TAMILNADU MEDICAL SERVICES CORPORATION LIMITED
417 Pantheon Road, Egmore, Chennai - 8
Website : http ://tnmsc.tn.nic.in www.tnmsc.com
E-mail: enquiry @ tnmsc.com

BID REFERENCE:006/TNMSC/ENGG/MSSH-OMAN/2012, Dt.13.06.2012

TENDER FOR SUPPLY AND INSTALLATION OF EQUIPMENTS TO DEPT. RADIOLOGY AT MULTI SUPER SPECIALITY HOSPITAL AT OMANDURAR GOVERNMENT ESTATE, CHENNAI

LAST DATE OF RECEIPT OF TENDER: 17.07.2012 at 03.00 PM

NOT TRANSFERABLE

ABSTRACT

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TAMILNADU MEDICAL SERVICES CORP. LTD.,
417, PANTHEON ROAD,
EGMORE, CHENNAI 600 008.

Telephones: (044) 28191890 / 28190259
E-mail: enquiry@tnmsc.com
Web site:www.tnmsc.com

TENDER FOR SUPPLY AND INSTALLATION EQUIPMENTS TO DEPT. OF RADIOLOGY AT MULTI SUPER SPECIALITY HOSPITAL AT OMANDURAR GOVERNMENT ESTATE, CHENNAI

BID REFERENCE	:	006/TNMSC/ENGG/MSSH-OMAN/2012, DT.13.06.2012
DATE OF COMMENCEMENT OF SALE OF BIDDING DOCUMENT	:	15.06.2012
LAST DATE FOR SALE OF BIDDING DOCUMENT	:	16.07.2012
LAST DATE AND TIME FOR RECEIPT OF BIDS	:	17.07.2012, 03.00 PM
TIME AND DATE OF OPENING OF BIDS	:	17.07.2012, 04.00 PM
PLACE OF OPENING OF BIDS	:	Tamilnadu Medical Services Corp. Ltd 417, pantheon road, Egmore, Chennai 600 008.
ADDRESS FOR COMMUNICATION	:	Tamilnadu Medical Services Corp. Ltd 417, pantheon road, Egmore, Chennai 600 008.

SECTION I : INVITATION FOR BIDS (IFB)

SECTION I : INVITATION FOR BIDS (IFB)

Sealed Tenders in duplicate will be received till **03.00 PM** on **17.07.2012** by the **Managing Director, Tamilnadu Medical Services Corp. Ltd., Chennai for Supply and Installation of Equipments to Dept. of Radiology at Multi Super Speciality Hospital at Omandurar Government Estate, Chennai.**

1. Interested eligible Bidders may obtain further information from the office of the Tamilnadu Medical Services Corp. Ltd, 417, Pantheon Road, Egmore, Chennai 600 008. Tamilnadu. India.

2. A complete set of bidding documents may be purchased by any interested eligible bidder on submission of a written application to the above office and upon payment of a non-refundable fee as indicated below in the form of a Demand Draft in favour of **Tamilnadu Medical Services Corp. Ltd., payable at Chennai**.

3. The bidding document may be obtained from the office of **Tamilnadu Medical Services Corp. Ltd., 417, Pantheon Road, Egmore, Chennai - 600 008**, during office hours namely, from **10.00 hours** to **17.00 hours** on all working days either in person or by post.

a)	Price of bidding document (Non-refundable)	:	Rs.5,725/- (Inclusive of all taxes) (Alternatively, the tender document can be downloaded from www.tenders.tn.gov.in and TNMSC website www. tnmsc. com at free of cost)
b)	Postal charges, inland	:	Rs.200/- (extra)
c)	Date of commencement of Sale of bidding document	:	15.06.2012
d)	Pre-bid meeting	:	29.06.2012 at 12.00 Noon
e)	Last date for sale of Bidding Document	:	16.07.2012
f)	Last date and time for Receipt of bids	:	17.07.2012, 03.00 PM
g)	Time and date of Opening of Technical bids	:	17.07.2012, 04.00 PM

h)	Place of opening of bids	:	Tamilnadu Medical Services Corp. Ltd., 417, Pantheon Road, Egmore, Chennai 600 008.
i)	Address for communication	:	Tamilnadu Medical Services Corp. Ltd., 417, Pantheon Road, Egmore, Chennai 600 008.

4. The bidders, who have downloaded the bid documents, shall be solely responsible for checking these websites for any addendum/amendment issued subsequently to the bid document and take into consideration the same while preparing and submitting the bids.

5. All bids must be accompanied by a bid security as specified in the bid document and must be delivered to the above office at the date and time indicated above.

6. Bids will be opened in the presence of Bidders' representative who choose to attend on the specified date and time.

SECTION II : INSTRUCTION TO BIDDERS

SECTION II: INSTRUCTIONS TO BIDDERS

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A. INTRODUCTION

1. Eligible Bidders

1.1 Manufacturers or their authorised representatives / direct importers are eligible to participate in this tender.

1.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

1.3 Government-owned enterprises may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the ***Purchaser***.

2. Cost of Bidding

2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid and ***Tamilnadu Medical Services Corp. Ltd., Chennai,*** hereinafter referred to as ***"the Purchaser"***, will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

B. THE BIDDING DOCUMENTS

3. Contents of Bidding Documents

3.1 The goods required, bidding procedures and contract terms are prescribed in the Bidding documents. In addition to the Invitation for Bids, the Bidding Documents include:

a. Instruction to Bidders (ITB);
b. General Conditions of Contract (GCC);
c. Special Conditions of Contract (SCC);
d. Schedule of Requirements;
e. Technical Specifications / Qualification criteria;
f. Bid Form and Price Schedules;
g. Bid Security form
h. Contract Form;
i. Performance Security Form;
j. Performance statement and
k. Manufacturer's Authorisation Form

3.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

4. Clarification of Bidding Documents

4.1 A prospective Bidder requiring any clarification of the Bidding Documents may notify the ***Purchaser*** in writing or by telex or cable at the ***Purchaser***'s mailing address indicated in the Invitation for Bids. The ***Purchaser*** will respond in writing to any request for clarification of the Bidding Documents which it receives not later than 7 days prior to the deadline for submission of bids prescribed by the ***Purchaser***. Written copies of the ***Purchaser's*** response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective Bidders which have received the bidding documents.

4.2 Pre-Bid Meeting:

α) The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the office of *Tamilnadu Medical Service Corporation Limited, 417, Pantheon Road, Chennai –8, India*. on **29.06.2012 at 12.00 Noon.**

β) The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

χ) The Bidder is requested to submit any questions in writing or by cable to reach the ***Purchaser*** not later than **3 days before the meeting**.

δ) Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be transmitted without delay to all purchasers of the bidding documents.

ε) Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

5. Amendment of Bidding Documents

5.1 At any time prior to the deadline for submission of bids, the ***Purchaser*** may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by an amendment.

5.2 All prospective bidders who have received the Bidding Documents will be notified of the amendment in writing or by cable and will be binding on them.

5.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bid, the ***Purchaser*** may, at its discretion, extend the deadline for the submission of bids.

C. PREPARATION OF BIDS

6. Language of Bid

6.1 The Bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the Bidder and the ***Purchaser***, shall be written in the English language. Supporting documents and printed literature furnished by the Bidder may be written in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the English translation shall govern.

7. Documents Comprising the Bid

7.1 The bid prepared by the Bidder shall comprise the following components:

(a) a Bid Form and Price Schedule completed in accordance with ITB Clauses 8, 9 and 10;
(b) documentary evidence established in accordance with ITB Clause 11 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;
(c) documentary evidence established in accordance with ITB Clause 12 that the goods and ancillary services to be supplied by the Bidder shall conform to the Bidding Documents; and

(d) Bid Security furnished in accordance with ITB Clause 13.

8. Bid Form

8.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating for the goods to be supplied, a brief description of the goods, their country of origin, quantity and prices.

9. Bid Prices

9.1 The Bidder shall indicate on the Price Schedule the unit prices and total Bid prices of the goods it proposes to supply under the Contract.

9.2 Prices indicated on the Price Schedule shall be entered separately in the following manner:

(i) The price of the goods, quoted ex-factory, ex-show-room, ex-warehouse, or off-the-shelf, or delivered, as applicable, including all duties and sales and other taxes already paid or payable:

a. on components and raw material use in the manufacture or assembly of the goods quoted ex-factory; or

b. on the previously imported goods of foreign origin quoted ex-showroom, ex-warehouse or off-the-shelf.

(ii) any purchaser-country sales and other taxes which will be payable on the goods if this contract is awarded;

(iii) charges for inland transportation, insurance and other local costs incidental to delivery of the goods to their final destination; and

(iv) the cost of incidental services listed in Clause 7 of the Special Conditions of Contract.

9.3 The Bidders separation of the price components in accordance with ITB Clause 9.2 above will be solely for the purpose of facilitating the comparison of bids by the ***Purchaser*** and will not in any way limit the ***Purchaser***'s right to contract on any of the terms offered.

9.4 Fixed price: Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITB Clause 22.

9.5 The ***Purchaser*** will arrange to get the Customs Duty on the Supplies to be made, be exempted from Government Authorities and certificate to the effect will be provided to the bidder on award of contract. Hence bidder should indicate separately the Customs Duty payable on the goods to be supplied by the Bidder. The bidder shall indicate the value of imported items on which the customs duty is payable. Any other duties / levies should be borne by the Bidder / Supplier.

10. Bid Currencies

10.1 Prices shall be quoted in Indian Rupees.

11. Documents establishing bidder's eligibility and qualifications

11.1 Pursuant to ITB Clause 7, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.

11.2 The documentary evidence of the Bidder's qualifications to perform the Contract if its bid is accepted, shall establish to the ***Purchaser***'s satisfactions.

(a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized (as per authorization form in Section XII) by the goods manufacturer or produce to supply the goods in India.

(b) that the bidder has the financial, technical and production capability necessary to perform the Contract and meets the criteria outlined in the qualification requirements specified in Section VI-A. To this end, all bids submitted shall include the following information:

(i) The legal status, place of registration and principle place of business of the company or firm or partnership, etc;

(ii) Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past five years and details of current contracts in hand and other commitments (suggested proforma given in Section XI)

12. Documents establishing goods conformity to bidding documents

12.1 Pursuant to ITB Clause 7, the Bidder shall furnish, as part of its bid, documents establishing the conformity to the bidding documents of all goods and services which the bidder proposes to supply under the contract.

12.2 The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data and shall consist of:

(a) a detailed description of the essential technical and performance characteristics of the goods;

(b) a list giving full particulars, including available sources and current prices, of all spare parts, special tools, etc., necessary for the proper and continued functioning of the goods for a period of three years, following commencement of the goods used by the ***Purchaser***; and

(c) an item-by-item commentary on the ***Purchaser***'s Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

12.3 For the purpose of the commentary to be furnished pursuant to ITB Clause 12.2 (c) above, the Bidder shall note that standards for workmanship, material and equipments and references to brand names or catalogue numbers designated by the ***Purchaser*** in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the ***Purchaser***'s satisfaction that the substitutes are substantially equivalent or superior to those designated in the Technical Specifications.

13. Bid Security

13.1 Pursuant to ITB Clause 7, the Bidder shall furnish, as part of its bid, bid security for the amount as indicated in Section V schedule of requirements.

13.2 The bid security is required to protect the ***Purchaser*** against risk of Bidders conduct which would warrant the security's forfeiture, pursuant to ITB Clause 13.7.

13.3 The bid security shall be in Indian Rupees and shall be in one of the following forms :

a. Deleted

b. A Banker's cheque, or demand draft obtained from any scheduled bank in favour of TamilNadu Medical Services Corporation Limited, payable at Chennai.

13.4 Any bid not secured in accordance with ITB Clauses 13.1 and 13.3 above will be rejected by the ***Purchaser*** as non-responsive, pursuant to ITB Clause 22.

13.5 Unsuccessful bidders bid security will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the ***Purchaser***, pursuant to ITB Clause 14.

13.6 The successful bidder's bid security will be discharged upon the bidders signing the contract, pursuant to ITB Clause 30, and furnishing the security, pursuant to ITB Clause 31.

13.7 The bid security may be forfeited:

(a) If a bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid form;

(or)

(b) In case of a successful bidder, if the bidder fails:
   (i) to sign the contract in accordance with ITB Clause 30; or
   (ii) to furnish performance security in accordance with ITB Clause 31.

14. Period of Validity of Bids

14.1 Bids shall remain valid for 90 days after the date of bid opening prescribed by the ***Purchaser***, pursuant to ITB Clause 17. A bid valid for a shorter period may be rejected by the ***Purchaser*** as non-responsive.

14.2 In exceptional circumstances, the ***Purchaser*** may solicit the bidders consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable or telex). The bid security provided under ITB Clause 13 shall be

suitably extended. A bidder may refuse the request without forfeiting its bid security. A bidder granting the request is not required or permitted to modify its bid.

15. Format and Signing of Bid

15.1 The bidder shall prepare two copies of the bid clearly marking each "**Original Bid**" and "**Copy Bid**" as appropriate. In the event of any discrepancy between them, the original shall govern. The bidder shall prepare the bid technical bid (Cover A) and the price bid (Cover B) and placed in separately sealed covers clearly marking "Technical bid" and "Price bid" as appropriate.

15.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorised to bind the Bidder to the Contract. The letter of authorisation shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.

15.3 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

D. SUBMISSION OF BIDS

16. Sealing and Marking of Bids

16.1 The bidder shall seal the **"Technical bid"** and **"Price bid"** in separate inner envelopes only making the envelopes as "Technical bid" and Price bid". Further the bidders shall seal the original and a copy of the bid in separate inner envelopes duly marking the envelopes as "**Original Bid"** and "**Copy Bid"**. He shall then place these two inner envelopes in an outer envelope.

16.2 The inner envelopes and outer envelopes and the cover shall be:

(a) addressed to the ***Purchaser*** at the following address:

Tamilnadu Medical Services Corp. Ltd.,
417, Pantheon Road,
Egmore,
Chennai 600 008.

(b) bear the project name, the invitation for bids (IFB) number and the words **"Do not open before 04.00 PM on 17.07.2012.**

16.3 The inner envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "late".

16.4 If the cover containing the outer envelope is not sealed and marked as required by ITB Clause 16.2, the ***Purchaser*** will assume no responsibility for the bid's misplacement or premature opening.

16.5 Telex, cable or facsimile bids will be rejected.

17. Deadline for Submission of Bids

17.1 Bids must be received by the ***Purchaser*** at the address specified under ITB Clause 16.2 not later than the time and date specified in the Invitation of Bids (Section I). In the event of the specified date for the submission of bids being declared a holiday for the ***Purchaser***, the bids will be received up to the appointed time on the next working day.

17.2 The ***Purchaser*** may, at its discretion, extend this deadline for submission of bids by amending the bid documents in accordance with ITB Clause 5, in which case all rights and obligations of the purchasers and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

18. Late Bids

18.1 Any bid received by the ***Purchaser*** after the deadline for submission of bids prescribed by the ***Purchaser***, pursuant to ITB Clause 17, will be rejected and/or returned unopened to the Bidder.

19. Modification and Withdrawal of Bids

19.1 The bidder may modify or withdraw its bid after the bids submission, provided that written notice of the modification or withdrawal is received by the ***Purchaser*** prior to the deadline prescribed for submission of bids.

19.2 The bidders modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of ITB Clause 16. A withdrawal notice may also be sent by telex or cable but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.

19.3 No bid may be modified subsequent to the deadline for submission of bids.

19.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the bid form. Withdrawal of a bid during this interval may result in the bidders forfeiture of its bid security, pursuant to Clause 13.7

E. BID OPENING AND EVALUATION

20. Opening of Bids by Purchaser

20.1 The ***Purchaser*** will open only the Technical bids (Cover A) of all bids, in the presence of bidder's representatives who choose to attend, at **12.00 Noon on 17.07.2012** at the following location:

Tamilnadu Medical Services Corp. Ltd.,
417, Pantheon Road,
Egmore,
Chennai 600 008.

The bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for the ***Purchaser***, the bids shall be opened at the appointed time and location on the next working day.

20.2 The bidders names, modifications, bid withdrawals and the presence or absence of the requisite bid security and such other details as the ***Purchaser***, at its discretion, may consider appropriate will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the bidder pursuant to ITB Clause 18.

20.3 The ***Purchaser*** will prepare minutes of the bid opening.

20.4 The **"Price Bid" (Cover B)** will be opened after evaluation of **"Technical bids" (Cover A)** and the date and time will be intimated to bidders whose bids are responsive and who are selected by the **Purchaser.**

21. Clarification of Bids

21.1 During evaluation of bids, the ***Purchaser*** may, at its discretion, ask the bidder for clarification of its bid. The request for clarification and the response shall be in writing. Unless the purchaser asks for change in price due to the clarifications sought the bidder is not permitted to alter the price furnished in the **"Price bid" "Cover B".** The change in price shall be submitted in a separately sealed covers with marking in the cover "**supplemental price bid"** before opening of the "**original price bid**".

22. Preliminary Examination

22.1 The ***Purchaser*** will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Bids from Representatives, without proper authorisation from the manufacturer as per Section XII, shall be treated as non-responsive.

22.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If the supplier does not accept the correction of errors, its bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.

22.3 The ***Purchaser*** may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any bidder.

22.4 Prior to the detailed evaluation, pursuant to Clause ITB 23, the ***Purchaser*** will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these clauses a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 6). Warranty (GCC Clause 14), Force Majeure (GCC Clause 24), Applicable law (GCC Clause 29) and Taxes and Duties (GCC Clause 31) will be deemed to be material deviation. The purchasers determination of a bids responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

22.5 A bid determined as not substantially responsive will be rejected by the ***Purchaser*** and may not subsequently be made responsive by the bidder by correction of non-conformity.

23. Evaluation and Comparison of Bids

23.1 The ***Purchaser*** will evaluate and compare bids previously determined to be substantially responsive, pursuant to ITB Clause 22.

23.2 The purchasers evaluation of a bid will take into account, in addition to the bid price (ex-factory/ex-warehouse/off-the-shelf price of the goods offered from within India, such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods, and excise duty on the finished goods, if payable) and price of incidental services, the following factors, in the manner and to the extent indicated in ITB Clause 23.3 and in the technical specifications:

(a) i) cost of inland transportation, insurance and other costs within India incidental to the delivery of goods to their final destination;
ii). The comprehensive annual maintenance charges for a period of 7 years subsequent to free guarantee maintenance period of 3 years.

(b) delivery schedule offered in the bid;

(c) deviations in payment schedule from that specified in the special conditions of contract

(d) the availability in India of spare parts and after-sales services for the equipment offered in the bid.

i) Manufacturer Bidders :-

a. An undertaking for the uninterrupted supply of adequate spares for atleast a period of 10 years shall be furnished.

b. Availability/ establishment of after sales service facility atleast in 4 regions of Tamil Nadu to ensure uninterrupted after sales service during warranty and maintenance period shall be confirmed. The details of service facility available / proposed to be set up shall be furnished in their bid.

ii) Non-Manufacturer Bidder:-

a. The bidder shall furnish an undertaking for the uninterrupted supply of adequate spares for atleast a period of 10 years with the backup undertaking from their manufacturer.

b. Availability/ establishment of after sales service facility atleast in 4 regions of Tamil Nadu to ensure uninterrupted after sales service during warranty and maintenance period shall be confirmed. The details of service facility available / proposed to be set up shall be furnished in their bid.

23.3 Pursuant to ITB Clause 23.2 the following evaluation methods will be applied:

(a) Inland transportation, ex-factory/ from port-of-entry, insurance and incidentals.

(i) Inland transportation, insurance and other incidentals, for delivery of goods to the project site as stated in ITB Clause 9.2 (iii).

The above costs will also be added to the bid price.

(b) Delivery schedule:

The ***Purchaser*** desires to have delivery of the goods covered under the invitation, at the time specified in the schedule of requirements. The estimated time of the arrival of the goods at the project site should be calculated for each bid after allowing for reasonable transportation time. Treating the bid offering the scheduled time of arrival as the base, a delivery "adjustment" will be calculated for other bids at 2% of the ex-factory price for each month of delay beyond the base and this will be added to the bid price for evaluation. No credit will be given to earlier deliveries and bids offering delivery beyond 2 months of stipulated delivery will be treated as unresponsive.

(c) Deviation in Payment Schedule:
The special conditions of contract indicate the payment schedule offered by the ***Purchaser***. If a bid deviates from the schedule and if such deviation is considered acceptable to the ***Purchaser***, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared to those stipulated in this invitation at a rate of 12% per annum.

(d) Spare parts and after sales service facilities in India:
The cost of the ***Purchaser*** of establishing the minimum service facilities and parts inventories, as outlined elsewhere in the bid invitation, if quoted separately, shall be added to the bid price.

(e) Annual Maintenance Contract (AMC):

i. The purchaser desires to have a comprehensive maintenance contract for a period of seven years after the expiry of free maintenance period of 3 years. Bidders should clearly indicates year wise comprehensive maintenance charges in the price schedule which shall be added to the bid price at a discount rate of 8% per annum. **Bids without this charges will be considered as non-responsive.**

ii. Any major repair pointed out by the ***Purchaser*** shall be rectified by the Supplier from the date of intimation within a period of 3 calendar days and commission the equipment to the satisfaction of the Purchaser.

24. Contacting the purchaser

24.1 Subject to ITB Clause 21, no bidder shall contact the ***Purchaser*** on any matter relating to its bid, from the time of bid opening to the time the contract is awarded.

24.2 Any effort by a bidder to influence the ***Purchaser*** in the ***Purchaser***'s bid evaluation, bid comparison or contract award decisions may result in rejection of the bidders bid.

24.3 The bidders shall not make attempts to establish unsolicited and unauthorized contact with the Tender accepting authority, Tender Inviting Authority or Tender Scrutiny Committee after opening of the bids and prior to the notification of award and any attempt by any bidder to bring to bear extraneous pressures on the Tender Accepting Authority bidder shall be sufficient reason to disqualify the bidder.

24.4 Notwithstanding anything contained in clause 24.3 above pursuant to ITB clause 21, the Tender Inviting Authority or the Tender Accepting Authority, may seek bona fide clarifications from bidders relating to the bids submitted by them during the evaluation of bids.

F. AWARD OF CONTRACT

25. Post Qualification

25.1 In the absence of pre-qualification, the ***Purchaser*** will determine to its satisfaction whether the bidder that is selected as having submitted the lowest evaluated responsive bid meets the criteria specified in ITB Clause 11.2 (b) and is qualified to perform the contract satisfactorily.

25.2 The determination will take into account the bidders financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the bidders qualifications submitted by the bidder, pursuant to ITB Clause 11 as well as such other information as the ***Purchaser*** deems necessary and appropriate.

25.3 An affirmative determination will be a prerequisite for award of the contract to the bidder. A negative determination will result in rejection of the bidders bid, in which event the ***Purchaser*** will proceed to the next lowest evaluated bid to make a similar determination of that bidders capabilities to perform satisfactorily.

26. Award Criteria

26.1 Subject to ITB Clause 28, the ***Purchaser*** will award the contract to the successful bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the bidder is determined to be qualified to perform the contract satisfactorily.

27. Purchaser's right to vary quantities at time of award

27.1 The ***Purchaser*** reserves the right at the time of award of contract to increase or decrease the quantity of goods and services originally specified in the schedule of requirements without any change in unit price or other terms and conditions.

28. Purchaser's right to accept any bid and to reject any or all bids

28.1 The ***Purchaser*** reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the purchasers action.

29. Notification of Award

29.1 Prior to the expiration of the period of bid validity, the ***Purchaser*** will notify the successful bidder in writing by registered letter or by cable or telex, to be confirmed, that its bid had been accepted.

29.2 The notification of award will constitute the formation of the contract.

29.3 Upon the successful bidders furnishing of performance security pursuant to ITB Clause 31, the ***Purchaser*** will promptly notify each unsuccessful bidder and will discharge its bid security, pursuant to ITB Clause 13.

30. Signing of Contract

30.1 At the same time as the ***Purchaser*** notifies the successful bidder that its bid has been accepted, the ***Purchaser*** will send the bidder the contract form provided in the bidding documents, incorporating all agreements between the parties.

30.2 Within 10 days of receipt of notification of award, the successful bidder shall sign the contract agreement, for the supply and installation and also for the comprehensive AMC contract as applicable after the warranty period.

31. Performance Security

31.1 Within 7 days of the receipt of notification of award from the ***Purchaser***, the successful bidder shall furnish the performance security in accordance with the conditions of contract, in the performance security form provided in the bidding documents or in another form acceptable to the ***Purchaser***.

31.2 Failure of the successful bidder to comply with the requirement of ITB Clause 30 or ITB Clause 31 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the ***Purchaser*** may make the award to the next lowest evaluated bidder or call for new bids.

32. Fraud and corruption

It is **purchaser'**s policy to require that the bidders, suppliers and contractors and their subcontractor observe the highest standard of ethics during the procurement and execution of such contracts.[1] In pursuance of this policy, the **purchasers;**

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

(i) **"corrupt practice"**[2] is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) **"fraudulent practice"**[3] is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to

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[1] *In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.*

[2] *"another party" refers to a public official acting in relation to the procurement process or contract execution]. In this context, "public official" includes staff and employees of other organizations taking or reviewing procurement decisions.*

[3] *a "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.*

mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) **"collusive practice"**[4] is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) **"coercive practice"**[5] is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) **"obstructive practice"** is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the purchaser's inspection and audit rights provided for under sub-clause 32 (e) below.

(b) will reject a proposal for award if it determines that the bidder considered for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

(c) will cancel the contract if the purchaser determines at any time that the bidder, supplier and contractors and their sub contractors engaged in corrupt, fraudulent, collusive, or coercive practices.

(d) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract; and

(e) will have the right to inspect the accounts and records of the bidders, supplier, and contractors and their subcontractors and to have them audited by auditors appointed by the purchaser.

Furthermore, Bidders shall be aware of the provision stated in Sub Clause 32 of the General Conditions of Contract.

33. Appeal

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4 *"parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.*

5 *a "party" refers to a participant in the procurement process or contract execution.*

33.1 This tender is governed by the provisions of Tamilnadu Transparency in Tenders Act 1998 and the Rules there under.

32.2 Any tenderer aggrieved by the order passed by the Tender Accepting Authority under section 10 of the said Act, may appeal to the Government within ten days from the date of receipt of order and the Government shall dispose the appeal within fifteen days from the date of receipt.

33.3 No Appeal shall be preferred while the tender is in process until tender is finalized and Notification of award as stated ITB in clause 29 is completed by the purchaser.

SECTION III : GENERAL CONDITIONS OF CONTRACT

SECTION III: GENERAL CONDITIONS OF CONTRACT
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GENERAL CONDITIONS OF CONTRACT

1. Definitions

1.1 In this contract the following terms shall be interpreted as indicated:

(a) "The Contract" means the agreement entered into between the ***Purchaser*** and the Supplier as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
(b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations;
(c) "The Goods" means all the equipment, machinery, and/or other materials which the Supplier is required to supply to the ***Purchaser*** under the Contract;
(d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the contract;
(e) "GCC" means the General Conditions of Contract contained in this section.
(f) "SCC" means the Special Conditions of Contract.
(g) "The ***Purchaser***" means the Organisation purchasing the Goods, as named in SCC;
(h) "The Supplier" means the individual or firm supplying the Goods under this Contract;
(i) "The Project Site", where applicable means the place or places named in SCC.
(j) "Day" means calendar day.
(k) "Delivery period" means the period applicable upto completion of supply, installation, testing and commissioning of the equipment by the supplier at the Project site and accepted by the Purchaser.

2. Application

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

3. Standards

3.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods country or origin and such standards shall be the latest issued by the concerned institution.

4. Use of Contract Documents and Information

4.1 The Supplier shall not, without the ***Purchaser***'s prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the ***Purchaser*** in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

4.2 The Supplier shall not, without the ***Purchaser***'s prior written consent, make use of any document or information enumerated in GCC Clause 4.1 except for purposes of performing the Contract.

4.3 Any document, other than the Contract itself, enumerated in GCC clause 4.1 shall remain the property of the ***Purchaser*** and shall be returned (in all copies) to the ***Purchaser*** on completion of the supplier's performance under the Contract if so required by the ***Purchaser***.

5. Patent Rights

5.1 The Supplier shall indemnify the ***Purchaser*** against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

6 Performance Security

6.1 Within 7 days after the Supplier's receipt of notification of award of the Contract, the Supplier shall furnish performance security to the ***Purchaser*** in the amount specified in the Special Conditions of Contract.

6.2 The proceeds of the performance security shall be payable to the ***Purchaser*** as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

6.3 The Performance Security shall be denominated in India Rupees and shall be in one of the following forms:

(a) A Bank guarantee issued by a nationalized/ scheduled bank located in India and in the form provided in the bidding Documents or any other form acceptable to the ***Purchaser***; or

(b) A cashier's cheque, certified cheque, or demand draft.

6.4 The performance security will be discharged by the ***Purchaser*** and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC

7. Inspection and Tests

7.1 The ***Purchaser*** or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract at no extra cost of the ***Purchaser***. The Special conditions of Contract and/or the Technical Specifications shall specify what inspections and tests the ***Purchaser*** requires and where they are to be conducted. The ***Purchaser*** shall notify the Supplier in writing of the identity of any representatives retained for these purposes.

7.2 The inspections and test may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. Where conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance including access to drawings and production data - shall be furnished to the inspectors at no charge to the ***Purchaser***.

7.3 Should any inspected or tested Goods fail to conform to the specifications, the ***Purchaser*** may reject them and the Supplier shall either replace the rejected Goods or make all alternations necessary to meet specification requirements free of cost to the ***Purchaser***.

7.4 The Purchasers right to inspect, test and, where necessary, reject the Goods' arrival in at site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the ***Purchaser*** or its representative prior to the Goods despatched.

7.5 Nothing in GCC Clause 7 shall in any way release the Supplier from any warranty or other obligations under this Contract.

7.6 Inspection and Audit

(i) The supplier shall permit the **purchaser** and or persons appointed by the **purchaser** to inspect the supplier's office and / or the accounts and records of the suppliers and its sub contractors relating to the performance of the contract, and to have such accounts and records audited by auditors appointed by the purchaser if required.

The Supplier's attention is drawn to Clause 32, which provides, inter alia, that acts intended to materially impede the exercise of the purchaser

inspection and audit rights provided for under Sub-Clause 7.6 (i) constitute a prohibited practice subject to contract termination

8. Packing

8.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, Where appropriate, the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.

8.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the ***Purchaser***.

9. Delivery and Documents

9.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the ***Purchaser*** in the Notification of Award. The details of despatching and/or other documents to be furnished by the supplier are specified in SCC.

10. Insurance

10.1 The Goods Supplied under the Contract shall be fully insured in Indian Rupees against the loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the Special Conditions of Contract.

11. Transportation

11.1 Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within the India defined as Project site, transport to such place of destination in India insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

12. Incidental Services

12.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- Performance or supervision of the on-site assembly and/or start-up of the supplied Goods;

- furnishing of tools required for assembly and/or maintenance of the supplied Goods;

- furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods.
- performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

(e) training of the ***Purchaser***'s Personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

12.2 Prices charged by the Supplier for incidental services, if not included in the contract Price of the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

13. Spare Parts

13.1 As specified in the Special Conditions of Contract, the Supplier may be required to provide any or all of the following materials and notifications and information pertaining to spare parts manufactured or distributed by the Supplier:

(a) Such spare parts as the ***Purchaser*** may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and

(b) In the event of termination of production of the spare parts:
   (i) advance notification to the ***Purchaser*** of the pending termination, in sufficient time to permit the ***Purchaser*** to procure needed requirements; and
   (ii) following such termination, furnishing at no cost to the ***Purchaser***, the blueprints, drawings and specifications of the spare parts, if and when requested.

14. Warranty

14.1 The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the ***Purchaser***'s specifications) or from any act or omission of

the Supplier, that may develop under normal use of the supplied Goods in conditions obtaining in the country of final destination.

14.2 This warranty shall remain valid for One year after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract.

14.3 The ***Purchaser*** shall promptly notify the supplier in writing of any claims arising under this warranty.

14.4 Upon receipt of such notice , the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the ***Purchaser.***

14.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC within a reasonable period, the ***Purchaser*** may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the ***Purchaser*** may have against the Supplier under the contract.

15. Payment

15.1 The method and conditions of payment to be made to the Supplier under the Contract shall be specified in the Special Conditions of Contract.

15.2 The Suppliers request(s) for payment shall be made to the ***Purchaser*** in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the services performed, and by documents, submitted pursuant to GCC Clause 9, and upon fulfillment of other obligations stipulated in the contract.

15.3 Payment shall be made promptly by the ***Purchaser*** but in no case later than sixty (60) days after submission of the invoice/claim by the Supplier.

15.4Payment shall be made in Indian Rupees

16. Prices

16.1Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any prices adjustments authorized in the special Conditions of Contract or in the ***Purchaser***'s request for bid validity extensions, as the case may be.

17. Change Orders

17.1 The ***Purchaser*** may at any time by written order given to the Supplier pursuant to GCC Clause 30, make changes within the general scope of the Contract in any one or more of the following:

(a) drawings, designs or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the ***Purchaser***;

(b) the method of shipping or packing

(c) the place of delivery; or

(d) the services to be provided by the Supplier.

17.2 If any such changes causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the ***Purchaser***'s change order.

18. Contract Amendments

18.1 Subject to GCC Clause 17, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

19. Assignment

19.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the ***Purchaser***'s prior written consent.

20. Subcontracts

20.1 The supplier shall notify the ***Purchaser*** in writing of all subcontracts awarded under the contract if not already specified in his bid. Such notification, in

his original bid or later, shall not relieve the Supplier from any liability or obligation under the contract.

21. Delays in the Supplier's Performance

21.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the ***Purchaser*** in its Schedule of Requirements.

21.2 If at any time during the performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of the Services, the Supplier shall promptly notify the ***Purchaser*** in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the ***Purchaser*** shall evaluate the situation and may at its discretion extend the Supplier's time for performance with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.

21.3 Except as provided under GCC Clause 24, a delay by the Supplier in the performance of its delivery obligation shall render the supplier liable to the imposition of liquidated damages pursuant to GCC Clause 22, unless any extension of time is agreed upon pursuant to GCC clause 21.2 without the application of liquidated damages.

22. Liquidated Damages

22.1 Subject to GCC Clause 24, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the ***Purchaser*** shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the SCC. Once the maximum is reached, the ***Purchaser*** may consider termination of the Contract pursuant to GCC Clause 23.

23. Termination for Default

(a) The ***Purchaser*** may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate the Contract in whole or part;

(i) if the Supplier fails to deliver any or all of the goods within the time period(s) specified in the Contract, or within any extension thereof granted by the ***Purchaser*** pursuant to clause 21; or

(ii) if the Supplier fails to perform any other obligation(s) under the Contract; or

(iii) if the supplier, in the judgment of the **Purchaser,** has engaged in fraud and corruption, as defined in GCC clause 32, in competing for or in executing the contract.

(b) In the event the ***Purchaser*** terminates the Contract in whole or in part, pursuant to GCC Clause 23.1(a), the ***Purchaser*** may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the ***Purchaser*** for any additional costs for such similar Goods. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

24. Termination for Insolvency

(a) The ***Purchaser*** may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the ***Purchaser***.

25. Termination for Convenience

(a) The ***Purchaser***, may by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the ***Purchaser***'s convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

(b) The Goods that are complete and ready for shipment within 30days after the Supplier's receipt of notice of termination shall be accepted by the ***Purchaser*** at the Contract terms and prices. For the remaining Goods, the ***Purchaser*** may elect.

(i) to have any portion completed and delivered at the Contract terms and prices; and /or

(ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

26. Force Majeure

26.1 Notwithstanding the provisions of GCC Clauses 21,22,23, the Supplier shall not be liable for forfeiture of its performance security, liquidation damages or termination for default, if and to the extent that, its delay in performance or other failure to perform 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 not foreseeable. Such events may include, but are not limited to, acts of the ***Purchaser*** either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions 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. Unless otherwise directed by the ***Purchaser*** in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

27. Resolution of Disputes

27.1 The ***Purchaser*** and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

27.2 If, after thirty (30) days from the commencement of such informal negotiations, the ***Purchaser*** and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the Special Conditions of Contract. These mechanisms may include, but or not limited to, conciliation mediated by a third Party, adjudication in an agreed national forum, and national arbitration.

28. Governing Language

28.1 The contract shall be written in English language. Subject to Clause 29, English language version of the Contract shall govern its interpretation. All correspondence and documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

29. Applicable Law

29.1 The Contract shall be interpreted in accordance with the laws of the Union of India.

30. Notices

30.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by cable, telex or fascimile and confirmed in writing to the other Party's address specified in Special Conditions of Contract.

31.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

31. Taxes and Duties

31.1 Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the ***Purchaser***. However, Sales tax in respect of the transaction between the ***Purchaser*** and the Supplier shall be payable extra, if so stipulated in the Notification of Award.

32. Fraud and corruption

32.1 If the Purchaser determines that the Supplier has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Purchaser may, after giving 7 days notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the contract, and the provisions of Clause 23 shall apply as if such termination had been made under clause 23.

(a) For the purposes of this Sub-Clause:

(i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) "obstructive practice" is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a purchaser investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the purchaser's inspection and audit rights provided for under Clause 11 [Inspections and Audits by the Bank].

32.2 Notwithstanding the clause 32 above, *Should any employee of the Supplier be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the purchase of the Goods, then that employee shall be removed.*

SECTION IV: SPECIAL CONDITIONS OF CONTRACT

SECTION IV: SPECIAL CONDITIONS OF CONTRACT
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SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of contract. The Corresponding clause number of the General Conditions is indicated in parentheses.

1. Definitions(GCC Clause 1)

(a) The ***Purchaser*** is **Tamilnadu Medical Services Corp. Ltd., Chennai.**

(b) The Supplier is.....

(c) Project site is the place(s) mentioned in the Schedule of Requirements

2. Performance Security (GCC Clause 6)

2.1 Substitute Clause 6.1 of GCC by the following:

Within 7 days after the supplier's receipt of Notification of Award, the supplier shall furnish performance security to the *Purchaser* for an amount of 5% of the contract value valid upto 60 days after the date of completion of performance obligations including the warranty obligations.

50% of value of Performance security will be discharged by the Purchaser and returned to the supplier not later than 60 days, following the date of completion of the supplier's performance obligation including any warranty obligations. The Balance 50% value of the performance security will be released after entering into a comprehensive maintenance contract after the warranty period and on payment of required performance security for the CMC contract. However in no case, the performance security will be returned before the date of completion of the warranty obligation.

Performance security for Maintenance contract

After successful completion of warranty period of 3 years, the supplier shall furnish performance security for 5% of the comprehensive AMC applicable for 7 years maintenance period valid for 7 years period of maintenance.

2.2 Substitute Clause 6.3 (b) of GCC by the following:

A cashier's cheque or banker's certified cheque or crossed demand draft or pay order drawn in favour of the ***Purchaser***.

2.3 Substitute Clause 6.4 of the GCC by the following:

The Performance Security will be discharged by the ***Purchaser*** and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including the warranty obligations, under the Contract.

2.4 Add Clause 6.5 to the GCC of the following:
In the event of any contract amendment, the supplier shall, within 7 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for further period of 60 days thereafter.

3. Inspection and Tests (GCC Clause 7)

The following inspection procedures and tests are required by the ***Purchaser***;

The supplier shall get each equipment inspected in manufacturer's works and submit a test certificate and also guarantee/warranty certificate that the equipment conforms to laid down specifications.

The ***Purchaser*** or its representative shall inspect and/or test any or all the equipment to confirm their conformity to the Contract specifications, prior to despatch from the manufacturer's premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the equipment on receipt at destination.

If the equipment fails to meet the laid down specifications the supplier shall take immediate steps to remedy the deficiency or replace the defective equipment to the satisfaction of the ***Purchaser***.

4. Packing (GCC Clause 8)

Add as Clause 8.3 of the GCC the following:

Packing Instruction: The Supplier will be required to mark separate packages for each consignee. Each package will be marked on three sides with proper paint/indelible ink, the following:

i) Project
ii) Contract No.
iii) Supplier's Name
iv) Packing list reference number

5. Delivery and Documents (GCC Clause 9)

Upon delivery of the Goods, the Supplier shall notify the ***Purchaser*** and the Insurance Company by cable or Telex or fax the full details of shipment including the Contract number, railway receipt number and date, description of Goods, quantity, names of the consignee etc.

The Supplier shall mail the following documents to the ***Purchaser***, with a copy to the Insurance Company.

(i) Three Copies of Supplier invoice (in duplicate) showing Goods description, quantity, unit price, total amount;

(ii) Railway receipt/acknowledgment of receipt of goods from the Consignee(s)

(iii) Insurance Certificate;

(iv) Manufacturer's/ Supplier's warranty and test Certificate;

(v) Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report;

The above documents shall be received by the ***Purchaser*** before arrival of Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the supplier will be responsible for any consequent expenses.

6. Insurance (GCC Clause 10)

For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "Warehouse to Warehouse" (Final destinations) on "All Risks" basis including War Risks and Strike.

7. Incidental Service (GCC Clause 12)

The following services covered under Clause 12 shall be furnished and the cost shall be included in the contract price:

(a) Unloading, safe storage and handling of consignment of site.
(b) On site assembly if any of the supplied goods, installation, testing and commissioning of the equipment.
(c) Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;

8. Spare parts (GCC Clause 13)

Add as Clause 13.2 to the GCC the following:
Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods. Other main spare parts and components shall be supplied as promptly as possible but in any case within one week of placement of order.

9. Warranty (GCC Clause 14)

9.1 Substitute GCC Clause 14.2 by the following:-
This warranty shall remain valid for 3 years after goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract.

9.2 The Supplier shall, in addition, comply with the performance and/ or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

(a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 3:

10. Payment (GCC Clause 15)

Payment for Goods and Services shall be made in Indian Rupees as follows:
(i) No advance payment is payable.

(ii) 100% payment will be made against supply and installation of the equipments at the respective sites against certification along with necessary stock entry bills from the respective consignee.

a) If there is a delay in installation of the equipment due to reasons not attributable to the supplier such as non readiness of site, 50% of the supply value will be released against supply and provisional stock entry certificate from the consignee / end user.
b) If there is no situation such as non availability of site etc., and installation is taken up by the supplier immediately after supply, 50% of the supply value will be paid against supply and certificate for receipt of the item in good condition and a provisional stock entry certificate, from the consignee / end user.
c) On completion of installation, another 20% is payable against installation certificate issued by the end user.

d) The final 30% will be paid after receipt of proper stock entry certificate from the end user.

e) For items ordered in bulk quantities, the first payment will be released only after supply / installation of atleast 20% of the ordered quantity or Rs.25.00 lakhs whichever is less.

f) If the price includes customs duty, relevant documentary evidence for import of the equipment / goods (Bill of lading / Airwary Bill, Bill of entry and invoice copy) and proof for payment of Custom duty shall be furnished.

g) Payment will be made either by means of Cheque or through RTGS (Real Time Gross Settlement System) / Core Banking / NEFT (Net Electronic Fund Transfer).

11. Prices (GCC Clause 16)

Substitute Clause 16.1 of the GCC with the following:

Prices payable to the Supplier as stated in the Contract shall not be subject to adjustment during performance of the Contract.

12. Sub-Contract (Clause 20)

Add at the end of sub-clause 20.1 the following:

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

13. Liquidated Damages (GCC Clause 22)

13.1 For delays:

Substitute GCC Clause 22.1 by the following

Subject to Clause 24, if the Supplier fails to deliver any or all of the Goods or perform of services within the time period(s) specified in the Contract, the ***Purchaser*** shall without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.5 percent of the delivered price of the delayed Goods or unperformed Services for each week of delay or part thereof until actual delivery or performance, up to a maximum deduction of 10 percent of the delayed Goods or Services contract price. Once the maximum is reached, the ***Purchaser*** may consider termination of the Contract.

14. Resolution of Disputes (GCC Clause 27)

Add as GCC Clauses 27.3 and 27.4 the following:

27.3 The dispute resolution mechanism to be applied pursuant to GCC Clause 27 shall be as follows:

(a) In the case of a dispute or difference arising between the ***Purchaser*** and a Supplier relating to any matter arising out of or connected with this agreement, such dispute or difference shall be settled in accordance with the Arbitration and Conciliation Act 1996 the Arbitral Tribunal shall consist of 3 Arbitrator, one each to be nominated by the ***Purchaser*** and the supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties and shall act as Presiding Arbitrator. In case of failure of the two Arbitrator appointed by the parties to reach upon a consensus with in a period of 30 days from the appointment of the Arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the President of Institute of Engineers (India).

27.4 The venue of arbitration shall be the place from where the Contract is issued (ie.) Chennai.

15. Notices (clause 30)

For the purpose of all notices, the following shall be the address of the ***Purchaser*** and Supplier.

Purchaser: **Tamilnadu Medical Services Corp. Ltd.,**
417, Pantheon Road,
Egmore,
Chennai 600 008.

Supplier:

16. (To be filled in at the time of Contract signature) **Annual Maintenance Contract (AMC):**

16.1 The supplier shall under take atleast one preventive maintenance visit per quarter and attend to all break down calls. The payment for the maintenance services will be made at the end of each quarter based on the certificate from the end user for completion of preventive maintenance and break down maintenance as per schedule.

16.2 An uptime guarantee of 95% shall be maintained out of total usage period of the equipment by the end users during warranty and maintenance period.

16.3 Any major repair pointed out by the ***Purchaser*** shall be rectified by the Supplier from the date of intimation within a period of 3 calendar days and commission the equipment to the satisfaction of the Purchaser. Failing which the Purchaser has a right to levy a penalty on the Supplier a sum of Rs.10,000/- per day or part thereof for each equipment until the equipments are repaired and commissioned to the satisfaction of the Purchaser.

16.4 The Supplier shall indicate clearly the free guarantee maintenance of the whole system supplied by the Supplier and the same should not be less than 3 years.

16.5 The Supplier shall also indicate separately post guarantee maintenance cost of the entire system for 7 years subsequent to free maintenance period and shall clearly indicate year wise maintenance cost with probable cost of spares required for each year, in addition to comprehensive maintenance charges.

16.6 The scope of comprehensive Annual Maintenance Contract shall include replacement of all parts without any exclusion. The supplier shall undertake atleast one Preventive Maintenance Service per quarter of the year and attend to all break down maintenance calls. The payment for the comprehensive maintenance will be made at the end of each quarter against certification from the end user for satisfactory completion of Preventive Maintenance within the quarter and attending the breakdown calls within the stipulated period of 3 days from the date of intimation.

17. Enclosures to Bid:

17.1 Technical bid (Cover A):

Technical Bid shall include the duly filled up Tender documents along with

a) Bid Security.

b) Duly attested copy of License if any, approved by the concerned Licensing Authority.

c) For Importers Photocopy of License renewed upto date.

d) Documentary evidence of constitution of firm such as Memorandum of Articles, Partnership Deed, etc., with details of Name, Address, Tel. No., Fax No., E-mail Address of firm and the Managing Director / Partner / Proprietor.

e) Authorisation of senior responsible officer of the Company to transact business.

f) Annual turnover statement last for three years certified by the Auditor.

g) Copies of Balance Sheet and Profit & Loss Account for three years certified by the Auditors.

h) Sales Tax clearance Certificate as on 31.03.2011

i) Notarised statement of the Installed manufacturing capacity of the Items quoted.

j) Qualification Criteria – Section VI-A

k) Performance Statement - Section XI

l) Manufacturer's Authorisation Form - Section XII

m) Technical literature and other documents in support of the goods / services.

n) Any deviations

o) List of items quoted (without prices)

p) In case of critical equipment, the supplier shall give a certificate to the effect that the equipment does not have any capability to remotely observe or access. If called for by the purchaser a verification and certificate of this claim shall be given by a 3rd party.

17.2 Price Bid (Cover B):

Price bid shall include

a) Duly filled in Price Schedule - Section VII
b) Bid Form

Please note that the Bidder run the risk of his bid being rejected if the Price Schedule contains any conditions.

SECTION V : SCHEDULE OF REQUIREMENTS

SECTION – V

SCHEDULE OF REQUIREMENTS

Sch. No.	Brief Description	Unit	Qty.	Bid security
	Dept. of Radiology			
1.	Ultrasonogram-4D Doppler as per specification	Nos.	1	Rs.60,000/-
2.	Ultrasound mid end as per specification	Nos.	1	Rs.15,000/-
3.	Ultrasound high end as per specification	Nos.	1	Rs.20,000/-
4.	Digital radiography system as per specification	Nos.	2	Rs.25,000/-
5.	1.5 Tesla magnetic resonance imaging equipment as per specification	Nos.	1	Rs.2,50,000/-
6.	128 slice ct scanner as per specification	Nos.	1	Rs.3,00,000/-
7.	Whole Body Multi Slice CT SCANNER(4 slice) as per specification	Nos.	1	Rs.2,00,000/-
8.	CR system as per specification	Nos.	1	Rs.15,000/-
9.	Flat Panel Neuro Bi-Plane Digital Subtraction Angiography System as per specification	Nos.	1	Rs.3,00,000/-

Delivery Schedule: - 60 days from the date of receipt of purchase order.

Place of delivery :- **The above items are to be delivered at Dept. of Radiology at Multi Super Speciality Hospital at Omandurar Government Estate, Chennai.**

SECTION VI : TECHNICAL SPECIFICATIONS

SECTION VI : TECHNICAL SPECIFICATIONS

1. ULTRASONOGRAM-4D DOPPLER

High End digital colour Doppler scanner with elasticity imaging & real time 4 D
Specifications:

1. Applications
   The machine must demonstrate the following application capabilities:
   - Abdominal.
   - Abdominal vascular
   - Renal
   - Renal vascular
   - Small parts imaging
   - Pediatric imaging
   - Urology
   - Musculoskeletal
   - Obstetrical, fetal echo,
   - Gynecology,
   - Vascular imaging (Cerebrovascular, Peripheral vascular, Transcranial)
   - Surgical imaging
   - Interventional imaging, for biopsy guidance, and probe attachment
   - Constar imaging.
2. Imaging
   Imaging modes – B mode, dual B-mode, M-mode
   Doppler modes – PW Doppler & CW Doppler,
   Colour Doppler and directional power Doppler
   Triplex mode
   Cineloop facility
   - 2D gray scale imaging with advanced compounding technologies,
   - Tissue harmonic imaging
   - Real time compounding imaging
   - One button time gain compensation
   - Simultaneous real time and colour Doppler imaging,
   - Power Angio imaging
   - Duplex and simultaneous pulsed wave Doppler imaging
   - Triplex imaging of simultaneous 2 D, pulsed wave and colour Doppler,
   - Panoramic imaging
   - Trapezoid imaging
   - Contrast imaging.
3. Elastography,
   - Elasticity imaging on breast tissue, should be real time analysis and non invasive, should be able tp detect automatically the difference in tissue elasticity and display them in color pattern – system shall equipped to perform elasticity imaging in a variety of application and on a variety of transducers.
   - Spectral Doppler should include angle correction, invert display, Doppler review for retrospective analysis, post processing features.

- 3D facility should be available. System shall have 3D imaging on all transducers.
- System shall have power 3D imaging.
- 4D imaging should be available
- System shall have curved and endo vaginal 4D capabilities.
- Realtime 4D software for abdominal, vascular and endocavity application.

4. General:
   - System shall have a semi - automated OB measurement package, utilizing a single keystroke to measure atleast six common fetal biometries.
   - System shall have a common user interface with multi-modality platforms (CT, MRI) unites the users, the console and the image in a unique, heads-up display.
   - System shall have the capability to provide speckle reduction on the entire volume exceptional workflow benefits for the entire deportment.
   - Flicker free minimum 18 – inch high resolution flat panel (TFT) display.
   - Control panel and monitor height and position shall be adjustable for operation while sitting or standing.

Image management:
System shall have CD-DVD and USB archival (DICOM and PC format)
System shall have atleast 160 GB hard drive capacity
System shall support DICOM Query / Retrieve and DICOM SR
System shall have report packages for each exam type.
System shall have a battery back up to enhance portability.
Internal hard disk for storage of still images and cineloop.
UPS
Computer with appropriate software to transmit images and reporting formats.
Good quality printer able to manage high number of print outs in both colour and black and white.

Probes to be quoted:-

Convex transducer 1 – 4 MHz capable to do liver elastography
Endo cavity transducer 2 – 9 MHz capable to do 3 D and elastography
Linear multi array matrix transducer 4 -9 MHz capable to be elastography
4 high frequency linear probe 5 – 18 MHz for small parts and muskulo skeletal and vascular application

2. ULTRASOUND MID END

Should be a minimum of 512 channel machine.

Should be a 12 bit analog to digital convertor.

Minimum of active 3 active probe connectors.

Monitor should be 15inch CRT SVGA, Flicker free type

Should incorporate wide band super high density probes. Each probe should have independent quad and quint frequency selections independent of the depth selection.
Should have PW, HPRF, CW Doppler modes.
Machine to be upgradable to realtime 3D/4D.
Dynamic range to be more than 150 db.
3D/4D probes should be a wide band harmonic probes with quad & quint frequency selection.
Multi beam processing processing technique to be incorporated to accelerate frame rate upto 700 frames/ second depending on the probes.
Free angular M Mode to reformed both on freeze and real time mode with atleast 3 cursors should be available.
B & B (color) live, dual dynamic display should be available.
Tissue Doppler imaging upgrade should be available.
Optional stress echo application and extended stress echo application to be available for analysis.
Measurement & report function for all application like Abdomen, Obstetrics, Gynec, small parts peripheral vessels, cardiac to be available.
Intimal media thickness (IMT) measurement & report should be available as standard for calculation of max, IMT & Mean IMT.
All the alphanumerical keys has to be user assignable for short key measurement application purpose.
Programmable image parameter function, with selection of one level five parameters such as, smoothness, contrast, edge enhancement, relief etc to be controlled for effective image appearance. It should be a user defined machine.
Should have the capability of connecting phased array sector cardiac probes and specialty probes like, intra operative, laparoscopic, micro surgery and Neuro surgery.
180 Deg panoramic TV / TR probe should be available optional 360 deg panaromic
Transrectal mechanical radial probe to be available.
Integrated data management system for standard DICOM images & patient data storage.
Floppy drive, CD & MOD to be available.

CD drive storage should have both the option of DICOM images & patient data storage.

Machine to be connected directly with Inkjet printer in either parallel port or USB port.

Power consumption of the machine not to exceed 1200 VA.

Probes

2 – 6 MHz 60 Deg, 60 R harmonic convex probe

3 – 9 Mhz 180 deg 9 mm TV/TR probe

5 – 10 Mhz steered linear for small parts & vascular application. Harmonics preferred.

3. ULTRASOUND HIGH END

Technical points	System architecture
1. Beam former	Universal digital beam former accepting routine intra – operative, phased array sector, convex, linear and endo vaginal probe.
2. Display	Should have high – resolution 15" medical grade flat panel monitor with articulating arm
3. Digital processing channels	Should be more than 1500 channels
4. Gray scale	System should have a minimum of 256 gray levels with system dynamic range to be more than 190 dB.
5. Display modes	With B, 2 B, 4B, Compounding, M PW, HPRF and colour Doppler with power Doppler, phase inversion tissue harmonics should be available on convex and phased array probes. Steering on colour / PW modes on linear probe should be available. Trapezoidal image. Triplex mode with atleast 18 frames per sec.
6. Cine review	Standard cine memory providing 500 frames on 2D mode and upto 30 seconds Doppler cine. To be confirmed.
7. Transducer technology	System should be capable of handling 2 – 13 MHz Multi frequency imaging with independent selection of 2D/

	color/ spectral Doppler frequency should be offered
8. Exam presets	Should be able to store atleast 30 user specific image presets.
9. Image optimization on B and M mode	System should have the following • 5 Selectable frequency on convex probe • 30 – 70 dB of Dynamic range. • Up/down & Right / left image rotation. • 4 steps of edge enhancement settings. • Upto 30 cm dept. • 8 maps of B color • 5 levels of persistence • 5 levels of resolution mode.
10. Color and spectral Doppler optimization	System should have the following • Selectable frequency on all probe • 1 – 20 mm gate adjustments on spectral modes • Filter adjustments should be specified. • Base line adjustments • Sweep speed adjustments • 5 levels of color line density adjustments • 3 levels of color priority selections.
11. Zoom function	When a more detailed view is needed, the system should reoptimises and rescans the selected region to actually increase to acoustic information content of the image upto 10 times.
12. Frame rate	Maximum achievable from rate should be more than 400 – f/s
13. Deep Doppler and color performance	HPRF performance at depth
14. Measurements and calculations	System should have atleast 8 calipers with depth information and extensive, customizable measurement and report packages including complete obstetrics, gynecology and fetal heart report packages. Distance, area % stenosis on B mode. Distance, time heart rate, slop and M mode Velocity, acceleration time, slope PI, RI, S/D ration and with auto Doppler on Doppler mode.

15. Image management	System should have facilities to store atleast 80,000 images and 2 minutes of clip store, should have the facility of performing calculations and annotations on stored images. System should have inbuilt CD/DVD /USB flash drive write for image transfer.
16. User interface	PC – based operating principles. Task light with back-lit illumination of control panel System should have on screen menu for easy and immediate access to imaging controls. Live image should be supported with side by side reference / stored images on the flat panel monitor. System should have wrist support to help reduce operator repetitive stress injuries.
17. Power requirements	System should operative between 200 – 240 VAC, 50 Hz. Maximum power consumption should not exceed 700 VA.
18. Required transducers	• Convex probe 3.0-5.0MHz (Compounding and harmonic imaging should be available) • Linear probe 5.0 – 10.0 MHz (Compounding and harmonic imaging should be available) • Endocavity probe 4.0 – 9.0 MHz (Compounding and harmonic imaging should be available)
19. Required accessories and special software packages	• Thermal printer • Extended field of view (panoramic image) • Automatic IMT calculation packages to predict cardio vascular and stroke risk factor • Vascular enhancement through B flow.

4. DIGITAL RADIOGRAPHY SYSTEM

TECHNICAL SPECIFICATIONS

Direct Digital radiography system with One Fixed Flat Panel Detector and one wireless flat panel detector for the complete range of general radiography purpose. It should be design to take a wide range of radiographic examinations. The design of the system should be user friendly, ergonomic and easy to maintain and should have following technical features or equivalent.

A. GENERATOR

1. Generator should be of latest technology with high frequency Generator for constant output
2. Output power: Should be 80KW
3. Generator power required should be minimum to provide 800mA at 100KV:

4. KVP range: should be 40 - 150 KVP
5. Exposure time: should be 1ms – 5sec
6. It should have digital display of mA, KVP & mAs.
7. Anatomical programming radiography (APR) should be possible.
8. It should have over loading protection and automatic mains voltage compensation for safety.

B. X-RAY TUBE

1. The X – ray tube should be rotating anode high speed, compatible with the generator and must have dual focus.
2. Focal spots of the following sizes:
   Large Focal Spot should be 1.2mm or less; Small Focal Spot should be 0.6mm or less.
3. Tube loading should be at least 30KW for small focus and at least 100KW for large focus with anode heat storage capacity of 300kHU or more.
4. Anode target angle to be specify.
5. Anode speed should be 8000 RPM or more.
6. Light beam collimator to be provided.
7. Tube overloading protection to be provided

C. X-RAY TABLE

1. Horizontal floating table top with Tray for wireless portable detector.
2. It should have transverse movements of ±10cm or more and longitudinal movements of ±40cm with electromagnetic brakes.
3. It should have motorized height adjustment should be min. 500mm & max should be specify.
4. Maximum Patient weight capacity: Should be 300 kg or more
5. The table top dimension should be specify

D. CEILING SUSPENDED COLUMN STAND

1. It should have ceiling mounted system carrying x-ray tube which can fulfill all standard RAD requirements
2. The Movement of X-ray tube should be motorized and movement in all possible direction: specify the travel range & Angulations in degrees
3. Tube assembly rotation axis should be ±180°.
4. It should have facility to display FFD/SID.

E. Vertical Bucky Stand for Chest exposure

1. Vertical stand mounted on floor with Fixed detector.
2. It should be suitable motorized bucky for vertical exposures.
3. Motorized detector tilting facility with either IR remote or hand switch control required.
4. Minimum Height to detector panel (center) from the floor: please specify
5. Maximum height to detector panel (center) from the floor: Please specify

F. DIGITAL FLAT PANEL DETECTOR

Automatic Exposure Control: 5 AEC measuring Fields to be provided.

FIXED

1. Fixed flat Panel Detector of size at least 43cm x 43cm size.
2. Image matrix size: should nominal 3000 pixels x 3000 pixels
3. Image resolution: should be up to 3.5 Lp/mm
4. Pixels size should not more than 145µm
5. The detector should be the latest generation Flat panel detector system made of Cesium iodide

WIRELESS

6. Wireless flat Panel Detector of size at least 35cm x 43cm size.
7. Image matrix size: should nominal 2000 pixels x 2000 pixels
8. Pixels size should not more than 145µm
9. Image resolution: should be up to 3.5lp/mm
10. The detector should be the latest generation Flat panel detector system made of Cesium iodide

G. IMAGE ACQUISITION AND DIGITAL WORK FLOW

1. The digital workstation should be based on the latest high speed processors
2. It should have the possibility of acquiring the image from the detector system.
3. It should have the possibility of whole system operation and image acquires, image display, image Process capabilities
4. The Image matrix dept should be 16 bit
5. It should have RAM of at least 2GB
6. The system should have ready DICOM interface (like send, receive, print for connectivity to any network computer / PC in DICOM format).
7. The system should have ready DICOM interface and networking capability with RIS/HIS/PACS.
8. Operating console should have facility for patient identity entry, viewing and processing images.
9. Workstation must be provided for image processing, image display, post processing functions and net working with color monitor 19”TFT screen.
10. The system should have an integrated CD/DVD-RW facility
11. Memory sticks for interface.
12. Hard Disk capacity for image data 2000 images or more.

H. STANDARD APPLICATIONS

1. A protocol to correct over-penetrated and under-penetrated areas within the image
2. Automated Image Shuttering and cropping tool
3. Automated brightness / contrast Control
4. Full range of measurement tools

I. ESSENTIAL ACCESSORIES

1. UPS of 5KVA rating (with Half hour back up) for the acquisition workstation
2. Infusion bottle holder

3. Compression belt with adjustable straps
4. Voltage stabilizer of 100KVA or more

J. OTHERS

1. The quoted model should be AERB type approved, CE & US FDA certified.
2. Only manufacturers of the system or authorized agents are authorized to quote
3. All the technical features should be quoted as standard. No technical features quoted as optional.
4. The bidder should submit a technical compliance statement with supporting data sheets.
5. All 3 components namely detector, generator and x-ray tube should be compatible with one another. A document supporting such arrangement for integration at the factory and compatibility should be provided by the bidder.
6. No reassembled and refurbished products shall be offered.

OPTIONS:

The Automatic Image Stitching software for dedicated orthopedic feature to acquire long-length
imaging fully automatically to be provided as option. Image acquisition should be possible in both projections, horizontally on the patient tables, as well as vertically in front of the vertical stands.

12. WARRANTY:

1. Warranty of 12 months of all parts as well as accessories and auxiliary units supplied with the main equipment including X – ray tube and Detector.
2. Supply one user manual (English)

5. 1.5 TESLA MAGNETIC RESONANCE IMAGING EQUIPMENT

TECHNICAL SPECIFICATION

(MRI-1.5 TESLA)

1.5 TESLA MAGNETIC RESONANCE IMAGING EQUIPMENT WITH MINIMUM 8 RF CHANNEL WITH WHOLEBODY IMAGING, MR ANGIOGRAPHY, PEDIATRIC IMAGING.

The quotations should be as per the specifications prescribed and it should be complete and comprise all essential components, accessories and features. It needs not only include the items mentioned in the specification but also features, which are additional and optional, the additional features should be clearly stated and the prices should be mentioned separately. Details of warranty, installation terms etc. should be mentioned. All data must be supported by data sheet.

Technical Specifications – MRI 1.5 Tesla

SL	Item Description		Tender Specification
I	**MAGNET & GRADIENT SYSTEM:**		
1.	Magnet Type	:	Must be Supercon
2.	Magnet Strength	:	1.5 Tesla
3.	Magnet Homogeneity Vrms-40 cm DSV	:	Typical value should be ≤ 0.4ppm. Both Typical & Guaranteed to be mentioned.
4.	Automatic in homogeneity correction	:	Essential
5.	Shielding Type – Active	:	Essential
6.	R.F. Shielding of room with built In Gas Pipe line for Patient Resuscitation, Electrical Wiring Systems for light and other Electrical fittings – A/c etc	:	Essential
7.	Emergency Rundown Control at Both Operator Console Room and Gantry room.	:	Essential to be provided in Gantry rooms as well as console room
8.	Gradient Strength	:	Specify.
9.	Slew Rate	:	Specify.
10.	Gradient Linearity	:	Specify.
11.	Field of View	:	≥48 cms or more
12.	Dedicated Helium exhaust system Into atmosphere	:	Essential
13.	Helium Boil-off rate not more than	:	Typical value should be 0.1 lt/Hr
14.	Helium refill per year not more than	:	Once in 3 year
15.	Magnet Bore Diameter, not less than	:	60 cms
16.	Magnet Bore length. Not more than	:	160 cms
17.	RF System should be compatible with parallel imaging techniques. It should be	:	Essential

	able to support time reduction with compatible coils in 2D/3D imaging in body/neuro imaging. The parallel acquisition factor should be at least 4. Higher PAT factor will be preferred.		
18.	RF system should support connecting Atleast 8 coils elements at a time	:	Essential
5.	Digital RF power output (kW)	:	≥15 kW at full efficiency
6.	RF Safety Protocols	:	Essentials – Give details
IV	**COILS:**		
1.	Body Coil must be Quadrature/CP, integrated into the Gantry	:	Essential for both transmission and Receiving
2.	8 channel head coil should be compatible To parallel acquisition techniques (PAT)	:	Essential
3.	Flexible Coil – large should be PAT Compatible	:	Essential
4.	Flexible coil – Small should be PAT compatible	:	Essential
5.	CP/quadrature/phased array neck/NV coil	:	Essential
6.	CP/quadrature knee coil	:	Essential
7.	CP/Quadrature/phased array spine coil (Cervical, dorsal, lumar) should be PAT compatible	:	Essential
8.	Neuro vascular array/equivalent coil should PAT compatible	:	Essential
9.	Body array/equivalent coils atleast 4 element.Should be PAT compatible	:	Essential
10	Cardiac array/equivalent coil should be PAT compatible	:	Essential
11.	Suitable coil for high quality lower peripheral angio in multi-station	:	Essential

angiography study combinable with PAT for avoiding venous contamination

VI MR WORKSTATION

1.	One additional latest advanced post processing workstation with 18 inch LCD monitor and 14”x17” additional laser camera with 600 dpi. It should be swappable (Interchangeable with main console with full functional capability as the main console) and should have all post processing software and complete Dicom functionalities	:	Essential

VII COMPUTER SYSTEM:

1.	Host Computer	:	Specify
2.	Minimum clock speed specify	:	Specify
3.	MIPS (Million Instructions per.Sec)/ Equivalent	:	Specify
4.	DRAM memory capacity	:	Min. 4 GB
5.	Hard Disk Capacity Not less than 200 GB	:	140 GB
	Image Storage at least	:	200,000 at 256 x 256 Matrix
		:	Uncompressed
6.	CDR/W	:	Re writeable
	- Capacity at least	:	≥ 4.0 GB
	- Capacity (images/disk)	:	40,000 images at 256x256 Uncompressed
7.	Remote Diagnostics-Service Capability	:	Standard

VIII IMAGE PROCESSOR:

1.	Image Processor-RAM memory-minimum of	:	8 GB
2.	Image reconstruction time- 256 x 256 matrix	:	≥ 1000 images/sec in 256 x 256 matrix
3.	Reconstruction Matrix	:	Specify Range

IX. IMAGING SPECIFICATION:

1.	Off centre FOV	:	Essential – specify
	- Lateral		
	- AP		

X. SOFTWARE SEQUENCES BASIC:

A1

1. Spin Echo for 256x256 matrix
   - TE atleast : 4.0 msec or less
   - TR atleast : 13 msec or less

2. Gradient Echo for 256x256 matrix
   - TE atleast : 1 msec or less
   - TR atleast : 3 msec or less

3. Inversion Recovery
   - TE : Specify
   - TR : Specify

B FAST SEQUENCES:

1. Fast Spin Echo
   - min TE : Specify
   - min TR : Specify
   - Turbo Factor/Echo Train length minimum : 256
   - IR. TSE : Essential
   - Resolution Matrix 512 x 512 : Essential

2. Fast Gradient Echo
   - min TE : Specify
   - min TR : Specify

C ULTRAFAST SEQUENCES:

1. EPI
   - Type of EPI
   - Single Shot : Essential
   - Multi Shot : Essential
   - EPI Factor minimum : 256
   - EPI Acquisition Matrix
   - 64x64 : Specify
   - 128 x 128 : Specify
   - 256 x 256 : Specify

Imaging Sequences: :_Essential _____

a) Spin Echo.
b) Gradient Spin Echo.
c) Inversion Recovery.
d) Fluid Attenuated Inversion Recovery.
e) Fast field Echo.
f) Turbo field Echo.
g) Turbo Spin Echo with Turbo factor more than or equal to 25.
h) EPI (both multishot & Single Shot as mentioned above)
i) 2D/3D Time of flight.
j) 1024 x 1024 acquisition.
k) Phased Contrast Angiography.
l) Water excitation.
m) Measurement of flow velocity of deeper vessels and CSF should be possible.
n) Parallel Imaging Sequences – Image Space & K Space based.
o) Sequence for motion artifact correction for non-cooperative patients for all contrast & directions.
p) Isotropic 3D sequences like CUBE, SPACE, VISTA.
q) DTI & Fibre Tracking software with atleast 32 directions.
r) Advanced MULTI ORGAN motion correction techniques should included as standard.

9. Software Packages : Standard

a) Complete latest MR application package for Neuro/ Ortho/ Onco/ Body/ Cardiac/ Angiography etc.
b) All the software to do pediatric studies should be included.
c) Automated Contrast Bolus Tracking Sequence.
d) Advanced angio protocols for neck and head, peripheral angio & Abdominal, Vascular Imaging.
e) Non-contrast angio (ToF) for head and neck.
f) Small vessel angiography.
g) Flow quantification (Measuring blood/CSF flow rate non invasively)
h) Advanced version of Multi Phase Liver Imaging sequence package.
i) Sequence package for routine and Breast imaging.
j) High Resolution Diffusion Weighted Imaging for Brain, Body & also Spine (if available) with maximum possible b-value.
k) Whole body imaging / screening & CE angio in one go (one table movement, feet first patient entry, single contrast injection in case of CE Angio) with suitable coils and with different contrasts (T1, T2, STIR) using a single multistation study with completely automated table movement to enable metastases screening (coronal, Sagittal and axial images to be available in one scan) within 15 minutes for patient heights as tall as 6.5 ft or taller and full FOV coverage (50 cms in x-y plane) should be offered. Patient comfort, speed and coverage with good image

quality for such scans will be given priority. It should be possible to do the above procedure in one go without coil / connector change in between the exam.

l) System should be offered with SENSE / SMASH / I-PAT Plus/ ASSET/GRAPPA or equivalent technique with upto factor 8 minimum of acquisition time reduction in most sequences. Pls specify compatibility with sequences, Scan techniques and gating techniques clearly. It should be possible to combine parallel imaging in all directions and without any compromise in FOV, application and coils both in 2D and 3D

C. MR cardiac Package

- ECG Triggered Heart imaging : Essential
-

Advanced cardiac applications: Morphology/wall Motion: 2D/3D IR prepared sequences for Myocardial evaluation: Cardiac function including EF.ED/ES Volume cardiac output, wall thickening and wall thickness;

D MR diffusion imaging with maximum b value of 7,000s/mm2 : Essential
With automatic calculation of tensory trace images and ADC maps
The system should be available to perform multip direction diffusion Weighted imaging/diffusion tensor imaging and the same should be Possible on the main console /workstation

E 3D MRCP : Essential

F Functional imaging brain with colour coding and on line calculation of Z score on the main console/workstation : Essential

G MR Fluoroscopy : Essential

H Spectroscopy- the system should have the hydrogen, single voxel spectroscopy, multivoxel, multislice 2D,3D spectroscopy, PRESS, STEAM and also the chemical shift imaging in 2d/3d. The complete processing/post –processing software including color metabolite maps should be available on the main console and it should be quoted as standard. The advanced spectroscopy post processing software should allow to process Display, manipulate, analyze and print the spectroscopy data on the main console/workstation. It should be possible to have prostrate spectroscopy in conjunction with the surface coil including any other interface, or hardware and software required for this application. Breast/Liver Spectroscopy to be quoted as standard. Parallel imaging compatibility with Spectroscopy will be preferred and would be given added weight age : Essential

XII . ARTIFACT REDUCTION TECHNIQUES **:** Essential –Specify details.

XIII. FAT AND FLUID SUPPRESSION TECHNIQUES: Fat suppressed technique to get fat, water, in Phase out of Phase contrast in a single acquisition essential (Dixon, ideal 3 D Dual Echo)

XIV.DOCUMENTATION:

1.Compact Discs – 100 Nos.	: Essential-specify
2. Documenting –digital dry laser Camera size 17'' x 14'' with a resolution of 640 DPI/PPI	: Essential

XV. A/C AIR CONDITION SYSTEM:

15° C to 24° C Maintenance around the Clock	: Essential

XVI. UPS for entire MRI Backup time : Essential. Imported make Minimum 30 minutes.

XVII. POWER REQUIREMENT:

For entire system	: Specify
Chiller, it should be offered with 2 compressors.	: Essential
the system should be supplied with the imported RF cabin and interior for the same should be carried out suitably	
Documentation Camera	: Specify

XVIII. TERMS OF INSTALLATION: : The firm should be responsible for site evaluation and complete installation, full technical co-operation for alteration of existing building Complex etc., if needed. If Turnkey installation – Specify terms.

XIX. PLEASE SPECIFY ANY OTHER SPECIAL FEATURES

XX. MISCELLANEOUS:

1.	Application specialist visit atleast for six weeks to orient local technicians / Radiologists	: Essential
2.	Training two Radiologist for three weeks at a suitable centre in India (for each MRI equipment)	: Essential
3.	For each MRI equipment one well Experienced service and maintenance Engineer should be provided to attend the equipment round the clock	: Essential
4.	Free comprehensive warranty for equipment for 3 years (including parts)	: Essential
5.	5 years Liquid Helium supply and maintenance. (Mention the cost of liquid Helium per year after the 5 year Warranty period for the liquid Helium)	: Essential
6.	Up time Guarantee	: Minimum 95%
7.	Penalty for default of Uptime	: As mentioned in tender document
8.	AMC for 7 years after the expiry Warranty period	: Essential, specify details.
9.	Availability of spares (Furnish the cost of each spare)	: 7 Years Minimum Essential
10.	Date of Commencement of warranty	: After Installation, demonstration & proper functioning of equipment and handing over of the equipment.
11.	Freight and Insurance Coverage (Give details of Insurance facility of the equipment after installation)	: Essential
12.	Date of manufacture of the equipment and original data sheet of the equipment Quoted should be furnished along with tender form.	: Essential.

13 Remanufactured, Refabricated, Refurbished : Essential
Unit should not be quoted

14. At the time of supplying the unit, each unit : Essential
Should be provided with date of Manufacturing certificate for giving by the Authorized and authorized third party reputed Inspection agency

15. Imported RF cabin has to be provided as a scope of the supply. The itemized cost for the same has to be included in the offer. Medical Gas (O_2, N_2O, Air & Vacuum) outlets (for the anesthesia machine and suction jars) should be provided inside the RF cabin. Wooden Hushing, lighting, providing cabinets for phantoms and other instruments, power supply to Vital signs monitor, Anesthesia machine, etc., ventilation for He gas also should be provided. In addition to this, fire safety and other safety measures should be in place with signage.

16. List of accessories (to be quoted as standard) :

a) Dry Laser Camera.
b) Hand Held Metal Detector.
c) UPS to provide power supply backup for the complete MRI Scanner for at least 15 minutes.
d) MR compatible patient trolley.
e) Phantoms for all quality control protocols should be provided.

PREMISES:

The Purchaser will provide one suitable room of required dimensions for installing the MRI as also adjoining rooms of required size such as Equipment room, Console room, Patient
Waiting room, Change room and Reception. It is the responsibility of the Supplier to provide and finish the interiors of the rooms in all respects for successful installation and commissioning of the equipment to the satisfaction of the Purchaser. This shall include everything required for successful commissioning but not limited to the following.

i. **Civil Worsk :** Necessary Civil works like Platform, Pedestals, etc., if any, required shall be provided.
Proper Lead protection for Console and Gantry room to be provided

ii. **Flooring:** Shall provide and lay Anti-static flooring of 2mm thick, manufactured by reputed standard manufactuers as per BS 2050-1978. Colour as per Purchaser's requirement

iii. **False Ceiling:** Shall provide and fix false ceiling of Luxalon make (84 R) with necessary fixing arrangements as per manufacturers specifications. Colour as per Purchaser's requirement.

iv. **Walls:** Walls upto ceiling shall be provided with Ceramic glazed tiles of size 8" x 12" Colour as per Purchaser's requirement.

v. **Electrical:** The purchaser will provide main incoming power at one point near the MRI Room. The supplier shall supply and install the main incoming switch fuse unit from this point, separate lighting and power distribution boards and lay distribution lines required for all times installed with the MRI and electrical lighting for the main equipment and Console romm, Patient waiting room, Change room, etc.

The Supplier shall also quote separately the cost / R.M. for laying Electrical cable from the main supply point of the hospital panel board to MRI incoming power point.

vi Plumbing : Required Plumbing work shall be provided

6. 128 SLICE CT SCANNER

Tender Specification

FOR 128 SLICE CT SCANNER for ALL PURPOSE SCANNING INCLUDING CORONARY ANGIOGRAPHY

S.N Requirement

1 Installation of top of a line Spiral Multi-Slice CT Scanner with capabilities of acquiring 128 slices per 360 degree in body and Cardiac Scan.

2 **Mandatory Essential features:**

I Scan Time

The scan time for one gantry rotation of complete 360 deg. Should be 0.4 sec or better.

II Detector

a Detector should have facility to acquire 128 slices simultaneously in one rotation

b. **The detector shall have atleast 64 rows with each row having atleast over 670 elements**

c. **The detectors shall be large area detector with a Z axis coverage of 40mm per rotation**

d. . **The detectors shall cover 40 mm per rotation for standard and cardiac scans**

III Matrix Size

a Display Matrix of 1024 X 1024 or more.

b **Reconstruction Matrix of 512 X 512,**.

IV Slice Thickness for Spiral Mode:

a 128 slice acquisition with minimum thickness of 0.625 mm or less and 32 slice acquisition with minimum slice thickness of 1.25 mm or better

b Any variable slice thickness from 0.7mm-7.5 mm in spiral mode and 0.5 mm-10mm in axial mode

v **Gantry:**
a Gantry Aperture: 70 cm or more
b Gantry Tilt: +/-30 deg
c Scan Field of View: 50 cm or more

vi **Scanning Capability:**
a True 3 -Dimensional Cone beam correction technique shall be available in all modes of acquisition such as axial, spiral, 128 slice mode, and also in various application studies for whole body and cardiac.
b The ECG gated acquisition shall have high accuracy of real time monitoring and adapting continuously Heart rate changes into the ECG trigger delay during each scan. Prospective ECG gated axial Cardiac scanning mode should also available as standard.
c The acquisition shall be 128 slice mode for all studies including cardiac. Step & shoot or an equivalent algorithm during cardiac scanning for dose reduction will be an essential requirement.
d Dose modulation shall be available for all types of studies including ECG gated tube current modulation.
e Pediatric and infant base protocols shall be available based on the infant weight.
f **Real time contrast monitoring acquisition with auto scan initiation protocol and with auto injector trigger**
g Latest Iterative reconstruction technique launched by company used for low dose scanning should be offered as standard.

vii Resolution
a The High contrast Resolution should be atleast 21 lp/cm for axial and spiral scan at cut off. (Specify the phantom used, scan time, mA, Filter for image reconstruction scan field dose slice and MTF),

b The low contrast resolution should be at least 4 mm at 3.0 HU. Dose to be less than 28Mgy. Measurement to be based on 20 cm CATPHAN. (Specify scan time, mA, filter for image reconstruction, scan field, slice).

Desirable features as detailed under:

3 **Pitch:** to be freely selectable in auto mode and also manual 0.15 -1.5

4 **Patient Couch:** The table should have a metal free scannable range of at least 160 cms

5 **X-Ray Generator:**
The Generator should be of high frequency type and having at least 80 KW output with

max current of 500 mA or more. Mention kV selections.

6 **X-ray Tube:**
Tube of high heat storage capacity **8 MHu** or more with effective storage of 25 Mhu. Peak Heat dissipation rate of Anode should be at least **1600 Khu/min**.

7 **Operator Console:**

a It should have a large 18" or more high resolution LCD monitor with a display 1024 X 1280 matrix or more. Dual monitor console one for scanning and one processing

b The System should be user friendly with all functions menu driven. It should be modern user interface.

c All functions including scanning image reconstruction film documentation, archiving, transferring, MPR Angiography maximum intensity projection, volume rendering, 3D SSD, CTAngio , vessel measurement, small volume quantification, Virtual endoscopy software for visualization of vessels and air filled structures and Colonography software for virtual endoscopic, colon study, Dental Planning software for panoramic views and cross-sectional cuts of mandible/maxilla and Brain & Body Perfusion, Lung Nodule Assessment should be possible on this operating console and on the independent workstation simultaneously.

8 **Computer System & image processor**

a 64 Bit/32 Bit main CPU with at least 2GB RAM memory or better.

b. High speed CPU using Pentium IV ore better running at 3.0 GHz or better

c. Hard disc of 250 GB Or more.

d. Image storage of 4,00,000 or more of 512 matrix

E CD archive with 600 or 700 MB capacity Discs

F **Image Processor: Operating system shall be windows based**

G **The image reconstruction time should be at least 20 images /per second or better for all types of acquisition modes including Cone beam correction, Neuro Imaging studies and 512 matrix. and standard pitch**

9 Workstation

a This should be additional and a Remote Workstation with 2 nos of 18" LCD monitors for post processing, filming,

b It shall be independent fully and be DICOM 3.0 compliant for multi modality study review.

c The computer shall be the latest state of art Pentium processor working on Windows base platform for ease of use

d It shall be a high speed CPU with a speed of 3.0 GHz or better and with an independant Hard disc storage capacity of 125 GB or more

Two more remote stations (Thin client base) for image review & posp-processing facility with all post-processing functions including cardiac, as is available in the main workstation and can be placed anywhere inside the hospital.

10 **Spiral/Helical Technique:**

a Scan length of at least 100 secs continuous.

b Should have facility of Multi-spirals bi-directional spirals and back-to-back spirals.

11 Software: DICOM 3.0 capability

a Software for cerebral perfusion study with stroke protocal

b MIP, Volume MIP, CT Angio software with quantitative vessel analysis, Virtual endoscopy software for visualization of vessels and air filled structures and Colonography software for virtual endoscopic, colon study, Dental Planning software for panoramic views and cross-sectional cuts of mandible/maxilla and Brain & Body Perfusion, Lung Nodule Assessment.

c. Volume rendering technique with axial cross reference imaging along with measurement tools on volume rendered image 3D, 3D Small volume measurement package MIP Slab viewer

d Calcium Scoring software for coronary arteries

e **Complete cardiac package with ECG gated studies (prospective and retrospective tagging) with**

i Cardiac review with analysis functions such as Ventricular motion, short axis/ long axis view, central stenosis analysis, regional wall motion studies

ii coronary angio,

iii coronary tree extraction ,

iv one touch volume rendering of the whole heart,

v ECG gated dose modulation,

vi Calcium and coronary angio reporting.

vii Cardiac study reconstruction must be high speed of atleast 20 images per second

viii Prospective ECG Gating cardiac scan

12 OTHERS

A Software for Remote Diagnostics Service over a telephone line

B ECG Gating gadgets.

C System must be PACS interface ready without any new hardware or software.

D Fully DICOM 3.0 compliant including:

i DICOM Modality worklist, with automatic procedure selection

ii capability from HIS- RIS interface. .

e Dose saving protocols must be available including:

i automatic tube current selection suited for selected exam

ii r dynamic on the fly tube current modulation while scanning

iii ecg gated dose modulation to reduce dose during undesired cardiac phases

iv Dose displays such as CTDI volume, DLP , Dose efficiency

13 **Hard Copy Unit:**

A Dry Camera with Digital Interface and control integrated with main console and workstation, Camera should print on 14" X 17" film size , **at 500dpi** and a Colour Laser Printer for Printing Coronary Scans.

14 **Patient Accessories**: All patient positioning accessories including head rest

should be included

15 **Accessories:**
Dual Head Pressure Injector with 500 syringes
120kVA UPS for entire CT system with 30 minutes backup. Should be of USA or European origin.

16 **Miscellaneous:**

Country of origin of the Main Equipment: USA and or Europe

Warranty period: 1 year.

CE marked & FDA (USA) approved.

17. **Turnkey**:
Complete turnkey work for the site preparation including false ceiling, cable ducting, lighting, earthing, lead lining on the doors, painting of the rooms and all other work necessary for installation of the equipment need to be done by the supplier.

18. **Training**:
On site clinical training of 4 weeks to be provided over a period of one year.

PREMISES:

The Purchaser will provide one suitable room of required dimensions for installing the CT Scanner as also adjoining rooms of required size such as Equipment room, Console room, Dark room, Patient Waiting room, Change room and Reception. It is the responsibility of the Supplier to provide and finish the interiors of the rooms in all respects for successful installation and commissioning of the equipment to the satisfaction of the Purchaser. This shall include everything required for successful commissioning but not limited to the following:

i. **Civil Works** : Necessary Civil works like Platform, Pedestals, etc., if any, required shall be provided.
Proper Lead protection for Console and Gantry room to be provided.

ii. **Flooring** : Shall provide and lay Anti-static flooring of 2 mm thick, manufactured by reputed standard manufacturers as per BS 2050-1978. Colour as per Purchaser's requirement.

iii. **False Ceiling** : Shall provide and fix false ceiling of Luxalon make (84 R) with necessary fixing arrangements as per manufacturers specifications. Colour as per Purchaser's requirement.

iv. **Walls**: Walls upto ceiling shall be provided with Ceramic glazed tiles of size 8 " x 12". Colour as per Purchaser's requirement.

v. **Electrical**: The purchaser will provide main incoming power at one point near the CT Room. The supplier shall supply and install the main incoming switch fuse unit from this point, separate lighting and power distribution boards and lay distribution lines required for all items installed with the C.T.Scanner and electrical lighting for the main equipment and Console room, Dark room, Patient waiting room, Change room, etc.

The Supplier shall also quote separately the cost / R.M. for laying Electrical cable from the main supply point of the hospital panel board to C.T.Scanner incoming power point.

vi. **Plumbing**: Required Plumbing work shall be provided.

vii. Air conditioners – 2 Tons x Five units with Individual stabilizers.

7. WHOLE BODY MULTI SLICE CT SCANNER(4 SLICE)

Technical Specification for Whole Body Multi Slice CT SCANNER (Four Slices Per Rotation or Equivalents)

The Model offered should be High end model under current production, should be Slip Ring Technology. Refurbished, Gold Seal Units will not be accepted. The offer should meet the Specifications as follows

Gantry:

1. The CT Scanner should have low Voltage Slip Rings incorporated in the Gantry
2. The Minimum scan time for a 360 Degree rotation should be **Sub Second of at least 0.8 Sec and specify the Scan time offered in the Tender.**
3. The gantry should have a minimum tilt of 25 degrees on either side and remote tilt should be available as standard.
4. The gantry should be provided with User control panels on either side for easy positioning
5. **The sub millimeter slice of 0.75 mm or less is required for Special Studies.**
6. The Gantry should have 3D Positioning Laser lights.
7. The Scan field or view (FOV) in acquisition mode should be at least from 200mm to 450mm with intermediate Steps for scanning different anatomies. **Recon FOC of 60 cm if available should be offered for Oncology applications**
8. Aperture should be at least 70 cm diameter.

X ray section:

1. The X ray Generator should be compact and inbuilt in the Gentry.

2. The Effective X ray power (KV x MA) should be 35 kw and above
3. **The MA range available should be between 10 to 300 MA or more with increments in steps of not more than 10 ma.**
4. The X ray Tube should be essentially Dual Focus with capacity of at least 3.5 MHU. Liquid beating X ray Tune is desirable. Any special feature of the X ray tube to be highlighted with literature.
5. Specify the focal Spots of the X-ray tube.
6. The X ray tube should have a cooling rate of not less **than 700 KHU per Min**
7. The X ray tube Cooler Unit should be in built in the Gantry

Detectors:

1. The Detector offered should be Solid State. Specify the Material
2. **The Effective Elements/ Channel should be at least 650 per row.**
3. **It should be possible to achieve Four Slice Acquisitions with better Coverage / Rotation to manage the Throughput in a Government Hospital.**
4. Specify the Fan Angle of the X ray and the geometry The detectors should not require frequent calibration

Patient Couch:

1. The Patient table offered should have a minimum load bearing capacity of at least 160 KG.
2. The minimum table top height should not be more than 50 cms from the floor level for easy transport of trauma patients.
3. The floating table top width should be at least 38 cms for better comfort
4. The range of metal free scan should be at least 165 cms.
5. The vertical range should be at least 40 cms (max height – min height)
6. Specify the reproducing accuracy of the table.
7. Remote UP/DOWN, FWD/BWD of the Patient Couch should be standard

Spiral / Helical Section:

1. **The system offered should have Spiral Capability of at least 100 seconds & above. Real Time Spiral @ 4 f/s should be standard.**
2. The range of Spiral facility in Axial Direction should be more than 100 cms.
3. The Real time Reconstruction Time in Spiral scan should not be more than 200 Milli seconds.
4. The system should have the Smart Prep or equivalent facility & ability to track contrast medium to trigger scan should be **included in the scope of Supply. Facility of Multiple ROI marks to Trigger Bolus is desirable.**
5. **System performance in Tilt Spiral scan as standard at any of the chosen angles in Multi Slice Mode is desirable.**
6. **Hi Res scan package of 0.63 mm or less should be offered as standard**

Computer Section:

1. The Computer offered should be the Latest Multi tasking processors and a menu driven platform with a RAM size of at least 3 GB
2. The Monitor should be the latest Color of at least 18 inches and flat screen. The display matrix should be at least 1024/2024.
3. The reconstruction time for a Axial scan should not be more than 300 Milli seconds.
4. The Hard disk Capacity for both Image and Raw data should be more than 100 GB
5. It should have facility to store at least 100,000 Images
6. The system should to supported with archiving facility of CD
7. DICOM facility to send, store, print, receive, Query/ Retrieve/ MWM/ MPPS should be standard.
8. PC Based connectivity should be standard for easy transfer of Images & Report.

Image Processing section:

1. The system should have standard software like 3D Volume rendering, MIP, CT Angio of the Extremities like Head / Neck/Liver / Kidneys / Limbs, **CT Based DSA facility for Neuro Applications should be included in the Offer.**
2. A State of the Art Extra Work Station with at least 4 GB RAM & 19 Inch monitor such as Advantage Windows or Equivalent with a Facility to Reconstruct 2D/ 3D/ VRT / Max IP/ CT Angio grams/ Navigator / Dental Scan / Multi Modality Fusion to Correlate the MRI & Ct Images should be offered as Standard. A Colour Laser Printer of a Resolution of 1200 dpi x 1200 Dpi with DICOM Print facility should be offered as standard. The Print Speed should be at least 15 Pages / min. Specify the Model offered in the Tender.
3. The Routine Software Required for the Analysis and display of 2D Images should be standard. Direct display or MPR images immediately after scan is preferable.
4. DICOM Facility of DICOM Send / Receive / Query / Retrieve / MWM / MPPS should be supplied with the System.

Resolution:

1. The System Spatial Resolution should be mentioned with parameters.
2. The Low contrast resolution should not be more than 4 mm at 0.5 %. Shoulder, Pelvis Streak Artifact suppression Software should be standard.
3. Noise Suppression protocols to maintain LCR at low dose should be standard.
4. Special software (Like MA modulation in Routine) to ensure Dose efficiency should be standard.
5. Specify the CT Dose index.

Accessories:

1. A minimum of 4 ton capacity AC of (2x2ton capacity) for gantry and a minimum of 2 ton capacity AC (1x2ton capacity) for console room shall be provided.

2. Multi sixe Dry Laser Imager of Reputed Make & Lead Glass of 60 cm x 120 cm
3. Stabilizer for the Entire system of suitable capacity
4. 10 KVA UPS with One hour back up of suitable capacity to handle CT Computer, Laser Imager, Work Stations, and Colour Printer.
5. Dual Phase Pressure Injector or reputed make with 100 No: Syringes & Tubings.

Warranty:

1. Three Years for CT Scanner System including X ray and all accessories
2. The offer should be accompanied by Original data sheet/brochure of the product.
3. The Cost of the CMC (Comprehensive Maintenance Contract) inclusive of the X ray tune should be quoted from 4th to 10th year inclusive of labor, spares and X ray tube. The CMC should cover all vender items and local accessories. This will be added to the cost for evolution of the Tender and to arrive at the Lowest Bid.
4. All compliance to the Tender should be in the form of Original Data sheet or Original Certificate from then manufacturer. Items under Work in Progress will not be considered.
5. FDA / CE & AERB Approval or Type NOC to be submitted in the Tender. The Above Specifications are generalized and any offer equivalent or better can be offered with suitable Date sheets.

PREMISES:

The Purchaser will provide one suitable room of required dimensions for installing the CT Scanner as also adjoining rooms of required size such as Equipment room, Console room, Patient Waiting room, Change room and Reception. It is the responsibility of the Supplier to provide and finish the interiors of the rooms in all respects for successful installation and commissioning of the equipment to the satisfaction of the Purchaser. This shall include everything required for successful commissioning but not limited to the following:

i. **Civil Works** : Necessary Civil works like Platform, Pedestals, etc., if any, required shall be provided.
Proper Lead protection for Console and Gantry room to be provided.

ii. **Flooring** : Shall provide and lay Anti-static flooring of 2 mm thick, manufactured by reputed standard manufacturers as per BS 2050-1978. Colour as per Purchaser's requirement.

iii. **False Ceiling** : Shall provide and fix false ceiling of Luxalon make (84 R) with necessary fixing arrangements as per manufacturers specifications. Colour as per Purchaser's requirement.

iv. **Walls**: Walls upto ceiling shall be provided with Ceramic glazed tiles of size 8 " x 12". Colour as per Purchaser's requirement.

v. **Electrical**: The purchaser will providase main incoming power at one point near the CT Scanner Room. The supplier shall supply and install the main incoming switch fuse unit from this point, separate lighting and power distribution boards and lay distribution lines required for all items installed with the CT Scanner and electrical lighting for the main equipment and Console room, Patient waiting room, Change room, etc.

The Supplier shall also quote separately the cost / R.M. for laying Electrical cable from the main supply point of the hospital panel board to CT Scanner incoming power point.

vi. **Plumbing**: Required Plumbing work shall be provided.

vii. A minimum of 4 ton capacity AC of (2x2ton capacity) for gantry and a minimum of 2 ton capacity AC (1x2ton capacity) for console room shall be provided.

8. CR SYSTEM

GENERAL SPECIFICATIONS FOR CR SYSTEM:

The CR system shall comprise of:

1. Image reading (CR reader) / Digitizer
2. CR Cassettes – different sixes
3. Nearby Preview Terminal
4. Patient Identification Data Entry Terminals
5. RIS interface system
6. Image Processing / CR Workstation
7. DICOM printer (SCP / SCU) (Dry Camera)
8. Accessories and Consumables
9. Web Based Image distribution (Optional)

Specifications:

1. CR Readers with capability for distributed CR reading.
2. PC based ID terminals and preview terminals, should be portable for installing in X-ray room of choice or suited to Workflow.
3. With strict compliance to current DICOM 3.0 standards and with service classes a specified clearly in the subsequent requirements.
4. CR system should be capable of acquiring data with minimum resolution of 1 line per mm with good Modulation Transfer: Function. Spatial resolution of the digital image shall be at least 2040 x 2040 x 12 bit depth.

5. The CR Cassette Turnaround time (Cassette Readout and Erase time together) should to faster such that Cassette processing rate should be at least 70 plates / hour.
6. CR Cassettes of Varying sizes1)
   i) 17” x 14” - Nos.
   ii) 14”x 14” - Nos.
   iii) 10” x 12” - Nos.
   iv) 12” x 12” - Nos.
   v) 8” x 10” - Nos.
   vi) 6” x 12” - Nos.

7. Quality Control system with periodic calibration mechanisms and phantoms to be provided.
8. A Background SQL database of choice should provide provisions for maintaining patient data, DICOM images (Lossless) and reports stored in a searchable form.
9. The cassettes should be resistant to
   i) Electrostatic charging and Mechanical damage for reasonable handling
   ii) The Cassettes should have Lead backing to control back scatter
10. Mechanism for Auto detection of cassettes in the Holder slot of CR reader is needed.
11. The CR cassettes should be capable of storing Patient Demographic Data and the CR Cassette Reader should automatically utilize this data for its DICOM functionalities. A computerized mechanism for reading and writing patient Data on the cassettes
12. Interfacing with HIS/RIS/Proprietary standards should be provided as necessary.
13. The System should accept Exposed cassettes even without patient demographics, for Emergency trauma cases.
14. Auto routing newly acquired Images via CR workstation / Image evaluation terminal to desired Preview Monitor for quick body part positioning check.
15. Preview modules should be available adjacent to the CR Reader for easy review and should have indication for alerting over Exposure.
16. Start up time of whole system should be not be more than 10 minutes for emergency use.
17. Mechanism for auto-routing of newly acquired images to preconfigured workstation and in case of emergency to Re-route the Images to one of the other preconfigured CR workstation.
18. The CR Reader buffer should hold at least the least 10 scanned images retrievable
19. The system should provided means to prioritize the transfer to CR workstation for emergency reports

20. Mechanism for printing multiple images in one film, with the optional capability of side and true size printing.
21. Should have WYSIWYG (What You See Is What You Get) output for print formatting.
22. Suitable standard uninterrupted power supply (UPS) system should be included.
23. DICOM Printers should be with minimum of 500 dpi resolution with complete DICOM compliance
24. DICOM Workstation Monitors should meet the high contrast and high brightness required for radiology reporting with resolution s above 2k.
25. Training on- site for Radiologists, Radiology Technicians, System Administrators

9. FLAT PANEL NEURO BI-PLANE DIGITAL SUBTRACTION ANGIOGRAPHY SYSTEM

General Description

1. Proposed system should be a dedicated biplane system for neuro angiography and interventional procedures.
2. The system should be state of the art, high resolution flat detector technology.
3. The system should be capable of real times digital angiography acquisition.
4. Rotational angiography possibility should be available.

Gantry

5. The system should have two C arm gantries: one floor mounted and one ceiling suspended providing full body coverage. Both gantry movements should be rapid, motorized and collision proof.
6. The frontal plane rotation range for LAO and RAO should be at least ± 120 degrees.
7. The frontal plane angulation range for CRAN/CAUD should be at least ± 45 degrees.
8. Both gantries should have fast speed for angulations and positioning. The frontal system should have a speed of at least 15deg/sec for all positions and lateral plane should have a speed of at least 8deg/sec.
9. Full configuration, positioning range, speed, weight of the c-arms with and without the tube / detector assembly should be clearly mentioned in the offer.
10. The system should have at least user defined 25 programmed positions and angulations of c-arm.

Patient Table

11. The table should be ergonomically designed, with a trendelenburg tilt facility of at least ±15 degrees.
12. The table should adequately support tall patients with a length of not less than 300cm and heavy weight at least 150kg.

13. The table should have motorized, longitudinal, vertical travel and floating table top for longitudinal and transverse movements with electromagnetic locking facility.
14. All patient positioning accessories to be supplied should be mentioned.

X-Ray Generator and Tubes

15. The generator should be high frequency (100KW) microporcessor controlled for constant output for radiography and fluoroscopy.
16. Radiography KVP range should be between 40 – 125KV.
17. Generator should have automatic exposure control device for radiography, fluoroscopy and angiography mode.
18. Generator should have tube overload protection.
19. Anode heat storage capacity for the X-Ray tubes should be 2.4MHU or more having liquid bearing technology or metal lubricant for optimal heat dissipation and noiseless operation. Maximum continuous heat dissipation rate should not less than 2.5kW.
20. The system should have adequate cooling facility for the X-Ray tubes for uninterrupted performance and should have long shelf life. Please mention.
21. The system should have continuous fluoroscopy output power of 3000W to permit continuous operation without delays and better image quality in extreme angulations.
22. In the system dual/triple focus spots should be available with micro focus for neuro interventional applications together with pulsed fluoroscopy capability.
23. Additional beam filtration of atleast 1.0 mm Cu equivalent. Different filter sizes to be freely selectable at the table side for any patient weight for maximum radiation safety to staff and patients

Flat Panel Detectors

24. Both detectors should be identical in panel size and fields of view.
25. The panel size should be 30x40cm on both detectors with identical field of view.
26. Please mention detector zoom fields.
27. Detector quantum efficiency should be 65% minimum in both flouro and record.
28. Detector pixel size should be at least 160 microns, the lower will be preferred for better resolution.

Monitors

29. Three TFT/LCD monitors at least 18" in size, for each plane for display of live, reference and subtracted image with high resolution flicker free display should be provided.
30. Monitors should be of flat TFT technology permitting high resolution image display & undistorted viewing from any angle in ambient lighting.
31. Similarly two TFT monitors for each plane live image with high resolution display in the control room should be provided.
32. Additional 18” high resolution color TFT monitor should be provided in the examination room.

33. The TV stand should be ceiling suspended & easily maneuverable to suit the operators' viewing.
34. Display of parameters of the tube, radiation dose, c-arm positions & orientation should be provided on the monitors in the examination room.

Digital Imaging System & Software

35. System should have a fully digital 2K image processing for improved detailed visualization of small structures.

36. Availability of Vascular analysis software both in examination room and console room.
37. System should be capable of virtual collimation of the shutters and wedges in the last image to reduce the xray dose.

38. Grab function to allow storage and archiving of both a fluoro image.

39. Lower & Upper Body Protection Shield to be provided.

40. Biplane digital pulse fluoroscopy at variable pulse frequencies from 10 to 30p/s should be available at 1024x1024 matrix preferably with real time and motion detection.
41. Facility to use the reference image as a roadmap by superimposition of fluoro image on the reference image should also be provided for both planes.
42. It should have the capability to acquire digital online subtracted images in 1024x1024 matrix, 14bit depth, in biplane mode with standard acquisition speed of 0.5 to 7.5 frames or more per second.
43. It should have a minimum image storage capacity of 50,000 images in 1024x1024 matrix.
44. System should be DICOM compatible and PACS connectivity should exist
45. Archiving of all the patient images on a CD/DVD should be provided.
46. The digital system should have high resolution subtracted fluoroscopy in both planes (simultaneous & random). It should be possible to display subtracted and native images for both planes simultaneously alongside the reference image in the examination room.
47. Automatic pixel shift during road-mapping should be available.
48. Access to all series / images should be fast & possible from the control room as well as the examination room.
49. Digital rotational angiography at a speed of upto 50deg/sec or more should be available.
50. System should have advanced image processing techniques for; real time edge enhancement, real time harmonisation, real time noise reduction and dose correction algorithms.
51. The system should be capable of giving 3D image and CT image from the same acquisition.

Intervention Tools
System should have integrated 3D Rotational Angiography application wherein the rotational scan data can be automatically sent to integrated interventional tool for creating 3D view for lesion assessment.

System should have a integrated 3D workstation to for reconstruction of images in 3D and display of 3D images and control in examination with following advanced features
•Reconstructive zoom
•Automated vessel analysis
•Virtual stenting
•Aneurysm analysis
•Catheter tip shaping
•CalciView
•SpineView

Soft Tissue Imaging: CT option to visualize soft tissue by rotational scan of the cathlab gantry. The CT 3D volume can be viewed in control room and examination room also. Contrast resolution for soft tissue imaging should be upto 5HU.

Subtracted Bolus Chase: For visualisation of lower peripheral vessel structures wherein the contrast bolus is followed interactively by a motorized table scan movement.

3D Dynamic roadmapping to reduce contrast and time, should allow overlay of real-time 2D fluoro images , CT images (Acquired in Cath) on the 3D vessel image to see the advancement of the guide wire, catheter and coils on the 3D volume in real time. Roadmap should have presets application wise (Abdomen, Peripheral & Neuro). Should also be able to select the Procedures like Navigation, Coil, stent, Glue, Particle in the Roadmap to visualize different materials.

System should have software to Percutaneous needle guided biopsies, drainages etc. by creating virtual paths on CT datasets. It should be possible to overlay live fluro in real time on CT image to see the progression of the needle to the target area.

The 3D images should be able to superimpose on the acquired CT datasets.

CD Recording and Archival
DICOM 3.0 based CD recording for recording on CD. CD review of DICOM CD's.
System should have ability to record DSA runs on the CD and the embedded viewer should support review of these DSA runs at referring physicians PC.
The workstation provided should have the ability to view CT and MR images also.

Pressure Injector

Suitable UPS for the complete lab

Lead Glass 100*80 cms

Lead Protection Accessories (lead aprons and thyroid shields) 6 nos each.

Dicom dry laser camera minimum 600 dpi resolution.

Pressure monitoring system capable of monitoring 2 invasive pressures and 3 lead ECG. Other functions should include NIBP, SPO2 measurements.

Standards and Safety

52. System should be FDA & CE approved.
53. System should conform to standards for electrical safety IEC-60601 / IS-13450
54. Should comply with AERB Guidelines.

Optional:

MR/CT Roadmap: Should extend the capabilities of the integrated 3D product by providing a sustainable 3D roadmap based on previous acquired CT or MR scans to support interventional procedures. The MR/CT Roadmap option should be able to match the real-time 2D fluoroscopy images with the 3D volume of CT or MR.

SECTION VI-A : QUALIFICATION CRITERIA

(Referred to in Clause 11.2 of ITB)

For determining the lowest-evaluated bid, the Purchaser shall carry out the post qualification of the Bidder in accordance with ITB Clause 11.2, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

1. <u>Manufacturer Bidders</u>

(i) The bidder must have manufactured and supplied satisfactorily the similar model ***quoted*** *in each schedule of the Schedule of Requirements either directly or through of any other authorized dealer to the extent of at least 1 No. under "Section – V, Schedule of Requirements" in any one of the last five years* ***of which minimum 1 No. should have been supplied to Indian Institution*** *and should be in use satisfactorily with no adverse report for at least one year preceding the date of bid opening.*

(ii) The Bidder should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the manufacture and supply of the required equipment within the specified time of completion after meeting all their current commitments.

(iii) The bidder should clearly confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the purchaser or his representative for inspection.

2. <u>Non- Manufacturer Bidders</u>

In the case of a Bidder offering to supply Goods under the Contract that the Bidder does not manufacture or otherwise produce, ***<u>the Bidder should be duly authorized by the manufacturer of the Goods who meets the criteria under (1) above</u>*** *(all supporting documents/information as asked above for manufacturer shall be submitted with the bid) and*

a) The manufacturer furnishes a legally enforceable authorization in the prescribed Form [Section XII] assuring full guarantee and warranty obligations as per GCC and SCC for the goods offered; and
b) The bidder, as authorized by the manufacturer, must have supplied and provided after sales service to the extent of at least 1 No. of the quantities of ***similar model*** *in the Schedule of Requirements in any one of the last five (5) years* ***to Indian***

***Institution**, which must be in satisfactory operation at least for one year on the date of bid opening.*

3. <u>Common to Both Manufacturer and Bidder</u>

(i) The information on past supplies and satisfactory performance should be given in the Proforma given under Section-XI.

(ii) Documentary evidence (end users certificate) in support of the satisfactory operation of the goods as specified above shall invariably furnished.

(iii) Data to support that the manufacturer has the financial and production capacity to perform the contract and complete the supplies within the stipulated delivery period shall be furnished. for the non-manufacturer bidder data to support that he has the financial capacity to perform the contract and complete the supplies within the stipulated delivery period shall be furnished. Reports on financial standing shall be in the form of profit and loss statements, balance sheets and auditors report for the past three years, bankers certificate, etc.,

a) The bidder should have a manufacturing capacity of atleast 18 Nos. for Sl.No.1 to 3, 5 to 9 and 36 Nos. for Sl.No.4 of similar capacity machines per annum certified by licensing authority/ chartered accountant.

b) The annual sales turnover for the bidder should be atleast of Rs.60.00 lakhs for Sl.No.1, Rs.15.00 lakhs for Sl.No.2 & 8, Rs.20.00 lakhs for Sl.No.3, Rs.25.00 lakhs for Sl.No.4 and Rs.500.00 lakhs for Sl.No.5, Rs.600.00 lakhs for Sl.No.6 & 9, and Rs.400.00 lakhs for Sl.No.7, in any one of the last three years (2006-07 to 2009-10), and it should be certified by the chartered accountants.

c) The bidder should have a cash/ credit limit of atleast of Rs.15.00 lakhs for Sl.No.1, Rs.3.75 lakhs for Sl.No.2 & 8, Rs.5.00 lakhs for Sl.No.3, Rs.6.25 lakhs for Sl.No.4 and Rs.125.00 lakhs for Sl.No.5, Rs.150.00 lakhs for Sl.No.6 & 9, and Rs.100.00 lakhs for Sl.No.7 with their bankers exclusively for this contract and a certificate for the above shall be furnished by the bankers.

(iv) Further, the manufacturer should be in continuous business of manufacturing / supplying and after sale services of products similar to that specified in the 'Schedule of requirement' during the last 5 years prior to bid opening. In case of non-manufacturer bidders, this condition should be satisfied by the manufacturer of the product.

(v) The legal status, place of registration and principal place of business of the company or firm or partnership, etc.;

Notwithstanding anything stated above, the purchaser reserves the right to assess the bidder's capabilities and capacity to execute the contract satisfactorily before deciding on award

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or record of poor performance such as, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

Note:

1) The above post qualification requirements are to be met by the bidder (in case of manufacturer bidders) and the bidder and the manufacturer respectively (in case of non manufacturer bidders) and qualification of group/sister/parent companies will not be considered for meeting the above requirement.

2) For the purpose of furnishing documentary evidence to meet the post qualification criteria, the bidder should furnish the following:

a. *The supply made to public sector/Government units in India/private sector, the bidder should submit an affidavit confirming that the performance statement given is correct along with copy of purchase order, copy of invoices, proof of payment received from Purchasers, documentary evidence (end user certificate) in support of satisfactory completion of orders and function as stated above."*
b. *The foreign manufacturer is permitted to submit an affidavit in their letter head duly signed by the authorized signatory of the manufacturer confirming that the performance statement given is correct.*

SECTION VII : BID FORM AND PRICE SCHEDULES

Date:.....200
Contract No.....

To:

Gentlemen,

Having examined the Bidding Documents including Addenda Nos....., the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver.....
(Description of Goods and Services) in conformity with the said Bidding Documents for the sum of..... (Total Bid amount in Words and Figures) or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our bid is accepted we will obtain the guarantee of a bank in a sum equivalent to 5% of the Contract Price for the due performance of the Contract, in the form prescribed by the ***Purchaser***.

We agree to abide by this bid for a period of .....(Number) days from the date fixed for bid opening under Clause 20 of the Instruction to Bidders and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this..... day of ..... 200..

Signature : .....
(in the Capacity of) : .....

Duly authorised to sign bid for and on behalf of
.....

PRICE SCHEDULE

1	2	3	4	5						6	7	8
				PRICE FOR EACH UNIT								
Sch No.	Item Description	Country of origin	Quantity & Unit	Ex-factory Ex-warehouse Ex-showroom off-the shelf (a)	Excise duty, if any (b)	Packing & forwarding (c)	Inland transport, Insurance and Incidental costs incidental to delivery (d)	Incidental services as listed in clause 7 of SCC (e)	Customs duty (f)	Unit price a+b+c+d+e+f	Total price per schedule for delivery at final destination (4 x 6)	Sales and other taxes payable if contract is awarded
	Dept. of Radiology											
1.	Ultrasonogram-4D Doppler as per specification											
2.	Ultrasound mid end as per specification											
3.	Ultrasound high end as per specification											
4.	Digital radiography system as per specification											
5.	1.5 Tesla magnetic resonance imaging equipment as per specification											
6.	128 slice ct scanner as per specification											
7.	Whole Body Multi Slice CT SCANNER(4 slice) as per specification											
8.	CR system as per specification											
9.	Flat Panel Neuro Bi-Plane Digital Subtraction Angiography System as per specification											

i. Unit price in (6) (Rs in words)

1. Ultrasonogram-4D Doppler as per specification…….…….
2. Ultrasound mid end as per specification …….…….…….
3. Ultrasound high end as per specification …….……
4. Digital radiography system as per specification …….……..…….

5. 1.5 Tesla magnetic resonance imaging equipment as per specification ……..…….…….
6. 128 slice ct scanner as per specification……..…….
7. Whole Body Multi Slice CT SCANNER(4 slice) as per specification……..……..……..…….
8. CR system as per specification……..……...
9. Flat Panel Neuro Bi-Plane Digital Subtraction Angiography System as per specification……..……

a) Annual Maintenance Charges (labour only) per year /per unit for 7 years after 3 years free warranty maintenance period

1. Ultrasonogram-4D Doppler as per specification…….…….
2. Ultrasound mid end as per specification …….…….…….
3. Ultrasound high end as per specification …….……
4. Digital radiography system as per specification …….……..…….
5. 1.5 Tesla magnetic resonance imaging equipment as per specification ……..…….…….
6. 128 slice ct scanner as per specification……..…….
7. Whole Body Multi Slice CT SCANNER(4 slice) as per specification……..……..……..…….
8. CR system as per specification……..……...
9. Flat Panel Neuro Bi-Plane Digital Subtraction Angiography System as per specification……..……

b) Annual Maintenance Charges (Comprehensive) for 7 years / per year / per unit after free warranty maintenance period

1. Ultrasonogram-4D Doppler as per specification…….…….
2. Ultrasound mid end as per specification …….…….…….
3. Ultrasound high end as per specification …….……
4. Digital radiography system as per specification …….……..…….
5. 1.5 Tesla magnetic resonance imaging equipment as per specification ……..…….…….
6. 128 slice ct scanner as per specification……..…….
7. Whole Body Multi Slice CT SCANNER(4 slice) as per specification……..……..……..…….
8. CR system as per specification……..……...
9. Flat Panel Neuro Bi-Plane Digital Subtraction Angiography System as per specification……..……

Note:

(a) In case of discrepancy between unit price and total price, the unit price shall prevail.

(b) **This price schedule should be placed in separate sealed cover "Cover B"**

(c) Service tax applicable for Annual Maintenance Charges shall be indicated separately. Otherwise it will be considered as included in the rates quoted.

Place : Signature of Bidder.....……..

Date : Name ……

Business Address ……

SECTION VIII : CONTRACT FORM

SECTION VIII: CONTRACT FORM

THIS AGREEMENT made the ..... day of ....., 20..... between ..... (Name and Address of ***Purchaser***) represented by the Managing Director ..... (hereinafter "the ***Purchaser***") of one part and .....(Name and Address of Supplier) ..... (hereinafter "the Supplier") represented by …… (Name of the Authorized Signatory and Designation), Aged …..... years, residing at …… (Full Residential Address of the Signatory) of the other part:

WHEREAS the ***Purchaser*** is desirous that certain Goods and ancillary services should be provided by the Supplier, viz., ... (Brief Description of Goods and Services) and ..... has accepted a bid by the Supplier for the supply of those goods and services in the sum of ..... (Contract Price in Words and Figures) (hereinafter "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall be deemed to form and be read and constructed as part of this Agreement, viz.:

   (a) the Bid Form and Price Schedule submitted by the Bidder;

   (b) the Schedule of Requirements;

   (c) the Technical Specifications;

   (d) the General Conditions of Contract;

   (e) the Special Conditions of Contract; and

   (f) the ***Purchaser***'s Notification of Award

3. In consideration of the payments to be made by the ***Purchaser*** to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the ***Purchaser*** to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The ***Purchaser*** hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

BRIEF PARTICULARS OF THE GOODS AND SERVICES WHICH SHALL BE SUPPORTED / PROVIDED BY THE SUPPLIER ARE:

S.No.	Brief Description of goods	Quantity to be Supplied	Unit Price	Total Amount (3 x 4)	Sales Tax & other Taxes Payable
1	2	3	4	5	6

Total Value: 5 + 6

Delivery Schedule:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the

said ..... (For the ***Purchaser***)

in the presence of .....

Signed, Sealed and Delivered by the

said .....(For the Supplier) (Signature, Name, Designation and Address with Office seal)

in the presence of .....

1) (Signature, Name and Address of witness)

2) (Signature, Name and Address of witness)

SECTION IX : PERFORMANCE SECURITY FORM

SECTION IX: PERFORMANCE SECURITY FORM

To : _____ (Name of ***Purchaser***)

WHEREAS ..... (Name of the Supplier) herein called "the Supplier" has undertaken, in pursuance of Contract No..... dated, ... to supply ..... (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 recognised bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, upto a total of ..... (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 limit 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.

This guarantee is valid until the ..... day of ..... 200.

Signature and Seal of Guarantors

.....

.....

.....

Date ..... 20 .....

Address .....

.....

.....

SECTION X: PERFORMANCE STATEMENT

(Please see Clause 11.2(b)
(ii) of Instructions to Bidders)

SECTION X

Proforma for Performance Statement (for a period of last five years)

Bid No.

Name of the Firm

Order placed by (Full Address of Purchaser) (1)	Order No. and Dated (2)	Description and Quantity of ordered equipment	Value of order	Date of Completion of delivery	Remarks indicating reasons for late delivery, if any	Has the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee)
				As per Actual Contract		

Signature and Seal of the Bidder .....

.....

SECTION XI

(Please see Clause 11.2(a) of Instructions to Bidders)

MANUFACTURER'S AUTHORISATION FORM

No..... dated .....

To

.....
.....
.....

Dear Sir,

IFB No._____

We _____ who are established and reputable manufacturers of _____ having factories at _____ and _____ do hereby authorise M/s._____ (Name and address of Representative) to submit a bid, and subsequently negotiate and sign the contract with you against the above IFB NO.

No company or firm or individual other than M/s._____ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific IFB.

We hereby extend our full guarantee and warranty as per Clause 14 of the General Conditions of Contract for the goods offered for supply against this invitation for bid by the above firm.

Yours faithfully,

(Name)
for and on behalf of M/s._____
(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a person competent and having the power of attorney to bind the manufacturer.

SECTION - XIII

AFFIDAVIT

(In Rs.10 NJ Stamp Paper)

1) I _____ S/o. _____ residing at No._____ proprietor / partner / Managing Director of _____ (Proprietary concern / Partnership firm / Company) carrying on business at No._____ do hereby solemnly affirm and sincerely state as follows:-
2) I state that our concern / company participated in the tender Ref. for the_____ supply of _____ with Tamilnadu Medical Services Corporation ltd.,
3) Our concern / company had supplied _____ nos. of similar equipment for the hospitals detailed below and the same is considered by us to meet the post qualification criteria prescribed in the tender above.

Sl.no	**Date of Invoice**	**Name of the Item and model**	**Name and address of Hospital / Institution supplied**	**Date of Installation ***	**Date of end user performance certificate ***

4) I satisfy that the equipment supplied to the above hospitals are working well and being maintained by us. The complaints received from the hospitals are attended to on time as per the Annual Maintenance Contract entered between us.
5) The performance certificate, invoice copy and payment proof are attached for the above supply

Solemnly affirm at Signed before me

Chennai on this _____

Day 2009 and singed in

my presents (Notary Public)

* *The period between the date of installation and date of end user performance certificate (Not installation certificate) should be more than one year on the date of bid opening.*