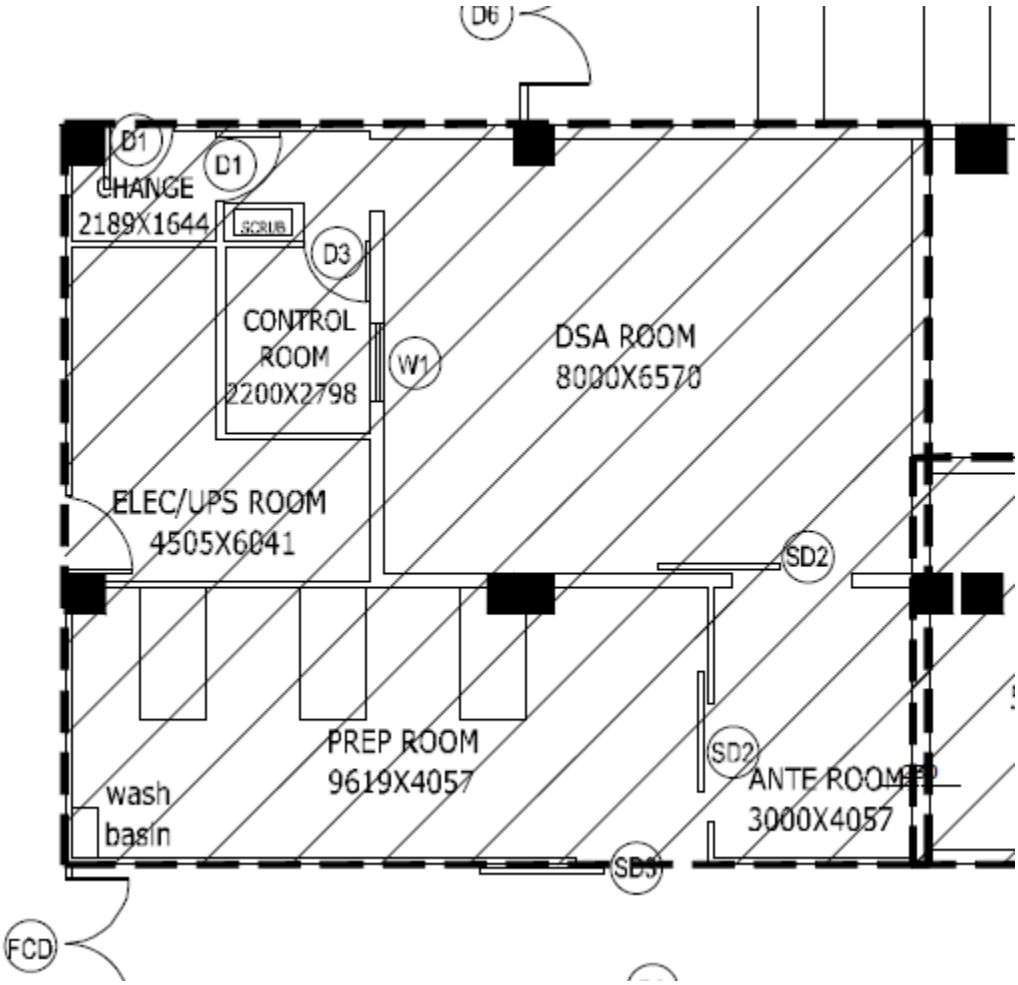
9	A separate workstation for 3D reconstruction of the rotational angiography images should be provided. The 3D image measurement and slicing should be possible. Facility to display reconstructed images in the procedure room should be provided.
10	The complete digital system along with workstation should be networked and connected to a DICOM compatible laser camera.
11	The digital system should have software for vascular analysis and quantification including stenosis %. All measurement should be possible from the patient table side.
12	Archiving on a CD/DVD recorder should be provided. RAID (4TB) should be supplied with the unit
13	An additional workstation for processing of the DSA images and their documentation should be provided in addition to 3D workstation. This workstation should have the facility to reconstruct the long leg view for peripheral images.
14	The system should be able to receive/display on reference monitor, DICOM format images from other modalities like CT & MR. DICOM print facility should be available.
15	Bolus chase software should be provided.
16	It should have facility to measure dose during the procedures.
17	Specify the time limit for minimum 30 seconds for uninterrupted acquisition of on-line subtracted images at 1024 x 1024 matrix with maximum frame rate.
H	**Essential Accessories**
1	Pressure injector with programmed flow rate, volume with variable pressure limits. Vendor should supply 500 disposable syringes with connector tubes in small batches as per the requirement of the department over next 5 years.
2	Multiport dry chemistry camera with resolution of 500 DPI or more. Three active ports should be available.
3	Lead glass at least 200 x 150cm for console room.
4	Ceiling suspended lead glass for table side radiation protection.
5	One ceiling suspended examination lamp.
6	Ten zero lead radio-protective aprons with hangers and floor stand, ten thyroid shields and ten universal lead eye glasses. Aprons should have lead equivalent of 0.5 mm and double sided.
7	Mattress and arm supports for patient table, Paediatric immobilizer.
8	Suitable UPS of at least 120 KVA for complete back up of the entire system including generator, digital system, all essential accessories to continue angio acquisition for 15 minutes.
9	A 6-channel monitor for ECG, Blood pressure, respiration, SPO2, ET co2 and NIBP pulse-oximeter (Adult & Paediatric B.P cuffs).
I	**Installation**
1	The unit will be installed on site modification basis. The vendor should inspect the site before quoting and ensure that the unit can be installed in the available space without any functional compromise. Complete layout site map and details of work (BOQ) should be part of technical bid. Provisions should be made for console room, changing room, scrub room, work-station and printer locations. It should also include Lead lined door with lead glass peeping window, radiation warning indicators and signage, Aluminium false ceiling, GVT floor tiles and full height wall tiles. All turnkey work should comply with specified standards of the hospital.

2	Necessary furniture and fixtures for comfortable working conditions, storage of system components and consumable stand for protective aprons and gonad shields. etc. should be provided.
3	Power and Air-conditioning requirement must be mentioned. AC of adequate capacity should be provided. Power supply by the institute will be terminated at existing point. All electrical provisions including earthing etc. will be vendor's responsibility.
4	Radiation safety requirements must be followed in during installation and subsequently during lifetime of the equipment. Vendor should assist in site approval, registration and licensing of the facility with AERB (elora)
J	**Warranty/After Sale Service**
1	The comprehensive onsite warranty of entire system shall include X-ray tube, detector, all accessories and items supplied along with maintenance and servicing of civil, electrical and air conditioning works. If vendor is not a direct subsidiary of OEM (principles), then such warranty must be vetted by OEM.
2	Regular preventive maintenance and QA checks as per AERB norms will be part of the warranty and CMC.
3	Free software update for 10 years.
4	Supplier must ensure the availability of 'expertise service' and maintenance in Jhajjar.
K	**Instructions**
1	There should be at least three installations of the quoted model in India. Satisfactory performance certificate by users on their letterhead must be attached.
2	All information asked for must be provided in the compliance statement under the headings given above.
3	All information in the tender document must be supported by original product data sheets or should be certified by the principals. Computer generated data sheets, photocopies or email printouts shall not be accepted.
4	If the unit is being quoted by Indian agency which is not a direct subsidiary of the principals; an undertaking from the principals must be provided that in case of discontinuation or change of the agency, merger, acquisition or any corporate rearrangement, the principal will arrange for onsite maintenance .of the unit and abide by all terms and conditions of the tender.
K	**SITE MODIFICATION WORKS**
1	The SCOPE OF WORK for SITE MODIFICATION OF DSA system shall consist of the following rooms:
a.	Examination Room
b.	Console room
c.	DSA equipment / UPS room.
2	The area considered for Site Modification for item: DSA SYSTEM is indicated in the site plan attached below as Annexure 1.
3	The vendor should inspect the site at NCI, Jhajjar , before quoting and ensure that the unit can be installed in the available space without any functional compromise.
4	Complete equipment layout site plan and details of work (BOQ) should be part of technical bid.
5	Provisions should be made for placing the various accessories in console room, work-station and printer locations.

6	It should also include Lead lined door with lead glass peeping window, radiation warning indicators and signage, Aluminium false ceiling, GVT floor tiles and full height wall tiles.
7	All site modification works should comply with specified standards of the hospital.
I	**Civil work**
1	Civil construction work including construction/ modification/ demolition of brick wall if any, plastering, flooring as per the approved plan and equipment layout plan.
2	Additional strengthening of floor / Concrete bed of DSA and equipment area, if required.
3	Installation of ceiling structure required to suspend the DSA system; without affecting the structural integrity of the building.
4	Platform for unloading and shifting the DSA System should be provided if necessary.
5	Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.
6	All the construction work to be done as per the final plan approved by NCI Jhajjar
7	Ceiling-to-wall ceramic tiling.
II	**Flooring**
1	600 x 600 mm glazed vitrified (GVT) tiles with 100mm tile skirting in Examination room.
2	5mm-Vinyl flooring in DSA equipment / UPS room.
III	**Painting**
1	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in Console, DSA equipment / UPS room.
IV	**False Ceiling**
1	Aluminium, acoustical-treated, powder coated tile for ceiling supported on grid or finished seamless with support above ceiling. Ceiling height to suit the equipment mount and clearances.
V	**Electrical work**
1	The supplier shall be required to specify the total load requirements for the DSA system 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 DSA area. The distribution panel for UPS, DSA System shall be provided by the vendor. Few lights in each room shall be connected to the UPS to provide emergency lighting.
2	The electrical work shall include the following:
a	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.
b	Switches light and power points should be of modular type and of standard make as listed below.
c	General lights –LED light fittings with minimum 500 Lux Illumination.
VI	**AIR CONDITIONING:**
a	Duct-able Split air-conditioners and Split Air conditioners may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface.
b	The outdoor units of AC should have grill coverings to prevent theft and damage.

VII	**Environment specifications:**	
a	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.	
b	Temperature ranges: 22± 2° C in all areas except equipment room which shall be as per requirement.	
c	Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.	
VIII	**Furniture:**	
1	Revolving chairs height adjustable, medium-back with hand-rest – 4 NOS.	
2	Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – 3 NOS.	
3	Drug trolleys - 1 NOS.	
4	Patient trolley with rubber foam mattress - 1 NOS.	
5	Name boards for all rooms	
6	Tables for Workstation and Radiologist - 2 NOS.	
7	Dustbins: 10 NOS.	
8	All furniture items should be of standard make as mentioned in the table below.	
IX	**Miscellaneous:**	
1	LED X-ray Film viewer with adjustable brightness ; capable of holding 3 films of 14”x17” size. – 2 Nos.	
2	Fire extinguisher ABC type- 5kg - 3 NOS.	
SL NO	**LIST OF ITEMS AND SUGGESTED MANUFACTURERS.**	
	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
E	ELECTRICAL	
1	*CABLES*	- Finolex, Havells ,V-Guard
2	*SWITCHES*	- Legrand, L&T, Crabtree , Roma
3	*DISTRIBUTION BOX , MCB*	- Legrand, L&T, Siemens, Havells
4	*LIGHT FITTINGS*	- Philips/ Crompton/ Wipro/Syska
F	AIR CONDINTIONING	- Daikin, Hitachi, Blue Star, Voltas,
G	FURNITURE	- Hermen Miller, Godrej, Featherlite, Geeken.

ANNEXURE – 1


D6
D1
D1
CHANGE
2189X1644
SCRUB
D3
CONTROL
ROOM
2200X2798
W1
DSA ROOM
8000X6570
ELEC/UPS ROOM
4505X6041
SD2
PREP ROOM
9619X4057
SD2
ANTE ROOM
3000X4057
wash
basin
SD3
FCD

Item No. 4 (Rfx/Event number 3000002584)

Full Field Digital Mammography Unit

Sl. No.	Technical Specification
	State of art, USFDA approved, Full Field Digital Mammography Unit with Digital Breast Tomosynthesis and Stereotactic Biopsy Facility.
	The system should have following features:
1	**X-ray Generator**
a	X-ray generator should deliver high frequency constant output with minimum rating of 5KW with 100 mA or more at 35 kV.
b	kV range should be 23 to 35 kV or higher in 1kV increment.
c	mAs range should be 4 to 500 mAs or higher.
d	Automatic exposure control with manual override facility.
e	Exposure lock to prevent accidental double exposure.
2	**X-ray tube**
a	Heat storage capacity should be 150 KHU or more.
b	Dual focal spots of size 0.3 (large) and 0.1 mm (small).
c	Collimator
3	**Gantry**
a	Fully motorized vertical movement and isocentric rotation.
b	SID of 65 cm or more.
c	Removable patient face shield.
d	Fully automated compression mode.
4	**Digital flat panel detector**
a	Solid state Direct / Indirect conversion type, size 24 cm x29 cm (± 1 cm).
b	Pixel size of 100 micron or less
c	Specify image matrix (in pixel) and image size (in MB)
5	**Digital breast Tomosynthesis**
a	Fully integrated USFDA approved digital breast tomosynthesis system to be supplied as the standard component.
b	It should be possible to perform tomosynthesis in both CC and MLO views.
c	It should be possible to obtain both standard views (2D) and tomosynthesis (3D) without repositioning of the patient or any change in the attachments.
d	Specify time taken for tomosynthesis acquisition.
e	It should be possible to generate synthesized mammographic view from tomosynthesis data.
6	**Acquisition workstation**
a	Medical Grade Monitor of resolution of 3 megapixel or more
b	Facility for patient information, worklist, scheduled work flow, mammography and tomosynthesis image review, print, storage, query and retrieve
c	Storage capacity of 5000 images or more
d	Radiation dose of both standard views (2D) and tomosynthesis (3D) should be displayed and transmitted to RIS-PACS
7	**REPORTING WORKSTATIONS: (1 no.):**
a	The Image processing as well as reviewing software shall be from the principal manufacturing company of Digital Mammography unit.
b	The Image processing as well as reviewing software should be USFDA certified for Digital mammography & Tomosynthesis.
c	Medical grade Colour Monitor of **minimum 10 Megapixel resolution**, Capable of at least 1000cd/m² brightness , with Out-of-the-box calibration to the DICOM grayscale display function for luminance. Display should be suitable for digital breast imaging, including breast tomosynthesis.

	With automated built-in QA and calibration. It should include a protective anti-reflective glass panel to prevent accidental damage to the screen.
d	Dedicated mammography workflow keypad
e	Mammography and tomosynthesis viewing and post processing facility
f	Customizable workflow, image layout and image orientation
g	It should be ready for multimodality (ultrasound, CT, MRI) viewing
h	DICOM storage, query, retrieve, print in ready to use configuration
i	Storage capacity of minimum 10,000 images.
8	**Image documentation and transfer**
a	It should be possible to transfer images to USB drive in DICOM and PC format from Acquisition workstation and Reporting workstation.
b	The workstation is to be integrated with DICOM compliant network of the institute
c	Mammography and tomosynthesis images should be vendor neutral so that viewing at any other workstation and storage in institute PACS server is possible. If these image formats are proprietary, appropriate licences should be provided to convert them for general viewing.
d	DICOM modality work list (DMWL) and modality pre procedure setup (MPPS) should be enabled.
9	**Digital Stereotactic breast biopsy facility**
a	Upright stereotactic biopsy unit, which should allow biopsy in both CC and ML orientation of the gantry.
b	It should be ready to use with standard FNAC needles, hookwire needles, 14G core biopsy guns and vacuum assisted biopsy probes. Needle holders, biopsy guides and any other hardware or software required for this purpose should be included with the unit.
10	**Compression paddles**
a	Two standard compression paddles of width 15 cm or more and 24 cm or more
b	Spot compression and axilla compression paddles
c	Stereotactic biopsy paddle with open window
d	Wire localization paddle with open window and alpha-numeric markers
e	Original (OEM) wall mounted hanger for compact docking of above mentioned paddles
11	**Standard accessories**
	USFDA approved vendor neutral, DICOM compatible Breast density software. It should be capable of automatic volumetric computation from both 2D and 3D data. It should be able to display individual breast volumes in cc, volumes of fibroglandular density in cc, percentage density score and ACR BI-RADS (5th edition) density score in tabulated form. It should be possible to calculate mean glandular radiation dose to the breast.
a	USFDA approved vendor neutral 2D CAD solution. CAD should identify vascular calcification, lymph nodes, nipple and exclude it from markings. CAD marking should be easily toggled on and off.
b	Vacuum assisted breast biopsy system with facility for dual suction and saline irrigation (Mammotome-revolve or Suros or BARD-encore or equivalent). It should be configured ready to use with stereotactic as well as hand held ultrasound guidance. Complete consumable sets for stereotactic, hand held ultrasound guided and MR compatible biopsy guns (20 nos each) and compatible biopsy site marker clips (20 nos each) should also be supplied. Unit Price of consumables for vacuum assisted biopsy to be quoted separately for additional requirement in future.
c	Motorized or Hydraulic mobile biopsy chair cum couch of reputed brand suitable for stereotactic biopsy in sitting and lateral decubitus position. Complete digital mammography QA kit including kV meter and ACR approved phantom. The supplier shall provide regular calibration and QA during the warranty and CMC period.

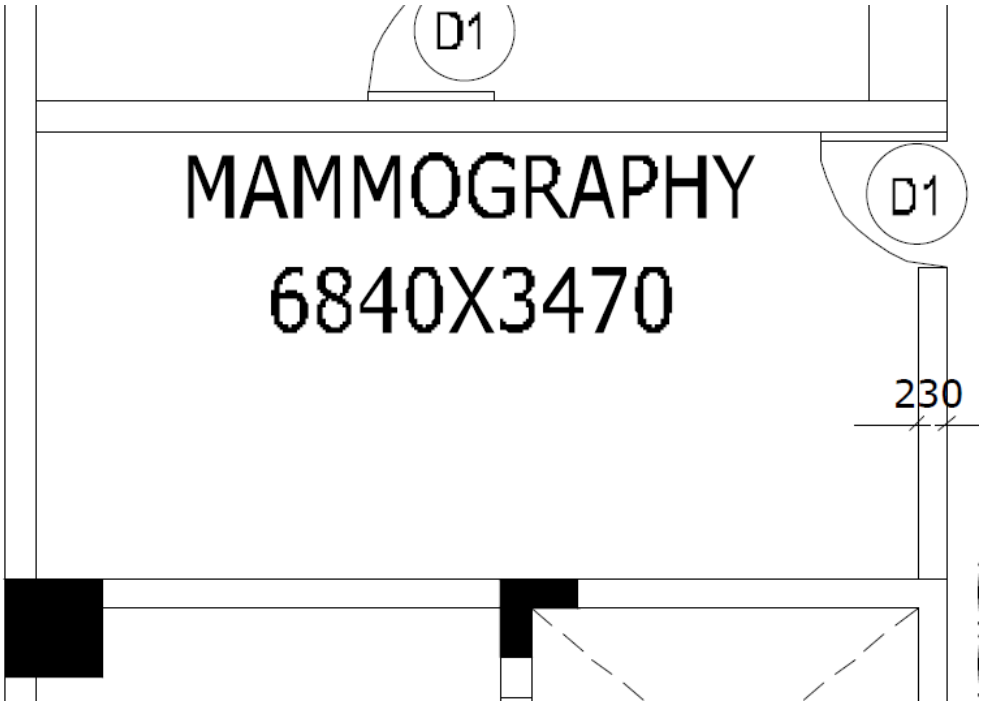
d	Radiation shield with 0.3 mm lead equivalent.
e	Compact dry chemistry film camera, approved for mammography.
f	UPS for 15 minutes back-up for entire system.
g	Crash cart - 1 no.
12	**Other features**
a	The unit should have AERB type approval for use in India.
b	The vendor should assist and facilitate site approval, registration, licensing and certification of the facility by AERB.
c	Vendors should have minimum three global Installations of the quoted system.
13	**After sales, Warranty and CMC**
a	The comprehensive onsite warranty of entire system shall commence from the date of issue of installation certificate by the institute. The warranty will include main unit with all parts including x-ray tube and detector, all accessories and optional items supplied with the unit, all turkey items, including batteries etc. One free software upgrade during warranty and unlimited software updates should be provided.
b	b. Regular maintenance and QA checks as per AERB norms will also be part of warranty and CMC.
c	c. After sales service: a factory trained service engineer should be available in Jhajjar Service call must be attended within 12 hours.
d	d. If the unit is being quoted by Indian agency which is not a direct subsidiary of the principals; an undertaking from the principals must be provided that in case of discontinuation or change of the agency, merger, acquisition or any corporate rearrangement, the principal will arrange for onsite maintenance of the unit and abide by all terms and conditions of the tender.
14	**Installation:**
a	The unit will be installed on Site-modification basis. The vendor should inspect the site before quoting and ensure that the unit and all accessories can be installed in the available space without any functional compromise. Necessary networking, furniture, fixture and modification to reporting room will be vendor's responsibility. Optimal Radiation safety requirements must be taken into consideration. Air-conditioning for the Mammography Room should be provided**.** Adequate furniture and fixtures of reputed brands should be provided. It should also include approved quality floor tiles and full height wall tiles. Power supply by the institute will be terminated at desired point one point within the Mammography site. . All electrical provisions including equipment mains panel, UPS cabling and DB, earthing etc. will be vendor's responsibility. All Site-modification work must comply with hospital norms.
15	**Instructions to vendors**
a	All information asked must be provided clearly in compliance sheet under same headings. Haphazardly given information will not be considered.
b	A complete original printed product data sheet must be submitted as a part of technical bid. Photocopy or computer generated data sheets or emails shall not be accepted. Product data sheets of quoted third party items must also be supplied.
c	Any technical clarification required which is not mentioned in the product data sheet should be clarified by the principals or manufacturer.
d	On-site training of the staff by application expert should be provided for the period not less than 4 weeks, as per the convenience of the department.
e	Original Product Datasheet of main unit and all accessories, including third party items to be provided.
f	There should be at least three installations of the quoted model **globally**. Satisfactory performance certificate by users on their letterhead must be attached.
16	**Site Modification Scope of Work – DIGITAL MAMMOGRAPHY**
a	The Site drawing of the Institute can be obtained from the Project office of NCI - AIIMS, room no. 161, Ist floor, DBRAIRCH, AIIMS campus, New Delhi.
b	The vendor should inspect the site at NCI, Jhajjar, before quoting and ensure that

	the unit can be installed in the available space without any functional compromise.
c	Complete equipment layout site plan and details of work (BOQ) should be part of technical bid.
d	Provisions should be made for placing the various accessories in console room, work-station and printer locations.
e	It should also include Lead lined door with lead glass peeping window, radiation warning indicators and signage, Aluminium false ceiling, GVT floor tiles and full height wall tiles.
f	All site modification works should comply with specified standards of the hospital.
17	**The Digital Mammography site modification shall consist of the following rooms:**
a	Digital Mammography Room with Control panel area & patient change area.
18	***Moreover Bidders will have to quote the Unit Rates of the following components of Site Modification work.***
a	Civil works
b	Electrical work
c	Air Conditioning (HVAC)
d	Fire Alarm & Detector
e	Interior Furnishing & Furniture
f	**The area considered for Site Modification for item: Digital Mammography System is indicated in the site plan attached below as Annexure 1.**
19	**Civil work**
a	Civil construction work including construction/ modification/ demolition of brick wall if any, plastering, flooring as per the approved plan and equipment layout plan.
b	Additional strengthening of floor , ceiling structure for equipment , if required
c	Platform for unloading and shifting the Digital Mammography should be provided if necessary.
d	Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.
e	All the construction work to be done as per the final plan approved by NCI Jhajjar.
f	False Ceiling-to-floor ceramic wall tiling
20	**Flooring**
a	600 x 600 mm glazed vitrified (GVT) tiles with 100mm tile skirting in Digital Mammography room.
b	**False Ceiling**
c	Lightweight Aluminium ceiling panels, acoustical-treated, supported on grid or finished seamless with support above ceiling. Powder coated finish (colour to be approved by Institute). Ceiling height to suit the equipment mount and clearances.
21	**Electrical work**
a	The supplier shall be required to specify the total load requirements for the Digital Mammography 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 DIGITAL MAMMOGRAPHY area. The distribution panel for UPS , DIGITAL MAMMOGRAPHY shall be provided by the vendor.
b	The electrical work shall include the following:
c	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.
d	Switches light and power points should be of modular type and of standard make as listed below.
e	General lights –LED light fittings with minimum 500 Lux Illumination
22	**AIR CONDITIONING: minimum 6 TR (4 TR Working + 2 TR Standby)**
a	Split air conditioners may be used according to room requirement and suitability. Humidity control should be provided to effectively eliminate moisture condensation on equipment surface.

b	The outdoor units of AC should have grill coverings to prevent theft and damage.	
c	**Environment specifications:**	
d	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.	
e	Temperature ranges: 22± 2° C in all areas except equipment room which shall be as per requirement of the equipment.	
f	Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.	
23	**Furniture:**	
a	Revolving chairs height adjustable, medium-back with hand-rest – 4 NOS.	
b	Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – 2 NOS.	
c	Drug trolleys - 1 NOS.	
d	Patient trolley with rubber foam mattress - 1 NOS.	
e	Name boards for all rooms	
f	Tables for Workstation and Radiologist - 2 NOS.	
g	Dustbins: 4 NOS.	
h	All furniture items should be of standard make as mentioned in the table below.	
24	**Miscellaneous:**	
a	LED X-ray Film viewer with adjustable brightness; capable of holding 3 films of 14”x17” size. – 2 Nos.	
25	**Fire alarm & Detector:**	
a	Fire alarm (along with new/existing panel) should be provided in all rooms, wherever site modification is being carried out. Fire alarm shall comprise of fire panel, smoke / heat detectors. The vendor should discuss with the engineering section and the department before quoting for Site-Modification	
b	Fire extinguisher Dry CO2 type 5kg as required for the building safety. – One per room	
26	**LIST OF ITEMS AND SUGGESTED MANUFACTURERS.**	
	ITEMS	**PREFERRED MAKES**
	FLOORING VITRIFIED TILES	Somany, Kajaria , H&R Johnson, RAK india
	PAINT	Dulux, Asian Paints , Nerolac
	PLUMBING	Kohler, Jaguar , Grohe , Roca
	ELECTRICAL	
	CABLES	Finolex, Havells ,V-Guard
	SWITCHES	Legrand, L&T, Crabtree , Roma
	DISTRIBUTION BOX , MCB	Legrand, L&T, Siemens, Havels
	LIGHT FITTINGS	Philips / Crompton / Wipro/Syska
	AIR CONDINTIONING	Daikin, Hitachi, Blue Star, Voltas,
	FURNITURE	Hermen Miller , Godrej ,Featherlite, Geeken.

ANNEXURE – 1

SITE PLAN FOR FULL FIELD DIGITAL MAMMOGRAPHY UNIT



Item No. 5 (Rfx/Event number 3000002585)

Digital Mobile X-Ray Unit

State-of-the-art, battery driven, compact, easily transportable, USFDA approved digital mobile radiographic units with telescopic or articulated arm and flat panel detector are required. It should be suitable for bedside radiography in wards, intensive care units and operation theatres.

The system should have the following essential features:

1. The X-ray Generator:

a) Must be microprocessor controlled high frequency with output 30 KW or more.
b) KV range: 40 KV to 125 KV or more.
c) Max. Current: 400mA or more.
d) It should have an electronic timer with shortest exposure time of 4 ms or less.
e) It should have a digital display of mAs and KV.
f) Please specify mA and seconds separately and not mAs alone.

2. X-Ray Tube:

a) Output should match the output of the generator.
b) It must have a rotating anode with at least 8000 rpm.
c) Dual focus x-ray tube with focal spot size 1.2 mm or less.
d) Heat storage capacity of the anode should be 140 KHU or more
e) Multileaf collimator.
f) It should have tilt angle indicator and retractable measuring tape

3. Flat Panel Detector:

a) The flat panel detector made up of amorphous selenium/silicon with CsI scintillator size at least 14x14 inches or more (Wi Fi enabled wireless).
b) The detector pixel matrix size should be 2k x 2k or more with DQE at least 65%.
c) Pixel size should be 200 um or less
d) The machine should have provision for detector storage compartment.
e) The image processing time after exposure should not be more than 15 Sec.
f) Weight of the detector should not be more than 3 Kg.
g) The detector should have wireless connectivity with its mobile X-ray unit for transfer of images and data.

4. Battery:

a) The machine should be able to run on mains 220V 15A single phase supply as well as on battery supply.
b) The battery should also provide power for the motor to move the machine.
c) The battery should be able to be charged from a normal 15A, 220 V single phase socket in less than 6 hours.
d) Number of exposures which can be done on fully charged battery should be at least 50. Please specify battery backup time / number of exposures.

5. Inbuilt Console:

a) The machine should have an integrated / inbuilt console with a TFT touch screen of 15 inches or more, having resolution of 1024 x 1024 at least.

b) The console should enable to view the image and provide post processing features, using touch screen.
c) The post processing features should include zoom, contrast and brightness adjustment.
d) It should have image storage memory of at least 2000 images.
e) Acquisition and post processing software must be from principal manufacturer for the quoted model.

6. Other Features:

a) The unit must have an effective braking system for parking, transport and emergency braking, including dead man break.
b) It must have a telescopic / articulated arm for maximum positioning flexibility.
c) Facility for exposures with remote/detachable exposure switch should be possible. Detachable exposure release switch should be supplied.
d) A grid of 8:1 ratio with size at least 13"xl3" should be supplied.
e) Valid NOC / Type approval of the quoted model from AERB should be provided.
f) Entire unit should be USA FDA approved.
g) The machine including batteries should not weigh more than 600 kg. Exact weight of the machine to be mentioned.
h) The machine should be manually movable, even without batteries drive.
i) It should measure radiation exposure and send this information to RIS-PACS.

7. Power Line Connection:

The unit should be able to operate on single-phase power supply of 200 to 240 volts, 15 Amp standard wall outlets with automatic adaptation to line voltage

8. Networking and image transfer:

a) The machine should be fully network ready to connect with hospital RIS and PACS. Wireless connection to network should also be possible
b) Connectivity to DICOM printers with multi-format options should be provided. It should be possible to connect the unit to external storage devices, DICOM Servers.
c) DICOM modality work list (DMWL) and modality pre procedure setup (MPPS) should be enabled on the unit.

9. Terms and Conditions:

a) Warranty: 5 years on site comprehensive warranty (labour & spares covering all parts of the units and items supplied, including but not restricted to batteries, X ray tube, detector from the date of issue of installation certificate by the institute.

b) Regular preventive maintenance and QA checks as per AERB norms will also be part of the warranty and CMC.

c) Warranty should be followed by comprehensive annual maintenance contract (CMC) for next five years, covering all items as that of warranty. The Cost of CMC with year wise breakup from 6th to 10th years should be mentioned in the price bid.

d) 95% uptime guarantee should be given. In case downtime exceeds 5%, penalty in the form of extended warranty, double the number of days for which the equipment goes out of service will be applied.

e) There should be at least three installations of quoted unit in India. Satisfactory performance report from the existing users should be provided

f) The supplier must ensure the availability of expertise service and maintenance at New Delhi. A 24x7 helpline number with call log facility should be mentioned.
g) In case the machines are quoted by Indian agent which is not the direct subsidiary of the principal, an undertaking from the principals must be provided that in case of discontinuation or change of agency, merger acquisition or any corporate rearrangement, the principal will arrange for onsite maintenance of the unit and abide by all term and conditions of tender.

10. Important instructions:

a) Quotations should be filled strictly under the headings given in the tender document. Incompletely filled quotations or information provided haphazardly will not be considered.
b) All technical information in the tender document must be supported by original product data sheets. Photocopies or email shall not be accepted.
c) All information asked for must be provided in the compliance statement under the headings given above and also highlighted in the original product data sheet.
d) Technical clarification if any must be provided by principals on their original letterhead, signed by authorized signatory.
e) The name of the quoted model must be mentioned on the principal's website as in-production model.

Item No. 6 (Rfx/Event number 3000002586)

Ultrasound Machine- High End

Ultrasound Machine- High End with Shear Wave Elastography:

A State-of-the-Art high end Medical Ultrasound unit to be supplied. Quoted unit should be capable of performing all Abdominal and Pelvic Imaging in Adults and Paediatric age group, Imaging of Small Parts, endocavitary and musculoskeletal Imaging. Systems should have the capability of Shear Wave Ultrasound Elastography and Contrast Imaging facility.

A. The system should have the following essential features:

1. The system should incorporate facility for High Resolution B mode, M Mode, PW, CW, Colour Doppler, Power Doppler, Angio, Duplex and Triplex Imaging modes.
2. Shear Wave Ultrasound Elastography Imaging should be provided to evaluate Relative Tissue Stiffness for breast, liver, prostate and other small part applications on convex, linear and endocavitary transducers.
3. The system should permit the simultaneous display of a color-coded tissue stiffness map as well as shear wave velocity measurements in one single image.
4. The system should include at least 21" LCD monitor with 1280 x 1024 resolution arm with tilt, swivel and height adjustment facility. A separate touchscreen should also be available.
5. The system should have 256 grey shades (8 bits) or more.
6. The system should have a fast boot up time of less than 150 seconds, when switched on from 'OFF' position.
7. Dynamic range should be 180 dB or more.
8. There should be at least 100,000 digital processing channels
9. The system should have a Frame Rate 1000 Frames per second or more.
10. The system should have imaging depth of 30 cm or more.
11. The system should have real-time compound imaging facility
12. The system should have Tissue Harmonic Imaging (THI) facility. The system should have THI capability on phased linear, 3D and curved array transducers. THI should be available in colour flow imaging, M-mode and 3D rendering modes.
13. The system should be able to work in combined mode of Harmonic Image and Real-time Compound Imaging. The system should have Tissue Harmonic Imaging in Power Doppler mode.
14. Complete contrast imaging package with quantification should be provided. It should be able to detect fundamental as well as second harmonic response of the contrast agent, dynamic contrast imaging with quantification in user selectable region of interest**.**
15. The system should have facility for extended field of viewing, reconstruction/ panoramic imaging.
16. The system should have multiple transducer ports (minimum three) with facility for switch over from one to another with single keystroke.
17. The system should have fusion imaging, capable of review of CT, MRI, PET images alongside real time ultrasound imaging and also to be able to use this multimodality data to assist ultrasound guided interventions in real time.
18. The system should have auto optimization features for ease of use and automatic quantification of Doppler parameters in real time and freeze modes.

19. Coded excitation/equivalent technology should be available to improve penetration and recover more tissue information for greater detail resolution at extended depths.
20. One-touch image optimization should be available in 2D mode with one button automatic adjustment of TGC.
21. Zoom facility with high resolution results and pan capability in both real time and frozen images with facility of pre and post processing.
22. The system should have Cine loop review facility in individual and mixed modes with memory up to minimum of 400 images and 30 seconds of Doppler.
23. **Equipment to be offered with following electronic Broad Bandwidth Probes.**
    a. Convex Array Transducer 2-5 MHz or higher range and should be compatible for contrast enhanced imaging
    b. Linear Transducer 7-15 MHz or higher range
    c. Linear transducer of 5-10 MHz or higher range and should be compatible for contrast enhanced imaging. if not compatible for CE imaging, then separate linear probe should be quoted.
    d. Small foot print transducer with reusable biopsy guide.
    e. Broad band Endocavitary Probe with frequency range 5 - 12 MHz or higher range with reusable biopsy guide
24. The system should have facility of direct storage and retrieval of B/W and color images (both frozen and cine loops) in the in-built hard disk drive. Inbuilt hard disk storage for images should be 500 GB or more.
25. The system should have USB archival (DICOM and PC format) facility.
26. The system should be DICOM 3.0 ready (like send, receive, print, acknowledge etc.).
27. Image Storage and documentation: The systems shall have to be connected with existing dry chemistry camera. It should be possible to print images on 8x10 and 10x12 inch size of films.
28. The unit should be connected with institute RIS-PACS network in ready to use configuration.
29. On line UPS for 30 minutes back up to support all functions of the unit.

B. AFTER SALES AND WARRANTY:

1. Comprehensive onsite warranty for five years from the date of issue of installation certificate by the hospital should be provided. The warranty shall cover main unit including all transducers, accessories, batteries, plastic or rubber parts, third party items and everything supplied as part of this tender.
2. Five years comprehensive maintenance contract covering everything as warranty should be quoted. Breakup of yearly cost of CMC from 6th to 10th year should be mentioned in price bid.
3. After sales service: a factory trained service engineer should be available in Delhi. Service call must be attended within 12 hours.
4. Uptime guarantee: 95% uptime guarantee of the facility should be provided. If the downtime of the facility (entire facility or part of it) exceeds 5%, penalty in the form of extension of warranty for the period double of the downtime period will be imposed.

C. IMPORTANT INSTRUCTIONS:

1. All information in the tender document must be supported by original product data sheets or should be certified by the principals. Computer generated data sheet or photocopies or emails shall not be accepted.

2. All information asked for must be provided in the compliance statement under the headings given above
3. There should be at least three working installations of the quoted models in the county with 'satisfactory service certificate' from the users should be submitted.
4. If the unit is being quoted by Indian agency which is not a direct subsidiary of the principals; an undertaking from the principals must be provided that in case of discontinuation or change of the agency, merger, acquisition or any corporate rearrangement, the principal will arrange for onsite maintenance of the unit and abide by all terms and conditions of the tender.
5. Spare parts and repair for the next 10 years must be ensured.

Item No. 7 (Rfx/Event number 3000002587)

Ultrasound Machine - Mid Range

A State-of-the-Art USFDA approved Medical Ultrasound unit with colour Doppler and tissue harmonic imaging to be supplied. The unit should be capable of performing all Abdominal, Pelvic, Small Parts, endocavitary and musculoskeletal Imaging.

A. **The system should have the following essential features:**

1. The system should incorporate facility for High Resolution B mode, M Mode, PW, CW, Colour Doppler, Power Doppler, directional power-angio, Duplex and Triplex modes.
2. The system should include at least 19" LCD monitor with 1280 x 1024 resolution arm with tilt, swivel and height adjustment facility. A separate touchscreen should also be available.
3. The system should have 256 grey shades (8 bits) or more.
4. The system should have a fast boot up time of less than 150 seconds, when switched on from 'OFF' position.
5. Dynamic range should be 200 dB or more.
6. The system should have a Frame Rate 1000 Frames per second or more.
7. The system should have imaging depth of 30 cm or more.
8. There should be at least 100,000 digital processing channels
9. The system should have real-time compound imaging facility on all probes
10. The system should have real time compound imaging and Tissue Harmonic Imaging (THI) facility. The system should have THI capability on linear and convex transducers.
11. The system should have extended field of viewing, reconstruction/ panoramic imaging.
12. The system should have multiple transducer ports (minimum three) with facility for switch over from one to another with single keystroke.
13. The system should have auto optimization features for ease of use and automatic quantification of Doppler parameters in real time and freeze modes.
14. Zoom facility with high resolution results and pan capability in both real time and frozen images with facility of pre and post processing.
15. The system should have Cine loop review facility in individual and mixed modes with memory up to minimum of 400 images and 30 seconds of Doppler.
16. **Equipment to be offered with following Broad Bandwidth Probes.**
    a. Convex Array Transducer 2-5 MHz or higher range.
    b. Linear Transducer 5-12 MHz or higher range
    c. Small foot print sector transducer 2-5 MHz with reusable biopsy guide.
    d. Endocavitary Probe with 5 to 9 MHz or higher range with reusable biopsy guide
17. The system should have facility of direct storage and retrieval of B/W and color images (both frozen and cine loops) in the in-built hard disk drive. Inbuilt hard disk storage for images should be 500 GB or more.
18. The system should have USB archival (DICOM and PC format) facility.
19. The system should be DICOM 3.0 ready (like send, receive, print, record on CD / DVD, acknowledge etc.).

20. Image Storage and documentation: The systems shall have to be connected with dry chemistry camera. It should be possible print images on 8x10 and 10x12 inch size of films. The unit should be connected with institute RIS-PACS network in ready to use configuration.
21. On line UPS for 30 minutes back up to support all functions of the unit.

B. After Sales and Warranty:

1. Comprehensive onsite warranty for five years from the date of issue of installation certificate by the hospital should be provided. The warranty shall cover main unit including all transducers, accessories, batteries, plastic or rubber parts, third party items and everything supplied as part of this tender.
2. Five years comprehensive maintenance contract covering everything as warranty should be quoted. Breakup of yearly cost of CMC from 6th to 10th year should be mentioned in price bid.
3. After sales service: a factory trained service engineer should be available in Delhi. Service call must be attended within 12 hours.
4. Uptime guarantee: 95% uptime guarantee of the facility should be provided. If the downtime of the facility (entire facility or part of it) exceeds 5%, penalty in the form of extension of warranty for the period double of the downtime period will be imposed.

C. Important Instructions:

1. All information in the tender document must be supported by original product data sheets or should be certified by the principals. Photocopies or emails shall not be accepted.
2. All information asked for must be provided in the compliance statement under the headings given above
3. There should be at least three working installations of the quoted models in the county with 'satisfactory service certificate' from the users should be submitted.
4. If the unit is being quoted by Indian agency which is not a direct subsidiary of the principals; an undertaking from the principals must be provided that in case of discontinuation or change of the agency, the principal will arrange for onsite maintenance of the unit and abide by all terms and conditions of the tender.

Item No. 8 (Rfx/Event number 3000002588)

Ultrasound Unit – Portable

State-of-the-art, fully digital, USFDA approved hand held portable color Doppler ultrasound machine to be quoted. The system is intended to be used in radiology department, wards and ICU and operation theatre. It should have whole body applications which include abdominal, gynecological, peripheral vascular, basic cardiology, musculoskeletal, nerves and small parts scanning along with image guided biopsy facility.

A. The system should have the following essential features:

1. The system should be capable of high resolution real time B mode, color Doppler, power Doppler and pulsed Doppler scanning modes.
2. Display screen should be of at least 10 inches in size with high resolution color LCD/TFT.
3. The system should have 256 gray shades or more.
4. The system should have imaging depth 20 cm or more.
5. The system should have dynamic range 150 dB or more.
6. The system should have Tissue Harmonic imaging facility.
7. The system should have Pan Zoom.
8. Offered model should have Speckle Reduction Techniques. Please specify methods used in offered model.
9. The system should have user selectable facility of enhanced needle visualization software for linear and convex transducers
10. The system should be DICOM 3.O ready (like send, receive, print) for connectivity to RIS/PACS. Wireless data transfer should be possible.
11. The system should have Real-time Compound Imaging for achieving excellent image quality.
12. The system should have Cine loop facility; both frame by frame and in cine mode.
13. Computer package for measurement and calculation provision for distance, area, volume, circumference and Doppler flowmetry.
14. The system should have Auto Optimization features for ease of use and Automatic Quantification of Doppler parameters.
15. The system should have an easy to use backlit keyboard and control panel with facility to disinfect the control panel and keyboard using liquid disinfectant solutions so as to avoid infections in wards and ICUs
16. Transducers should be of broad band technology. These should be easy to disinfect with short acting disinfectant. Explicitly mention disinfectant(s) that can be used.

17. **Following transducers to be offered with the system :**
    (i) Convex Array Transducer with frequency range of 3-5 MHz or wider range.
    (ii) Linear Array Transducer with frequency range of 6-13 MHz or wider range.
    (iii) CW 2.5 MHz probe with basic cardiology package
    (iv) Endocavitary Transducer with frequency range of 5-8 MHz or wider range, with add-on biopsy guide needle holder.
    (v) Small footprint (15mm or less) transducer for pediatric applications
18. Unit weight should not exceed 5 Kg (with battery but without trolley).

19. Boot time (from power off state to ready to scan) should be 30 seconds or less.
20. The backup of battery should 60 minutes or more of continuous operation. Additional battery should be provided.
21. The unit and transducers should be sturdy enough to withstand accidental hit or fall in normal working conditions and hand held transportation. A separate certificate in this from principles is required.
22. Specify image storage capacity.
23. The system should have facility for copying images to a USB drive.
24. The system should be able to connect to a multi-port DICOM compatible dry chemistry camera without need for additional software.
25. The system should operate on 220 V, 50 Hz AC.

26. Accessories :

(a) Detachable, imported, molded, OEM Trolley/cart to mount transducers and machine.

(b) When the machine is mounted on trolley, facility for connecting three transducers in standby mode with easy selection of active transducer should be possible.

27. **Guarantee / Warranty**: Comprehensive, on-site Warranty for 5 years covering main unit, transducers and all accessories supplied should be quoted.
28. **CMC rates** for subsequent 5 years (6^{th}-10^{th} year) including labour cost and cost of spare parts for whole equipment including all transducers and accessories should be quoted.
29. A free, comprehensive software upgrade (compatible with the existing platform) guarantee for 10 years must be provided.

B. Important Instructions:

a. All information in the tender document must be supported by original product data sheets or should be certified by the principals. Computer generated data sheets, photocopies or email printouts shall not be accepted.
b. All information asked for must be provided in the compliance statement under the headings given above.
c. Supplier must ensure the availability of 'expertise service' and maintenance in New Delhi. Spare parts and repair for the next 10 years must be ensured.
d. Application Specialist should be available for on-site training.
e. At least three working installations of quoted model should be present in India. At least three satisfactory performance certificates from these users should be provided.
f. The Principals shall give an unqualified commitment that warranty and maintenance of the equipment shall in no way be affected by any corporate changes such as change in the authorised agent or any merger, transfer (in part or full), amalgamation or separation of the company or any of its constituents etc. for that matter.

Item No. 9 (Rfx/Event number 3000002589)

Radio-Frequency Ablation System

System should include US FDA approved Radio Frequency ablation with following required specifications and accessories.

1. System should include a Radio Frequency generator for tumor ablation systems with required Accessories.

1.1. The system should be usable for ablation in liver, lung, bone, kidney, thyroid, prostate etc.
1.2. The system should be capable of delivering a frequency of at least 450 KHz The system should be capable of generating power of at least 250 W
1.3. The system should be capable of generating temperature of at least 100 deg C.
1.4. The system should be able to support electrode lengths of upto 25 cm (i.e., 10 cm, 15 cm, and 20 cm).
1.5. The ablation size (ex-vivo) should be at least 5 cm.
1.6. The system should have needle track ablation facility.
1.7. The system should be compatible to use with Ultrasound, CT, MRI, laparoscopy and open surgery.
1.8. The system should have facility for real-time temperature and/or impedance monitoring
1.9. Probe cooling system should be available, whenever feasible.
1.10. There should be optimal display of target temperature, power setting, timer, delivered power, time that RF is delivered, efficiency, temperatures for all device and auxiliary thermocouples.
1.11. There should be a foot switch for ablation control to enable hands free use.
1.12. The system should be supplied with 20 electrodes sets (probe with other essential consumables) of at variable lengths for ablation size at least 5 cm in the liver and lung. 10 of these to be supplied immediately and 10 after one year. Unit rate to be quoted and frozen for next five years.

2. Impedance Monitor:

2.1. System should have Display to reads biological Impedance in all different modes throughout the procedure
2.2. System should have Impedance Range of 60 - 900 Ohm
2.3. System should have self –Test with Internal 500 Ohms test resistor

3. Continuous RF Lesion Mode

3.1. System should have adequate RF Power as per standard guidelines for various tumour ablation
3.2. System should have at least 450 kHz frequency
3.3. System should have ability to display voltage (RMS), current (RMS), power, impedance and/or dynamic graphic display with temperature in degrees C.
3.4. System should have selectable timer which should automatically start when appropriate temperature is reached.

3.5. System should have Auto mode with ability to press to Auto start button to ramp up the temperature until set temperature is reached.
3.6. System should have Maximum Temperature settings and ability to select at least 100° C. System should have ability to adjust RF power automatically and not to exceed temperature.

4. Safety Features

4.1. System should have Sterile Probe Test system with ability able to checks integrity of probe Intra-operatively.
4.2. System should have Maximum Temperature with ability to limit lesion Temperature upto 100 degrees C, and system's hardware should have ability to lock-out if temperature exceeds a prefixed value.
4.3. System should have Thermocouple with ability to lockout when faulty Thermocouple Electrode is connected to one of the sockets
4.4. System should have Hardware and software with ability lockout if voltage / current control are not initially set to Zero in all RF modes.
4.5. System should have ability to show message for broken thermocouple.
4.6. The system should have ability to display all alert conditions and error messages.

5. Data Management

5.1. Patient Details: System should have ability to enter Patients details into internal memory.
5.2. USB Connection: System should have facility to use an USB Memory Stick to export the procedures details from the machine to a computer.
5.3. A Laptop preloaded with compatible software to record ablation cycle.

6. Trolley for mounting of RF unit to be provided.

7. Warranty/After Sale Service

7.1. Five year comprehensive onsite warranty of entire system (Spares and labour) including all accessories and items supplied along with maintenance. If vendor is not a direct subsidiary of OEM (principles), then such warranty must be vetted by OEM.
7.2. This will be followed by 5 years comprehensive AMC covering everything as warranty.
7.3. A free software upgrade (compatible with the supplied platform) guarantee form OEM for 10 years.
7.4. 95% uptime guarantee should be given (365 days on 24x7 basis). In case down time exceeds 5%, penalty in the form of extended warrantee, double the number of days for which the equipment goes out of service, will be applied.
7.5. Supplier must ensure the availability of 'expertise service' and maintenance in New Delhi. Spare parts and repair for the next 10 years must be ensured by OEM.
7.6. Price of consumable probes to be quoted separately and frozen for 5 years.
7.7. Future modifications in probes/ technology should be made compatible with the offered system.

8. Instructions

8.1. The system should be state of art and latest model.

8.2. There should be at least five installations of the quoted model in India. Satisfactory performance certificate by users on their letterhead must be attached.
8.3. All information asked for must be provided in the compliance statement under the headings given above.
8.4. All information in the tender document must be supported by original product data sheets or should be certified by the principals. Computer generated data sheets, photocopies or email printouts shall not be accepted.
8.5. If the unit is being quoted by Indian agency which is not a direct subsidiary of the principals; an undertaking from the principals must be provided that in case of discontinuation or change of the agency, merger, acquisition or any corporate rearrangement, the principal will arrange for onsite maintenance of the unit and abide by all terms and conditions of the tender.
8.6. The vendor must inspect the proposed site and space for installation and ensure that it is adequate for satisfactory installation and placement of all components without any functional compromise. A site map showing this to be attached with technical bid.
8.7. Training at functional site to be provided to doctors.

Note: All the participating firms should quote the price of all required spares and consumables for upkeep & smooth functioning of the equipment for a period of 5 years. **The quoted price should include RF machine and the above said numbers of RF probes.** In case of non-compliance, the firm has to replace the spares free of cost till the warranty period.

9. Warranty

9.1. The tenderers must quote for five years comprehensive warranty (including all spares and labour) from the date of completion of the satisfactory installation.
9.2. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected.
9.3. The bidders must submit their quote also (rates) for subsequent five years comprehensive AMC (including all spares and labour) in their price bid, failure to comply this condition will entail the rejection of the bids.
9.4. All the hardware & software upgradation will be provided free of cost upto 5 years.

Item No. 10 (Rfx/Event number 3000002594)

HDR Brachytherapy System

Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	High Dose-Rate Brachytherapy Remote After-Loading System
	Sealed tenders (sealed separately as the "Technical Bid & the Price Bid-in duplicate) are invited directly from the manufacturers/principles for the supply of a latest technology High Dose-Rate (HDR) Brachytherapy Remote After-Loading System. The High Dose-Rate (HDR) Brachytherapy Remote After-Loading System includes Treatment Unit, Control Unit, Treatment Planning System and applicators and other required accessories for clinical application. The HDR system should be capable for the treatment of intracavitary, intraluminal, interstitial and surface mould brachytherapy. The offer system should be of the latest model. The vendor should provide commitment to be able to provide service and support for the offered new unit for atleast 10 years from the date of installation.
	Technical Specification
1	**1. Brachytherapy Treatment Unit:**
	1.1 The system should be capable for the treatment of intracavitary, intraluminal, interstitial and surface mould brachytherapy
	1.2 The HDR system should be latest microprocessor and PC controlled and it must have latest hardware and advanced software.
	1.3 The system should have minimum 20 channels or more for all types of brachytherapy treatments.
	1.4 The system should be on wheels for easy mobility in the treatment area and provided with storage safe of lead/ tungsten alloy to guarantee and compatible with guidelines of international safety regulations especially AERB.
	1.5 Specify the in-built radiation safety measures provided in the unit including power failure, emergencies, channels indexer, activity of the source and dose rate, verification system for channel number and connectivity of the applicator etc.
	1.6 Specify the surface dose rate of the system source container when full strength of the source is loaded.
	1.7 The treatment unit should have an in-built integrated radiation detector to check the safe return of the source (GM Type tube).
	1.8 The source must be retractable and reach in the safe position in the events of an emergency/ power failure etc specifies the source retraction methods.
	1.9 Refurnished / reconditioned unit should not be offered. The vender shall quote month and year of the fabrication of the unit and provide the certificate of the same of its being original.
	1.10 The Source head should have adequate shielding and its height should be adjustable.
	1.11 The System should have the dummy cable to check the treatment parameters prior to treatment.
2	**2. Radioactive Source**
	2.1 The system should use radioactive sources of Ir-192
	2.2 source strength should be of at least 10Ci Ir-192
	2.2 Please specify the activity, physical characteristics and dimensions of the source being supplied with the unit. Specify the number of source offered and usability period of the each source quoted. Please specify the following:

Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	(i) Specify the maximum source extension
	(ii) Specify the dwell position per catheter
	(iii) Specify the maximum dwell time per position in the catheter
	(iv) Specify the maximum treatable length in cm
	(v) Specify the accuracy in position in mm.
	(vi) Specify the active diameter and length of the source.
	(vii) Specify the mode of source movement in each channel of the unit
	(viii) Source cable must be able to pass through catheters of curvature 1.5 cm or less
3	**3. Treatment Control Console:**
	3.1 Stand alone and independent PC based control unit should be provided with flat panel 21" or larger plasma color monitor, keyboard, mouse build in audio card, network card, backup media, printer etc and direct link with 3D-TPS to be supplied.
	3.2 It should have protection circuit inbuilt to prevent treatment without proper applicator connection, door closing and proper index locking.
	3.3 It should have all self-testing provision necessary for the treatment.
	3.4 Control unit software should run on window application.
	3.5 Access must be limited to authorized users with password protection
	3.6 The treatment times must be automatically corrected for the decay of the radioactive source
	3.7 There should be higher dwell position for the source in each channel
	3.8 On-line extensive display of status codes with an indication of the action required
	3.9 Large patient's database should be provided with a backup option to an external storage device
	3.10 The system should provide real-time information during treatment.
	3.11 Provision for checking of complete operation of the system prior to actual treatment including electronic and radiation safety checks should be available.
4	**4. Brachytherapy Treatment Planning System (TPS)**
	4.1 A state-of-the-art brachytherapy planning system capable for performing conventional 2D and advanced 3D-treatment planning with dose-volume histogram analysis methods and different methods of optimization of the treatment plan and also inverse planning modules for planning of all treatment techniques like intracavitary, interstitial, intraluminal, and surface mould.
	4.2 System should have input capability of receiving patient information i.e patient data through scanner, digitizer, and directly from CT, MRI, X-ray unit through DICOM 3.0/RT compatible interface.
	4.3 The system should be capable of doing multimodality image registration and also should have the features of auto-contouring of the organs and applicator etc.
	4.4 The 3D planning and viewing of dose distribution in coronal and sagital cuts and any other possible cuts should be provided.
	4.5 The system should include the plan library, source and applicator library, optimization and isodose sharper tools and reporting tools etc. specify the features.
	4.6 The treatment times must be automatically corrected for the decay of the radioactive source.

Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	4.7 The system should be cabable of summation of brachytherapy and external beam dose distribution and 3D viewing and should be quoted as optional item and price must be quoted separately.
	4.8 The Networking (on-line) between HDR treatment unit and TPS should be provided and it should be connected with CT machine and simulator and other imaging modalities.
	4.9 Hardware: Treatment planning system should have a latest computer with high speed with most modern graphics workstation, fast processor with RAM of maximum latest availability and should have a Hard Disk with large storing capacity of maximum available memory, Key Board, Mouse of latest configuration.
	4.10 The system should have at least 21" TFT LCD Screen with high resolution for good visualization
	4.11. For patient data input, high resolution FILM SCANNER should be provided.
	4.12 One color printer A3/A4 size for printing the treatment planning and plotting of isodose should be provided.
	4.13. The vendor should provide advanced model-based dose calculation algorithm for inhomogeneity correction in dose calculation as per the AAPM TG-186 recommendations.
5	**5. Applicators for HDR Unit**
	5.1 Supply the standard accessories for the application of intracavitary, intraluminal, interstitial brachytherapy of cervix, vagina, rectum and head and neck esophagus and bronchial, biliary, breast and prostate applications. Applicators to be provided for;
	5.2 Gynaecological applicator Fletcher-Suit type – 6 sets
	5.3 Gynaecological application templates -2 set each (2 sets Syed-Neblet and 2 Sets of MUPIT with all required accessories)
	5.4 CT / MRI compatible gynaecological Fletcher-Suit type applicators – 2 sets
	5.5 Vaginal / Rectal applicator – 6 sets
	5.6 Esophagus applicator – 6 sets
	5.7 Nasopharyngeal applicator – 2 sets
	5.8 Intrabronchial Applicators (reusable)– 4 sets
	5.9 Surface mould – 5 sets for IOHDR applications (Freiberg applicators)
	5.10 All kinds of x-ray dummy markers (two sets) for the applicators supplied (wherever relevant). Interstitial implant plastic tubes – total 1000 numbers and Interstitial implant plastic needles- total 50 numbers and interstitial implant stainless steel applicators-20 numbers.
	5.11. Vienna Applicator or its equivalent for combined interstitial and intracavitary application-2 sets
	5.12 Provide the catalogues of the all the applicators. All the guide-tubes must be functional for 5 years.
	5.13. Vendor should provide one extra treatment control console system which will be compatible with offered HDR treatment machine for the purpose of performing intra-operative HDR brachytherapy treatment.
	5.14. Vendor should quote treatment planning system for intraoperative real-time ultrasound guided prostate brachytherapy treatment including inverse planning capability.

Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	5.15. Vendor should quote an ultrasound system for performing for intraoperative real-time ultrasound guided prostate brachytherapy treatment along with compatible probes.(Probes for Prostrate , breast and abdomen)
	5.16. Vendor should provide extra two sets of transfer tubes for Gynecological applicator Fletcher-Suit type.
6	**6. Radiation Dosimetric, Quality Assurance (QA) and Safety System/Tools**
	6.1 Quote necessary QA tools and radiation monitoring and measuring instrument being supplied with the unit.
	6.2 Emergency container/ source container as per AERB norms
	6.3 Brachy treatment table with all accessories (Motorized/Hydraulic locking clamp mounting and Lithotomy position support)
	6.4 Source position simulator and source check ruler
	6.5 Two online UPS with 30 min backup for total system (HDR machine and TPS)
	6.6 Closed Circuit TV systems along with standby camera
	6.7 X-ray reconstruction jig.
	6.8 X-ray marker wire for all applicators.
	6.9 Well-type chamber with calibration certificate should be provided.
	6.10. Vendor should provide the Last-man-out switch (LMOS) for offered HDR machine as acceptable by AERB
	6.11. **Gamma Zone (Area) Monitors (one number):** Gamma-Zone (Area) Monitor is used for radiation area monitoring around the interior walls of brachytherapy equipment. Gamma-Zone (Area) Monitors shall be able to measure and monitor x-rays and gamma-rays (dose/dose rates) of varying energy levels in minimum possible timeframe. System should have capability of warning alarm condition whenever the emergency exposure is in the treatment room. The measurement range: 0.1mR/h to 100mR/h and display units: µR/h, mR/h, µSv/h, mSv/h. The detector shall be of GM based. Specify the details of the offer system.
	6.12 Two-way communication between Patient & Console should be provided as standard.
7	**7. Equipment Warranty and Service:**
	7.1. The vendor must quote for five years comprehensive warranty (including all spares and labour from the date of completion of the satisfactory installation. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. The vendors must submit their quote (Rate) also for subsequent five years comprehensive AMC (including all Spares and labor) in the price bid, failure to comply this condition will entail the rejection of the bids.
	7.2. Five years warranty to be commenced from first patient treated as per AERB norms.
	7.3 CMC year-wise for quoted machines, UPS, Battery and other accessories for next 5 years after warranty
	7.4 Spare parts should be available for minimum of 10 years.
	7.5 Source: (i) minimum 10 sources (Ir-192 source) should be offered for 5 years period (one source in every four months interval or as and when required) to maintain HDR treatment delivery. **The 10 sources' cost** should be quoted seperately and this will be considered for L1 calculation. Loading of new source and unloading of the decayed source, source transportation, source export and disposal will be part of the offer.
	7.6 Quote the rates of consumables recommended valid for 5 years block.

Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	7.7 Factory trained service engineer/Applications specialists should be available in NCI Jhajjar to look after the installation and maintainace of the system without patient treatment interruption.
8	**Staff Training and Manual/documentations**
	8.1 Training should be provided to one Radiation Oncologist and one Medical Physicist for one week in the centre of excellence in abroad and also on-site training of two week to staff of department.
	8.2 User / Technical / Maintenance manuals to be supplied in English
	8.3 Certificate of calibration and service inspection should be provided.
9	**National Regulatory Body and Radiation Safety and Protection Requirement:**
	The vendors should visit the site and user department to get the Plan Layout and should facilitate and coordinate with user department in communicating with AERB in providing all required information pertaining to radiation safety compliance of the concerned equipment till the clinical commissioing process of first patient treatment commencement.
	Scope of Work for Site Modification:
	General Requirements
	1. The Supplier should inspect the proposed site offered by the Consignee, wherein the HDR BRACHYTHERAPY SYSTEM has to be installed. They are required to submit the plan for the project. The scope of work includes complete Electrical, Wall finishing, Air-conditioning, Flooring for the proper functioning of the HDR BRACHYTHERAPY SYSTEM. The supplier shall assist the user by providing necessary documentations/technical data for regulatory clearances and approvals from AERB. (The site plan is attached herewith as Annexure I).
	2. The cost of the site modification work should be quoted separately and this cost will be considered for L1 calculation.
	3. Vendor will have to quote Unit Rates of the following components of Site Modification
	work.
	i. Electrical work
	ii. Air conditioning (HVAC)
	iii. Flooring
	iv. Wall Finishing & Painting
	v. False Ceiling
	4. The payment for site modification work shall be based on the Unit Price quoted by the supplier applied to the actual measurement of Site Modification work executed at the supplier at the site.
	5. Bidder should clearly mention break up price of each component of Site Modification work separately.
	6. The system should be installed and handed over in working condition with all necessary electrical, wall finishing, air conditioning, flooring and plumbing work undertaken by the vendor in consultation with the user dept.
	7. Rate quoted for Site modification work, Furniture like desks, chairs, shelves etc; and the price quoted for 7 TR HVAC is included for L1 calculation of the bids.
	8. The HDR BRACHYTHERAPY CENTRE shall consist of the following rooms:
	a HDR BRACHYTHERAPY Treatment Room
	b Console room

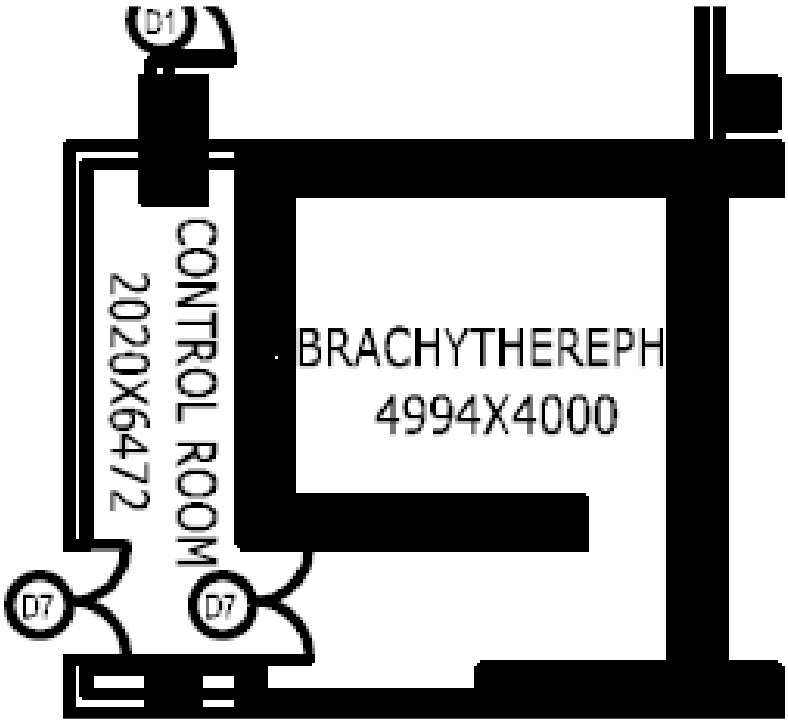
Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	9. The supplier shall be required to specify the total load requirements for the HDR BRACHYTHERAPY centre including the load of air conditioning, room lighting and for the accessories if any. The supply line will be provided by the Institute up to one point within the HDR BRACHYTHERAPY centre. The mains panel and distribution panel for HDR BRACHYTHERAPY SYSTEM, HVAC, and LIGHTING should be provided by the supplier. Few lights in HDR BRACHYTHERAPY SYSTEM, CONSOLE ROOMS, UPS ROOM shall be connected to the UPS to provide emergency lighting.
	10. The bidder may quote the unit rates of any other site modification work activity which is not mentioned in the list below.
	THE ELECTRICAL WORKs:
	1. 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.
	2. All necessary cabling like LAN, DICOM & PACS for data interface between TPS and HDR BRACHYTHERAPY SYSTEM; CT-SIMULATOR & HDR BRACHYTHERAPY SYSTEM should be provided with adequate number of terminals.
	3. All the internal wiring including that of telephone, LAN, DICOM & PACS etc) will be concealed variety.
	4. Earthing: Double-Earthing shall be provided with copper plate for the HDR BRACHYTHERAPY SYSTEM and all accessories like UPS. The earthing for the AC should also be done by the suppliers. The earthing cable/wire shall be routed end-to-end through an insulated conduit.
	5. Switches light and power points should be of modular type and of standard make as listed below.
	6. General lights – Ceiling mounted LED lighting panels, recessed 600 x 600mm, should be provided. Light dimming facility should be provided wherever it is necessary.
	7. All wires used must be FRLS (Fire Retardant with low smoke) type only.
	AIR CONDITIONING WORKs:
	1. The area marked for Site Modification work needs to be air-conditioned. Package Air Conditioners may be used according to room requirement and suitability. Humidity control should be provided to effectively eliminate moisture condensation on the equipment. The Air conditioning system should be designed with standby unit(s) to provide uniform air-conditioning 24 x 7.
	2. The outdoor units of AC should have grill coverings to prevent theft and damage.
	3. Stand-alone Room Dehumidifiers of adequate capacity for HDR BRACHYTHERAPY SYSTEM Room, Console Room and TPS Room to be provided to ensure condensation-free atmosphere for the high value equipment.
	Environment specifications:
	Humidity range: Relative humidity 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.
	4. Temperature ranges: 22 ± 2° C in all areas throughout the year, except equipment room which shall be as per requirement of the equipment.
	5. Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the supplier.

Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	FLOORING WORKs:
	1. "600x600 mm vitrified tiles with 100mm matching tile skirting in HDR BRACHYTHERAPY SYSTEM Room & Console Room.
	Note: 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 institute 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 institute. 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."
	2. Floor levelling if required to be done by supplier. All installation related floor modification non-structural) like Turntable pit, trench etc to be done by supplier.
	4. The HDR BRACHYTHERAPY SYSTEM room, Console Room will be made rodent /pest proof.
	5. Mode of measurement (finished surface area of the tiles shall be measured and paid. Rate shall be inclusive of providing and laying leveling course, PVC spacers, providing and applying epoxy grout and no additional payment shall be made for wastage.
	WALL FINISHING & PAINTING
	1. Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in all areas not covered by wall tiles. Colour to be approved by institute.
	2. Wall Tiles-High quality density Vitrified Tiles clad on the side walls up to a uniform height of 1200 mm in all rooms; except UPS & equipment rooms. Colour to be approved by institute.
	Note: Providing all tools, tackles, materials, manpower for applying plastic enamel paint over
	3. Coats of wall putty including primer in all areas, of approved brand and manufacture and approved shade finished with roller to wall & ceilings surfaces, in 2 coats over a coat of approved quality primer on the plastered/POP surface, POP board/Gypsum board surfaces including scaffolding, preparation of surface, sanding, light sanding, work platform, painting equipment/apparatus etc. required to complete interior grade finish etc. at all heights & levels complete as per drawings & Specifications.
	FALSE CEILING
	1. Acoustical tile for ceiling with light weight insulating material of high quality supported on grid or finished seamless with support above ceiling. To be finished with white paint or powder coated with white paint, if metallic. The false ceiling panels should be of reputed brands.
	MISCELLANEOUS:
	1. The HDR BRACHYTHERAPY SYSTEM room shall be provided with wall-mounted storage cupboards within HDR BRACHYTHERAPY SYSTEM room; to store: Dosimetry & QA Items, HDR BRACHYTHERAPY SYSTEM accessories.
	2. Sufficient number of Open Racks of high Quality vendors should be provided to house the immobilization materials; within HDR BRACHYTHERAPY SYSTEM room
	3. TPS room should be provided with LED X-ray film viewer with adjustable brightness; capable of holding 3 films of 14"x17" size-2 nos.

Sl. No.	Technical Specification of 'HDR Brachytherapy System'
	4. The CONSOLE room shall be provided with Wall mounted Storage cupboards with MDF laminate shutters; to be fixed on the wall above the workstation (approx 1800 mm length; 750 mm height; 300 mm depth).
	FURNITURE:
	1. Revolving chairs height adjustable, medium-back with hand-rest for Control room, TPS room - 12 Nos.
	2. "Workstation/Tables for Console room & TPS room:
	The Console room and TPS room should be provided with suitable workstations(s) of reputed brand, to accommodate the various Terminals in Console Room, TPS Room. The Workstation shall be providing with enough power sockets, LAN sockets etc. to enable smooth functioning of the HDR BRACHYTHERAPY SYSTEM and TPS."
	3. Bookshelves: Four-door bookcase with glass doors, height approx. 1700 mm; to store manuals; CD/DVDs, spares etc-4 Nos.
	4. Shoes Rack - 2 Nos.
	LIST OF ITEMS AND SUGGESTED MANUFACTURERS.
	A ELECTRICAL
	1. CABLES - Gloster, Universal, Polycab
	2. WIRES - Finolex, Havells, V-Guard, RR Kabel, Gloster, Anchor
	3. SWITCHES - Legrand, L&T, Crabtree , Roma, MK, Crabtree
	4. DISTRIBUTION BOX , MCB - Legrand, L&T, Siemens, Havels
	5. LIGHT FITTINGS - Philips / Crompton / Kesselec-Schreder / Wipro.
	B AIR CONDITIONING -Daikin, Hitachi, Blue Star, Voltas
	C FURNITURE -Hermen Miller, Godrej, Featherlite, Wipro
	D FALSE CEILING - Armstrong, Saint Gobain, Luxalon.

Annexure-1: AERB approved Site and Facility Layout plan

SITE PLAN of HDR BRACHYTHERAPY



B. GENERAL POINTS:

1. Warranty:

a) The bidders must quote for Five years Comprehensive Warranty as per Conditions of Contract of the bidding document for complete equipment (Including all spares, labour and third party items) and Turnkey Work (if required) from the date of satisfactory installation, commissioning, trial run, handing over and acceptance of the goods by the User Department.

b) The warranty charges shall not be quoted separately.

c) All software updates should be provided free of cost during Comprehensive Warranty period.

d) During the Warranty period, desired Uptime of 95% of 365/366 (Leap Year) days (24 hrs), if downtime more than 5%, the warranty period/CAMC period will be extended by double the downtime period. Complaints should be attended properly, maximum within 8 hrs.

2. After Sales Service:

After sales service centre should be available at the city of Institution on 24 (hrs) X 7 (days) X 365 (days) basis. Complaints should be attended properly, maximum within 8 hrs. The service should be provided directly by Bidder/Indian Agent. Undertaking by the Principals in the "Manufacturer Authorisation Form" that the spares for the equipment shall be available for at least 10 years from the date of supply of equipment.

3. Training:

On Site training to Doctors/ Technicians/ staff is to be provided by Principal/Indian Agents (if they have the requisite know-how) for operation and maintenance of the equipment to the satisfaction of the User Department.

4. Comprehensive Annual Maintenance Contract (CAMC) of subject equipment:

a) The cost of Comprehensive Annual Maintenance Contract (CAMC) which shall include preventive maintenance including testing & calibration as per technical/service/ operational manual of the manufacturer, labour and all spares, after satisfactory completion of Warranty period may be quoted for next five years on yearly basis for complete equipment including third party items as per Price Schedule.

b) The cost of CAMC may be quoted along with GST applicable on the date of Bid Opening.

c) Cost of CAMC will be added for Ranking/Evaluation purpose on NPB basis.

d) Before commencement of CAMC period, the suppliers shall furnish a Performance Bank Guarantee for 2.5% of the cost of the equipment (as per Performa given in bidding document) valid till 3 months extra after expiry of entire CAMC period. The Performance Bank Guarantee for CAMC will be applicable in case of equipment cost is more than Rs.10 lakh.

e) All software updates should be provided free of cost during CAMC. In case of failure by the supplier, the Bank Guarantee of CAMC will be forfeited.

f) The payment of CAMC will be made on half yearly basis after satisfactory completion of said period duly certified by end User.

g) During the CAMC period, desired Uptime of 95% of 365/366 (Leap Year) days (24 hrs), if downtime more than 5%, the warranty period/CAMC period will be extended by double the downtime period. Complaints should be attended properly, maximum within 8 hrs.

5. Uptime & Downtime Penalty Clause:

a) The firm should provide uptime guarantee of 95% during warranty period and CAMC period.

b) During the Warranty period and CAMC period, desired Uptime of 95% of 365/366 (Leap Year) days (24 hrs), if downtime more than 5%, the warranty period/CAMC period will be extended by double the downtime period. Complaints should be attended properly, maximum within 8 hrs.

6. Turnkey Work:

Turnkey Work is to be indicated in the Technical Specification wherever required. The Bidder shall examine the existing site where the equipment is to be installed, in consultation with User Department. The Bidders are required to quote separately for the equipment and Turnkey Work as per Price Schedule. The Turnkey Work costs may be quoted in Indian Rupee and the same will be added for Ranking Purpose.

The Turnkey Work should completely comply with AERB requirement, wherever required.

SECTION - VIII

QUALIFICATION CRITERIA

1. The bidders must be a manufacturer. In case the manufacturer does not quote directly, they may authorise their authorized agent as per proforma of "Manufacturer Authorization Form" as given in the bidding document to quote and enter into a contractual obligation.

2. The Manufacturer should have supplied and installed in last Five years from the date of Bid Opening, similar equipment meeting major parameters of technical specification which is functioning satisfactorily.

3. In support of 2, the Bidder shall furnish Performance statement in the enclosed Proforma 'A'.

   The Bidder shall furnish Satisfactory Performance Certificate in respect of above, duly translated in English and duly signed alongwith the bid.

4. The Purchaser reserves the right to ask for a free demonstration of the quoted equipment after giving reasonable time to the bidder at a pre-determined place acceptable to the purchaser or at site (in case of non portable and heavy equipment) for technical acceptability as per the bidding document specifications, before the opening of the Price Bid.

PROFORMA 'A'

PROFORMA FOR PERFORMANCE STATEMENT
(For the period of last five/seven years)

TE No. : _____

Date of Bid Opening : _____

Name and address of the Bidder : _____

Name and address of the Manufacturer : _____

Order placed by (full address)	Order no. and date ##	Description (Model no.) and quantity	Value of order (Rs.)	Consignee	Date of Delivery Period			Have the goods been functioning satisfactorily (attach documentary proof)**
					Contract	Actual	Reasons for Delay if Any	
1	2	3	4	5	6	7	8	9

We hereby certify that the details of all orders received in last 5 years of quoted equipment (including AIIMS, PGIMER, JIPMER, RML Hospital, Safdarjung Hospital, Institute of National importance) has been furnished. We hereby further certify that if at any time, information furnished by us is proved to be false or incorrect; we are liable for any action as deemed fit by the purchaser in addition to forfeiture of the Bid Security.

Name_____

Business Address_____

Signature of Bidder_____

Place: _____ Seal of the Bidder_____

** The documentary proof will be a latest certificate from the consignee/end user with cross-reference of order no. and date

The bidders are requested to submit the purchase order copies for the specific model quoted along with the Techno-commercial Bid.

SECTION – IX

BID FORM

To
CEO
HLL Infra Tech Services Limited
B-14A, Sector-62
Noida – 201 307

Ref. Your TE No. _____due for opening on _____

We, the undersigned have examined the above mentioned bidding document, including amendment/corrigendum (*if any*), the receipt of which is hereby confirmed. We now offer to supply and deliver _____ in conformity with your above referred document for the sum as shown in the Price Schedules attached herewith and made part of this bid. If our bid is accepted, we undertake to supply the goods and perform the services as mentioned in the bidding documents, in accordance with the delivery schedule specified in the List of Requirements.

We further confirm that, if our bid is accepted, we shall provide you with a performance security of required amount in an acceptable form in terms of "General Conditions Contract", Section - IV read with modification, if any "Special Conditions of Contract", in Section - V, for due performance of the contract.

We agree to keep our bid valid for acceptance as required in the "General Instruction to Bidders", read with modification, if any in "Special Instructions to Bidders", Section – III or for subsequently extended period, if any, agreed to by us. We also accordingly confirm to abide by this bid up to the aforesaid period and this bid may be accepted any time before the expiry of the aforesaid period. We further confirm that, until a formal contract is executed, this bid read with your written acceptance thereof within the aforesaid period shall constitute a binding contract between us.

We further understand that you are not bound to accept the lowest or any bid you may receive against your above-referred advertised tender enquiry.

We confirm that we do not stand deregistered/banned/blacklisted by any Central Govt. Ministries/Departments/Hospitals/Institutes.

We confirm that we fully agree to the terms and conditions specified in above mentioned bidding document, including amendment/ corrigendum if any**.**

"We hereby certify that if at any time, information furnished by us is proved to be false or incorrect, we are liable for any action as deemed fit by the purchaser in addition to forfeiture of the bid security."

Name_____

Business Address_____

Place: _____ Signature of Bidder_____

Date: _____ Seal of the Bidder_____

SECTION - X

PRICE SCHEDULE

(The below formats are for example. However, actual price format is given in the e tender portal for bidding)

A) PRICE SCHEDULE FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN LOCATED WITHIN INDIA

1	2	3	4	5					6
				Price per unit (Rs.)					
Item Sr. No./ RFx no.	Brief Description of Goods	Country of Origin	Quantity (Nos.)	Ex - factory/ Ex -warehouse /Ex-showroom /Off - the shelf including packing charges (a)	GST (if any) Value (%age] (b)	Inland Transportation, Insurance for a period including 3 months beyond date of delivery, loading/ unloading and Incidental costs till consignee's site (c)	Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site (d)	Unit Price (at Consignee Site) basis (e) =a+b+c+d	Total Price (at Consignee Site) basis (Rs.) 4 x 5(e)

Total Bid price in Rupees: _____ (in figures)

_____ (in words)

Note: -

1. If there is a discrepancy in prices the same will be evaluated as per clause 29 of GIB.
2. The charges for Annual CAMC after warranty shall be quoted separately as per Section-X – Price Schedule C

Name_____

Business Address_____

Place: _____

Signature of Bidder_____

Date: _____

Seal of the Bidder_____

B) PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD

1	2	3	4	5							6
				Price per unit (Currency)							Total price on CIP Named Port of Destination + Insurance (local transportation and storage)
Item Sr. No./ RFx no.	Brief Description of Goods	Country of Origin	Qty (Nos.)	FOB price at port of Lading /FCA price at airport (a)	Indian Agency Commission (% of FOB)**	Net FOB	Freight &Insurance (port of loading to port of entry) and other Incidental costs (b)	Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site (c)	Extended Insurance (local transportation and storage) from port of entry to the consignee site for a period including 3 months beyond date of delivery (d)	Unit Price on CIP Named Port of Destination + Extended Insurance (local transportation and storage) (e) = a+b+c+d	4X 5 (e)

** To be paid in Indian Currency (Rs.)

Total Bid price in _____ (currency to be mentioned) _____ (in figures)
_____ (in words)

Note: -

1. If there is a discrepancy in prices the same will be evaluated as per clause 29 of GIB.
2. The charges for Annual CMC after warranty shall be quoted separately as per Section – X – Price Schedule C
3. The Bidder will be fully responsible for the safe arrival of the goods at the named port of entry in good condition as per terms of CIP as per INCOTERMS, if applicable
4. Actual Custom duty applicable on the date of bid opening and 2% C& F charges will be added to the CIP price to arrive at free delivery at consignee site for evaluation purpose.

Indian Agent (Name and Address) :_____

Indian Agency Commission - ___% of FOB

Name_____

Business Address_____

Place: _____ Signature of Bidder_____

Date: _____ Seal of the Bidder _____

C) PRICE SCHEDULE FOR COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (CAMS) AFTER WARRANTY PERIOD

1	2	3	4					5	6	7
Item Sr. No./ RFx no.	BRIEF DESCRIPTION OF GOODS	QTY (Nos.)	Annual Comprehensive Maintenance Contract Cost for Each Unit year wise*.					Total Annual Comprehensive Maintenance Contract Cost for Each Unit for 5 years (4a+4b+4c+4d+4e)	GST (if any) Value (%age]	Total Annual Comprehensive Maintenance Contract Cost (inclusive of GST) for 05 years 3 x (5+6)
			1st	2nd	3rd	4th	5th			
			a	b	c	d	e			

* After completion of Warranty period

Total CAMC price in Rupees: _____(in figures)

_____ (in words)

NOTE:-

1. If there is a discrepancy in prices the same will be evaluated as per clause 29 of GIB.
2. The cost of Comprehensive Annual Maintenance Contract (CAMC) which includes preventive maintenance including testing & calibration as per technical/ service /operational manual, labour and spares, after satisfactory completion of Warranty period may be quoted for next 5 years or the period as mentioned in the bidding document on yearly basis for complete equipment and Turnkey (if any).
3. The cost of CAMC may be quoted along with GST applicable on the date of Bid Opening.
4. Cost of CAMC will be added for Ranking/Evaluation purpose based on NPB as stipulated in the bidding document.
5. The payment of CAMC will be madeas stipulated in GCC.
6. The uptime warranty will be 95 % on 24 (hrs) X 7 (days) X 365 (days) basis or as stated in Technical Specification of the Bidding document.The stipulations in Technical Specification will supersede above provisions.
7. All software updates should be provided free of cost during CAMC period.
8. The supplier shall keep sufficient stock of spares required during Comprehensive Annual Maintenance Contract (CAMC) period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.

Name_____

Business Address_____

Place: _____ Signature of Bidder_____

Date: _____ Seal of the Bidder_____

D) PRICE SCHEDULE FOR TURNKEY WORK

Schedule No.	TURNKEY WORK	Turnkey Work price (in Rs.)	GST (if any) Value (%age]	Turnkey Work price (in Rs.) (including GST)

Total turnkey work price in Rupees: _____ (in figures)

_____ (in words)

Note: -

1. The cost of Turnkey Work (Civil/Electrical/Mechanical Engineering work) as per Technical Specification (Section VII) may be quoted on lump sum along with GST applicable on the date of Bid Opening.
2. Cost of Turnkey Work will be added for Ranking/Evaluation purpose.
3. The payment of Turnkey Work will be made as per GCC.

Name_____

Business Address_____

Place: _____ Signature of Bidder_____

Date: _____ Seal of the Bidder_____

SECTION – XI

CHECK LIST

The bidders should furnish specific answers to all the questions/issues mentioned in the Checklist detailed below:

Name of Bidder: _____

Name of Manufacturer: _____

Sl. No.	Activity	Yes/ No/ NA	Page No. of the Bids submitted	Remarks
1. a.	Have you enclosed Bid Security of required amount for the quoted schedules?			
b.	In case Bid Security is furnished in the form of Bank Guarantee, has it been furnished as per standard format of the bidding document?			
c.	In case Bank Guarantee is furnished, have you kept its validity 45 days beyond the validity of Techno Commercial Bid?			
2.a.	Are you exempted for furnishing bid security being MSE as defined in MSE procurement policy issued by department of MSME.			
b.	If yes, have you enclosed certificate of registration issued by department of MSME.			
c.	Does such certificate clearly mention the quoted item?			
3. a.	Have you enclosed duly filled bid form as per bidding document?			
b.	Have you enclosed Power of Attorney in favour of the signatory?			
4. a.	Have you enclosed clause-by-clause technical compliance statement (in excel format as provided on e-portal) for the quoted goods vis-à-vis the Technical specifications?			
b.	In case of Technical deviations in the compliance statement, have you identified and marked the deviations?			
5. a.	Have you submitted satisfactory performance certificate as per the Proforma for performance statement given in the bidding document?			
b.	Have you submitted the documentary proof that goods have been functioning Satisfactorily?			

Sl. No.	Activity	Yes/ No/ NA	Page No. of the Bids submitted	Remarks
c.	Have you submitted latest purchase order copies?			
6.	Have you submitted Manufacturer's Authorization Certificate as per bidding document?			
7.a.	Have you quoted prices of goods, turnkey (if any), CAMC etc. in the Price Schedule as per bidding document?			
b.	If the ATE calls for buy back, have you quoted buy back prices along with applicable GST?			
8.	Have you kept validity of 270 days from the Techno Commercial Bid Opening date as per the bidding document?			
9. a.	In case of Indian Bidder, have you furnished GST No.?			
b.	In case of Foreign Bidder, have you furnished GST No. of your Indian Agent?			
10.	Have you intimated the name and full address of your Banker (s) along with your Account Number, IFSC Code etc.?			
11.	Have you furnished documents establishing your eligibility & qualification criteria as per bidding documents?			

N.B.

1. All pages of the Bid should be page numbered and indexed.
2. The Bidder may go through the checklist and ensure that all the documents/ confirmations listed above are enclosed in the bid and no column is left blank. If any column is not applicable, it may be filled up as NA.
2. It is the responsibility of bidder to go through the bidding document to ensure furnishing all required documents in addition to above, if any.
3. Wherever necessary and applicable, the bidders shall enclose certified copy as documentary proof/ evidence to substantiate the corresponding statement.
4. In case a bidders furnishes a wrong or evasive answer against any of the question/issues mentioned in the Checklist, its bids will be liable to be ignored.

Name_____

Business Address_____

Place: _____ Signature of Bidder_____

Date: _____ Seal of the Bidder_____

SECTION – XII

BANK GUARANTEE FORM FOR BID SECURITY

Whereas _____ (Name and address of the Bidder)
(*Hereinafter called the "Bidders"*)
Has submitted its Bid dated _____ for the supply of _____
(Hereinafter called the "Bid")
Against the purchaser's ATE No. _____

Know all persons by these presents that we _____ having our registered office at _____
(Hereinafter called the "Bank")
Are bound unto HLL Infra Tech Services Ltd., Noida (for and on behalf of AIIMS)
(Hereinafter called the "Purchaser)
In the sum of _____ for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this _____day of _____ 20____.

The conditions of this obligation are:

1) If the Bidder withdraws or amends, impairs or derogates from the bid in any respect within the period of validity of this Bid.
2) If the Bidder having been notified of the acceptance of his Bid by the Purchaser during the period of its validity:-

    a. if the bidder fails or refuses to furnish the performance security for the due performance of the contract or
    b. if the bidder fails or refuses to accept/execute the contract or
    c. if it comes to notice at any time, that the information/documents furnished in its Bid are false or incorrect or misleading or forged.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or more the three conditions, specifying the occurred condition(s).

This guarantee will remain in force upto _____ *(insert date of additional forty-five days after Bid validity)* and any demand in respect thereof should reach the Bank not later than the above 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)

SECTION – XIII

MANUFACTURER'S AUTHORISATION FORM

The CEO
HLL Infra Tech Services Limited
B-14A Sector-62
Noida, Uttar Pradesh-201307

Dear Sir,

Ref: Your TE document No _____ dated _____

We, _____ who are proven and reputable manufacturers of_____(*name and description of the goods offered in the bid*) having factories at_____, hereby authorise Messrs_____(*name and address of the agent*) to submit a bid, process the same further and enter into a contract with you against your requirement as contained in the above referred TE documents for the above goods manufactured by us.

We also state that we are not participating directly in this bid for the following reason(s):
_____*(please provide reason here).*

We further confirm that no supplier or firm or individual other than Messrs. _____ (*name and address of the above agent*) is authorised to submit a bid, process the same further and enter into a contract with you against your requirement as contained in the above referred TE documents for the above goods manufactured by us.
We also hereby extend our full warranty, CAMC as applicable as per clause 15 of the General Conditions of Contract, read with modification, if any, in the Special Conditions of Contract for the goods and services offered for supply by the above firm against this TE document.

We also hereby confirm that we would be responsible for the satisfactory execution of contract placed on the authorized agent and the spares for the equipment shall be available for at least 10 years from the date of supply of equipment.

We also confirm that the price quoted by our agent shall not exceed the price which we would have quoted directly"

Yours faithfully,

[*Signature with date, name and designation*]
for and on behalf of Messrs_____
[*Name & address of the manufacturers*]

Note:

1. *This letter of authorisation should be on the letter head of the manufacturing firm and should be signed by a person competent and having the power of attorney to legally bind the manufacturer.*
2. *Original letter may be sent.*

SECTION – XIV

BANK GUARANTEE FORM FOR PERFORMANCE SECURITY/CAMC SECURITY

WHEREAS _____ (Name and address of the supplier) (Hereinafter called "the supplier")

has undertaken, in pursuance of Purchase Order/ Contract no_____ dated _____ to supply _____ (*insert description of goods and services*) (Hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier 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 the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of _____ (insert *Amount of the guarantee in words and figures)*, and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) 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 supplier 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 supplier 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 will remain in force upto _____*(insert date of additional Ninety days after completion of satisfactorily warranty period in case of Performance Security and additional Ninety days after completion of satisfactorily CAMC period in case of CAMC security)* and any demand in respect thereof should reach the Bank not later than the above date.

.....
(Signature with date of the authorised officer of the Bank)
.....
Name and designation of the officer
.....
.....
Seal, name & address of the Bank and address of the Branch

SECTION – XV

CONTRACT FORM - A

CONTRACT FORM FOR SUPPLY, INSTALLATION, COMMISSIONING, HANDING OVER, TRIAL RUN, TRAINING OF OPERATORS & WARRANTY OF GOODS

ALL INDIA INSTITUTE OF MEDICAL SCIENCES
(Insert Name of concerned Centre/ Hospital/ Department/ Section)
ANSARI NAGAR, NEW DELHI-110 029

Contract No_____ dated_____

To _____
(*insert name of Supplier with address*)

This is in continuation to this office's Notification of Award No_____ dated _____

1. Name & address of the Supplier: _____
2. ATE No of Bidding Documents: _____and subsequent Amendment No_____, dated_____ (if any), issued by the Purchaser
3. Supplier's Bid No_____ dated_____ and subsequent communication(s) No_____ dated _____ (if any), exchanged between the supplier and the purchaser in connection with this Bidding Document.
4. In addition to this Contract Form, the following documents etc, which are included in the Bidding Documents mentioned under paragraphs 2 and 3 above, shall also be deemed to form and be read and construed as integral part of this contract:

   (i) General Conditions of Contract;
   (ii) Special Conditions of Contract;
   (iii) List of Requirements;
   (iv) Technical Specifications;
   (v) Quality Control Requirements;
   (vi) Bid Form furnished by the supplier;
   (vii) Price Schedule(s) furnished by the supplier in its Bid;
   (viii) Manufacturers' Authorisation Form (if applicable);
   (ix) Purchaser's Notification of Award

   Note: The words and expressions used in this contract shall have the same meanings as are respectively assigned to them in the conditions of contract referred to above. Further, the definitions and abbreviations incorporated under clause 1 of Section II – "General Instructions to Bidders" of the Bidding Document shall also apply to this contract.

5. Some terms, conditions, stipulations etc. out of the above-referred documents are reproduced below for ready reference:

   (i) Brief particulars of the goods and services which shall be supplied/ provided by the supplier are as under:

Schedule No.	Brief description of of goods/services	Accounting unit	Quantity to be supplied	Unit Price	Total price	Terms of delivery

Any other additional services (if applicable) and cost thereof: _____
Total value (in figure) _____ (In words) _____

(ii) Delivery schedule:_____

(iii) Details of Performance Security required:_____

(v) Destination and despatch instructions:_____

(vi) Consignee: _____

6. Warranty clause:

7. Payment terms:

_____
(Signature, name and designation of the Purchaser authorised official**)**
For and on behalf of Director, AIIMS

Received and accepted this contract

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

For and on behalf of _____
(*Insert Name and address of the supplier*)

(Seal of the Supplier)
Date: _____
Place: _____

CONTRACT FORM – B

CONTRACT FORM FOR COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (CAMC)

Comprehensive Annual Maintenance Contract No._____
Dated_____

Between

Director, AIIMS

And

(*insert Name & Address of the Supplier*)

Reference: Contract/ Purchase Order No_____ dated_____ for supply, installation& commissioning, Training and CAMC of goods& services.

In continuation to the above referred Contract/Purchase Order, the Contract of Comprehensive Annual Maintenance Contract is hereby concluded as under: -

1	2	3	4					5	6
Items Sr. No./ RFx no.	Brief description of goods	Quantity (Nos.)	CAMC Cost for Each Unit year wise in Rs					GST Value in Rs (___ %)	Total CAMC Cost for 5 Years with GST (3) X[(4a+4b+4c+4d+4e) + (5)]
			1st	2nd	3rd	4th	5th		
			a	b	c	d	e		

Total value (in figure) _____ (In words) _____

b) The CAMC commence from the date of expiry of all obligations under Warranty i.e. from_____ (date of expiry of Warranty) and will expire on _____ (date of expiry of CAMC)

c) The cost of Comprehensive Annual Maintenance Contract (CAMC) which includes preventive maintenance, labour and spares, after satisfactory completion of Warranty period as contained in the above referred contract on yearly basis for complete equipment as per contract including Turnkey Work(if any).

d) There will be 95% uptime warranty during CAMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CAMC period by double the downtime period and other penalty as per contract.

e) During CAMC period, the supplier shall visit at each consignee's site for preventive maintenance including testing and calibration as per the manufacturer's service/ technical/operational manual. The supplier shall visit each consignee site as recommended in the manufacturer's manual, but at least once in 3 months commencing from the date of the successful completion of warranty period for preventive maintenance of the goods.

f) All software updates should be provided free of cost during CAMC period.

g) The Bank Guarantee valid till _____ [(fill the date) 3 months after expiry of entire CAMC period] for an amount of Rs. _____ [(fill amount) equivalent to 2.5% of the cost of the equipment as per contract] shall be furnished in the prescribed format given in Section XIV of the Bidding Document, along with the signed copy of CAMC within a period of 21 (twenty one) days of start of CAMC failing which the Performance Security (10% of the contract value) submitted shall be en-cashed payable to the Purchaser/Consignee.

h) If there is any lapse in the performance of the CAMC as per contract, the proceeds Annual CAMC Bank Guarantee shall be forfeited and their bad performance will be considered while awarding future contracts.

i) Payment terms: The payment of CAMC will be made against the bills raised by the supplier on six monthly basis after satisfactory completion of said period, duly certified by the concerned User Department. The payment will be made in Indian Rupees.

_____
(Signature, name and designation of the Store Officer/ASO of the Purchaser**)**

_____
(Signature, name and designation of the F&CAO of the Purchaser)
For and on behalf of Director, AIIMS

(Seal of the Purchaser)
Date: _____
Place: _____

Received and accepted this contract

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

For and on behalf of _____
(*Insert Name and address of the supplier*)

(Seal of the Supplier)
Date: _____
Place: _____

Note:- The contract will be prepared on Non-judicial Stamp paper(currently of value of Rs. 100).

SECTION – XVI

CONSIGNEE RECEIPT CERTIFICATE

(To be given by consignee's authorized representative)

The following store(s) has/have been received in good condition:

1) Contract/Purchase Order No. & date: _____

2) Supplier's Name: _____

3) Consignee's Name & Address: _____

4) Name of the item supplied: _____

5) Quantity Supplied: _____

6) Date of Receipt by the Consignee: _____

7) Signature of Authorized Representative of Consignee with date:_____

8) Name and designation of Authorized Representative of Consignee:_____

9) Seal of the Consignee:_____

SECTION – XVII

CONSIGNEE ACCEPTANCE CERTIFICATE

(To be given by consignee's authorized representative)

This is to certify that the goods as detailed below have been received in good conditions along with all the standard and special accessories in accordance with the contract. The same has been installed and accepted.

1) Contract/Purchase Order No. & date:_____

2) Supplier's Name:_____

3) Consignee's Name & Address: _____

4) Name of the item Supplied :_____

5) Quantity Supplied :_____

6) Date of Receipt by the Consignee :_____

7) Date of Installation/Commissioning and Acceptance of Equipment: _____

8) The supplier has fulfilled its contractual obligations satisfactorily

OR

The supplier has failed to fulfill its contractual obligations with regard to the following:

i)
ii)
iii)
iv)

9) The amount of recovery on account of failure of the supplier to meet his contractual obligations is_____ (here indicate the amount).

10) Signature of Authorized Representative of Consignee with date:_____

11) Name and designation of Authorized Representative of Consignee:_____

12) Seal of the Consignee:_____