

# **GLOBAL TENDER ENQUIRY**

**FOR PURCHASE OF MEDICAL EQUIPMENT ON BEHALF OF  
RAJIV GANDHI SUPER SPECIALITY HOSPITAL**

**HLL/PCD/GNCTD/33/RGSSH/16-17**



**BY**

## **HLL LIFECARE LIMITED**

**(A GOVERNMENT OF INDIA ENTERPRISE)**

**Procurement & Consultancy Services Division**

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**SECTION I****NIT No: HLL/PCD/GNCTD/33/RGSSH/16-17****Dated: 29.04.2015****NOTICE INVITING E-TENDERS (NIT)**

1. Procurement & Consultancy Services Division of HLL Lifecare Limited, for and on behalf of Rajiv Gandhi Super Speciality Hospital, invites online eTenders, from eligible and qualified tenderers for supply Medical Equipment as under:

Sl. No.	Tender_ID	Name of the item	Qty.	Tender Fee (Rs.)	EMD Amount (Rs.)	Date & time of Prebid meeting	Date & time of closing of online tender	Closing date & time for submission of physical Tender	Date & time of opening of tender
1	2016_HFWD_104215_1	Fully automated Electrolyte Analyzer	1	500	8,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
2	2016_HFWD_104215_2	High Speed Centrifuge	3	500	33,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
3	2016_HFWD_104215_3	Fully Automatic Electrophoresis System	1	500	20,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
4	2016_HFWD_104215_4	Deep Freezers -40 degree Celsius	1	500	13,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
5	2016_HFWD_104215_5	Deep Freezers -80 degree Celsius	1	500	15,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
6	2016_HFWD_104215_6	Laboratory Centrifuge Machine	2	500	9,200	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
7	2016_HFWD_104215_7	Laminar Air Flow (Bio-Safety Cabinet)	4	500	36,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
8	2016_HFWD_104215_8	Ambulatory BP Monitors	3	500	12,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
9	2016_HFWD_104215_9	3D Mapping System	1	3000	4,50,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
10	2016_HFWD_104215_10	Rotablator Machine	1	500	33,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
11	2016_HFWD_104215_11	OCT & FFR Integrated System	1	3000	4,30,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
12	2016_HFWD_104215_12	Intra-aortic balloon pump (IABP)	1	1000	1,60,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
13	2016_HFWD_104215_13	TMT Machine	3	1000	84,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
14	2016_HFWD_104215_14	Fully Automated ESR Analyser	1	500	24,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
15	2016_HFWD_104215_15	EP Lab with RF generator	1	2000	2,00,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
16	2016_HFWD_104215_16	Endoscopy System	1	1000	1,00,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
17	2016_HFWD_104215_17	Syringe Infusion Pumps	50	1000	60,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM

HLL Lifecare Limited

Sl. No.	Tender_ID	Name of the item	Qty.	Tender Fee (Rs.)	EMD Amount (Rs.)	Date & time of Prebid meeting	Date & time of closing of online tender	Closing date & time for submission of physical Tender	Date & time of opening of tender
18	2016_HFWD_104215_18	BOD Incuabator	1	500	8,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
19	2016_HFWD_104215_19	Fully Autoamted Elisa Processor (Reader and Washer)	2	500	48,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
20	2016_HFWD_104215_20	Bacteriology Incubator	1	500	4,400	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
21	2016_HFWD_104215_21	Hot Air Oven	1	500	2,800	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
22	2016_HFWD_104215_22	Hemodialysis Machine with HDF Facility	1	500	32,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
23	2016_HFWD_104215_23	Hemodialysis Machine	6	1000	1,44,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
24	2016_HFWD_104215_24	Hemodialysis Machine with SLED	4	1000	1,20,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
25	2016_HFWD_104215_25	Dialysis Reprocessing System	2	500	18,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
26	2016_HFWD_104215_26	Tissue Embedding Station	1	500	36,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
27	2016_HFWD_104215_27	Fully Automated Tissue Processor For Histopathology Lab	1	500	44,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
28	2016_HFWD_104215_28	Semi-Automatic Rotary Microtome	2	500	18,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
29	2016_HFWD_104215_29	Fully Automated Cryo Microtome	1	500	24,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
30	2016_HFWD_104215_30	Fully Automated Slide Stainer for Histo Lab	1	500	32,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
31	2016_HFWD_104215_31	3.0 Tesla MRI Scanner	1	5000	33,00,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
32	2016_HFWD_104215_32	Digital Flat Panel Fluoroscopy with DSA	1	3000	7,00,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
33	2016_HFWD_104215_33	ACT Machine	5	500	50,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM
34	2016_HFWD_104215_34	Cell Saver	1	500	30,000	10-05-16 11:00 AM	31-05-16 06:00 PM	01-06-16 01:30 PM	01-06-16 02:00 PM

2. Interested tenderers may obtain further information about this requirement from this office inviting the tenders.
3. The prospective bidders who have not registered can register with E-procurement system of NIC by paying necessary registration charges. The bidders may prepare a banker cheque/Draft in favour of Delhi E-governance society and deposit it at E-procurement help desk room. The details of payment can be obtained from help desk.

In order to submit the bids electronically bidders are required to have type-II Digital Signature Certificate. Digital Signature can be obtained from any of the certifying agency.

The tender shall be submitted online for all the necessary documents and **in physical form (with respect to few documents as mentioned in the SIT)** in three parts/covers as mentioned below:

- (i) Tender Fee and EMD
- (ii) Pre-qualification and Technical compliance as per following documents:
  - a) Manufacturer's authorization in case bid is submitted by an Indian agent (A declaration must be attached here in case directly quoted by a manufacturer or a document establishing the relation of the Indian office with the manufacturer in case quoted by Indian office of the manufacturer).
  - b) Tender Form as per Section-X.
  - c) Copy of PAN.
  - d) Certificate of Incorporation/Declaration being a proprietary firm.
  - e) Annual report of last 3 completed financial years (Balance sheet and Profit & Loss Account)
  - f) Name, address and details of account with respect to bidder and/or beneficiary of L/C.
  - g) Quality Control Requirements as per Section VIII
  - h) Performance statement along with required PO copies and its corresponding end user's satisfactory performance certificate as per section IX.
  - i) Affidavit as per Section XIX
  - j) Technical Bid along with clause-by-clause technical compliance statement for the quoted goods vis-à-vis the Technical specifications with all related brochures in the tender enquiry

(iii) Price Bid (Only online).

4. All prospective tenderers may attend the Pre Tender meeting. For all the above tender IDs, Prebid meeting shall be held at Conference Room of HLL Lifecare Limited, B-14A, Sector -62, Noida, Gautam Budh Nagar, U.P. - 201 307.
5. To participate in the submission against the tender, it is mandatory for the Applicants to get digital signature and get themselves registered with e-tendering system of various hospitals under Govt. of NCT of Delhi.
6. Tenderer may download the tender enquiry documents from the web site [www.lifecarehll.com](http://www.lifecarehll.com) or [www.govtprocurement.delhi.gov.in](http://www.govtprocurement.delhi.gov.in) and submit its tender online after logging in to their user ID at [www.govtprocurement.delhi.gov.in](http://www.govtprocurement.delhi.gov.in).
7. Tenderers shall ensure that their tenders, complete in all respects, are submitted **online and desired hard copies in original** (as stated in SIT) dropped in the Tender Box located at **HLL Lifecare Limited, Procurement and Consultancy Division, B-14 A, Sector-62, Noida-201307, Uttar Pradesh** on or before the closing date and time indicated above, failing which the tenders will be treated as late and rejected.

8. In the event of any of the above mentioned dates being declared as a holiday /closed day for the purchase organisation, the physical form of tenders will be received/opened on the next working day at the appointed time.

**SVP (GB)**  
**HLL Lifecare Limited**

**SECTION - II****GENERAL INSTRUCTIONS TO TENDERERS (GIT)  
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## GENERAL INSTRUCTIONS TO TENDERERS (GIT)

### A. PREAMBLE

#### 1. Definitions and Abbreviations

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

1.2. Definitions:

- (i) "Purchaser" means Rajiv Gandhi Super Speciality Hospital
- (ii) "Tender" means Bids / Quotation / Tender received from a Firm / Tenderer / Bidder.
- (iii) "Tenderer" means Bidder/ the Individual or Firm submitting Bids / Quotation / Tender
- (iii) "Supplier" means the individual or the firm supplying the goods and services as incorporated in the contract.
- (iv) "Goods" means the articles, material, commodities, livestock, furniture, fixtures, raw material, spares, instruments, machinery, equipment, medical equipment, industrial plant etc. which the supplier is required to supply to the purchaser under the contract.
- (v) "Services" means services allied and incidental to the supply of goods, such as transportation, installation, commissioning, provision of technical assistance, training, after sales service, maintenance service and other such obligations of the supplier covered under the contract.
- (vi) "Earnest Money Deposit" (EMD) means Bid Security/ monetary or financial guarantee to be furnished by a tenderer along with its tender.
- (vii) "Contract" means the written agreement entered into between the purchaser and/or consignee and the supplier, together with all the documents mentioned therein and including all attachments, annexure etc. therein.
- (viii) "Performance Security" means monetary or financial guarantee to be furnished by the successful tenderer for due performance of the contract placed on it. Performance Security is also known as Security Deposit.
- (ix) "Consignee" means the Hospital /Institute/Medical College/ person to whom the goods are required to be delivered as specified in the Contract. If the goods are required to be delivered to a person as an interim consignee for the purpose of despatch to another person as provided in the Contract then that "another" person is the consignee, also known as ultimate consignee.
- (x) "Specification" means the document/standard that prescribes the requirement with which goods or service has to conform.
- (xi) "Inspection" means activities such as measuring, examining, testing, gauging one or more characteristics of the product or service and comparing the same with the specified requirement to determine conformity.
- (xii) "Day" means calendar day.

1.3 Abbreviations:

- (i) "TE Document" means Tender Enquiry Document
- (ii) "NIT" means Notice Inviting Tenders.
- (iii) "GIT" means General Instructions to Tenderers
- (iv) "SIT" means Special Instructions to Tenderers
- (v) "GCC" means General Conditions of Contract

- (vi) “SCC” means Special Conditions of Contract
- (vii) “DGS&D” means Directorate General of Supplies and Disposals
- (viii) “NSIC” means National Small Industries Corporation
- (ix) “PSU” means Public Sector Undertaking
- (x) “CPSU” means Central Public Sector Undertaking
- (xi) “LSI” means Large Scale Industry
- (xii) “SSI” means Small Scale Industry
- (xiii) “LC” means Letter of Credit
- (xiv) “DP” means Delivery Period
- (xv) “BG” means Bank Guarantee
- (xvi) “ED” means Excise Duty
- (xvii) “CD” means Custom Duty
- (xviii) “VAT” means Value Added Tax
- (xix) “CENVAT” means Central Value Added Tax
- (xx) “CST” means Central Sales Tax
- (xxi) “RR” means Railway Receipt
- (xxii) “BL” means Bill of Lading
- (xxiii) “FOB” means Free on Board
- (xxiv) “FCA” means Free Carrier
- (xxv) “FOR” means Free On Rail
- (xxvi) “CIF” means Cost, Insurance and Freight
- (xxvii) “CIP (Destinations)” means Carriage and Insurance Paid up to named port of destination. Additionally the Insurance (local transportation and storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery.
- (xxviii) “DDP” means Delivery Duty Paid named place of destination (consignee site)
- (xxix) “INCOTERMS” means International Commercial Terms as on the date of Tender Opening
- (xxx) “H&FW” means Department of Health & Family Welfare, Government of NCT of Delhi
- (xxxi) “CMC” means Comprehensive maintenance Contract (labour, spare and preventive maintenance)
- (xxxii) “RT” means Re-Tender.

## 2. Introduction

- 2.1 The Purchaser has issued these TE documents for purchase of goods and related services as mentioned in Section – VI – “List of Requirements”, which also indicates, *interalia*, the required delivery schedule, terms and place of delivery.
- 2.2 This section (Section II - “General Instruction to Tenderers”) provides the relevant information as well as instructions to assist the prospective tenderers in preparation and submission of tenders. It also includes the mode and procedure to be adopted by the purchaser for receipt and opening as well as scrutiny and evaluation of tenders and subsequent placement of contract.
- 2.3 The tenderers shall also read the Special Instructions to Tenderers (SIT) related to this purchase, as contained in Section III of these documents and follow the same accordingly. Whenever there is a conflict between the GIT and the SIT, the provisions contained in the SIT shall prevail over those in the GIT.
- 2.4 Before formulating the tender and submitting the same to the purchaser, the tenderer should read and examine all the terms, conditions, instructions, checklist etc. contained in the TE documents. Failure to provide and/or comply with the required information, instructions etc. incorporated in these TE documents may result in rejection of its tender.

**3. Availability of Funds**

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

**4. Language of Tender**

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

4.2 The tender submitted by the tenderer and all subsequent correspondence and documents relating to the tender exchanged between the tenderer and the purchaser, may also be written in the Hindi language, provided that the same are accompanied by English translation, in which case, for purpose of interpretation of the tender etc, the English translations shall prevail.

**5. Eligible Tenderers**

This invitation for tenders is open to all suppliers who fulfil the eligibility criteria specified in these documents.

**6. Eligible Goods and Services**

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

**7. Tendering Expense**

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

**B. TENDER ENQUIRY DOCUMENTS**

**8. Content of Tender Enquiry Documents**

8.1 In addition to Section I – “Notice inviting Tender” (NIT), the TE documents include:

- Section II – General Instructions to Tenderers (GIT)
- Section III – Special Instructions to Tenderers (SIT)
- Section IV – General Conditions of Contract (GCC)
- Section V – Special Conditions of Contract (SCC)
- Section VI – List of Requirements
- Section VII – Technical Specifications
- Section VIII – Quality Control Requirements
- Section IX – Qualification Criteria
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- Section XI – Price Schedules
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- Section XIII – Bank Guarantee Form for EMD

- Section XIV – Manufacturer’s Authorisation Form
- Section XV – Bank Guarantee Form for Performance Security/CMC Security
- Section XVI – Contract Forms A & B
- Section XVII – Proforma of Consignee Receipt Certificate
- Section XVIII – Proforma of Final Acceptance Certificate by the consignee
- Section XIX – Affidavit/Undertaking
- Section XX – Check List for the Tenderers
- Section XXI – Consignee List

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

#### **9. Amendments to TE documents**

- 9.1 At any time prior to the deadline for submission of tenders, the purchaser may, for any reason deemed fit by it, modify the TE documents by issuing suitable amendment(s) to it.
- 9.2 Such an amendment will be notified in the referred websites only.
- 9.3 In order to provide reasonable time to the prospective tenderers to take necessary action in preparing their tenders as per the amendment, the purchaser may, at its discretion extend the deadline for the submission of tenders and other allied time frames, which are linked with that deadline.

#### **10. Clarification of TE documents**

- 10.1 A tenderer requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser in writing on or before the pre-bid meeting.
- 10.2 Each prospective Tenderer can attend the Prebid meeting mentioned in para 4 in Section I with maximum 2 persons duly authorized by Tenderer.

### **C. PREPARATION OF TENDERS**

#### **11. Documents Comprising the Tender**

- 11.1 The tender shall be submitted online for all the necessary documents and in physical form (with respect to few documents as mentioned in the SIT) in three parts/covers as mentioned below:
- (i) Tender Fee & EMD.
  - (ii) Pre-qualification as per checklist section XX and as mentioned in para A below and Technical Bid
  - (iii) Price Bid (Only online)

Bidders are requested **not to submit the hard copy of Financial Bid** along with the physical form of tender. Also, uploading of the price bid in prequalification bid or technical bid will result in rejection of the tender.

#### **A) Techno – Commercial Tender (Un priced Tender)**

- i) Earnest money furnished in accordance with GIT clause 19.1 alternatively, documentary evidence as per GIT clause 19.2 for claiming exemption from payment of earnest money.
- ii) Tender Form as per Section X.

- iii) Documentary evidence, as necessary in terms of clauses 5 and 17 establishing that the tenderer is eligible to submit the tender and, also, qualified to perform the contract if its tender is accepted.
- iv) Tenderer/Agent who quotes for goods manufactured by other manufacturer shall furnish Manufacturer's Authorisation Form. **While giving authorization to agent, to quote on their behalf, manufacturer has to give the reasons for not quoting directly against this tender.**
- v) Deleted.
- vi) Documents and relevant details to establish in accordance with GIT clause 18 that the goods and the allied services to be supplied by the tenderer conform to the requirement of the TE documents.
- vii) Performance Statement as per section IX along with relevant copies of orders and end users' satisfaction certificate.
- viii) Deleted
- ix) Certificate of Incorporation.

**B) Price Tender:**

1. Prices are to be quoted in the attached Price Bid format online as per the directions on the official website.
2. The price should be quoted for the accounting unit indicated on the website.

**The bidder shall not submit hard copy of financial bid otherwise his tender shall be straightway rejected. Also, uploading the price bid in prequalification bid or technical bid will result in rejection of the tender.**

Note:

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

- 11.2 A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrant that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages
- 11.3 A tender, which does not fulfil any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.
- 11.4 Tender sent by fax/telex/cable/electronically shall be ignored.

**12. Tender currencies**

- 12.1 The tenderer supplying indigenous goods or already imported goods shall quote only in Indian Rupees.
- 12.2 For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP or Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only if such services are to be performed /undertaken in India. Commission for Indian Agent, if any and if payable shall be indicated in the space provided for in the price schedule and will be payable in Indian Rupees only.
- 12.3 Tenders, where prices are quoted in any other way shall be treated as non-responsive and rejected.

### 13 Tender Prices

- 13.1 The Tenderer shall indicate on the Price Schedule provided under Section XI all the specified components of prices shown therein including the unit prices and total tender prices of the goods and services it proposes to supply against the requirement. All the columns shown in the price schedule should be filled up as required. If any column does not apply to a tenderer, same should be clarified as “NA” by the tenderer.
- 13.2 If there is more than one schedule in the List of Requirements, the tenderer has the option to submit its quotation for any one or more schedules and, also, to offer special discount for combined schedules. However, while quoting for a schedule, the tenderer shall quote for the complete requirement of goods and services as specified in that particular schedule.
- 13.3 The quoted prices for goods offered from within India and that for goods offered from abroad are to be indicated separately in the applicable Price Schedules attached under Section XI.
- 13.4 While filling up the columns of the Price Schedule, the following aspects should be noted for compliance:
- 13.4.1 For domestic goods or goods of foreign origin located within India, the prices in the corresponding price schedule shall be entered separately in the following manner:
- a) the price of the goods, quoted ex-factory/ ex-showroom/ ex-warehouse/ off-the-shelf, as applicable, including all taxes and duties like sales tax, CST VAT, CENVAT, Custom Duty, Excise Duty etc. already paid or payable on the components and raw material used in the manufacture or assembly of the goods quoted ex-factory etc. or on the previously imported goods of foreign origin quoted ex-showroom etc;
  - b) any sales or other taxes and any duties including excise duty, which will be payable on the goods in India if the contract is awarded;
  - c) charges towards Packing & Forwarding, Inland Transportation, Insurance (local transportation and storage) would be borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery, Loading/Unloading and other local costs incidental to delivery of the goods to their final destination as specified in the List of Requirements and Price Schedule;
  - d) the price of Incidental Services, as mentioned in List of Requirements and Price Schedule;
  - e) the prices of Turnkey ( if any), as mentioned in List of Requirements, Technical Specification and Price Schedule; and
  - f) the price of annual CMC, as mentioned in List of Requirements, Technical Specification and Price Schedule.
- 13.4.2 For goods offered from abroad, the prices in the corresponding price schedule shall be entered separately in the following manner:
- a) The price of goods quoted FOB/FCA port of shipment, as indicated in the List of Requirements and Price Schedule;
  - b) The amount of freight and insurance
  - c) the price of goods quoted CIP (name port of destination) in India as indicated in the List of Requirements, Price Schedule and Consignee List;
  - d) Deleted
  - e) the charges for Insurance (local transportation and storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery. Other local costs and Incidental costs, as specified in the List of Requirements and Price Schedule;
  - f) the charges for Incidental Services, as in the List of Requirements and Price Schedule;
  - g) the prices of Turnkey ( if any), as mentioned in List of Requirements, Technical Specification and Price Schedule; and

h) the price of annual CMC, as mentioned in List of Requirements, Technical Specification and Price Schedule.

13.5 Additional information and instruction on Duties and Taxes:

13.5.1 If the Tenderer desires to ask for excise duty, sales tax/ VAT, Service Tax, Works Contract Tax etc. to be paid extra, the same must be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

13.5.2 Excise Duty:

- a) If reimbursement of excise duty is intended as extra over the quoted prices, the supplier must specifically say so also indicating the rate, quantum and nature of the duty applicable. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of excise duty will be entertained after the opening of tenders.
- b) If a Tenderer chooses to quote a price inclusive of excise duty and also desires to be reimbursed for variation, if any, in the excise duty during the time of supply, the tenderer must clearly mention the same and also indicate the rate and quantum of excise duty included in its price. Failure to indicate all such details in clear terms may result in rejection of that tender.
- c) Subject to sub clauses 13.5.2 (a) & (b) above, any change in excise duty upward/downward as a result of any statutory variation in excise duty taking place within contract terms shall be allowed to the extent of actual quantum of excise duty paid by the supplier. In case of downward revision in excise duty, the actual quantum of reduction of excise duty shall be reimbursed to the purchaser by the supplier. All such adjustments shall include all reliefs, exemptions, rebates, concession etc. if any obtained by the supplier.

13.5.3 Sales Tax:

If a tenderer asks for sales tax/ VAT, Service Tax and Works Contract Tax to be paid extra, the rate and nature of sales tax applicable should be shown separately. The sales tax / VAT, Service Tax and Works Contract Tax will be paid as per the rate at which it is liable to be assessed or has actually been assessed provided the transaction of sale is legally liable to sales tax / VAT, Service Tax and Works Contract Tax and is payable as per the terms of the contract. If any refund of Tax is received at a later date, the Supplier must return the amount forth-with to the purchaser.

13.5.4 Octroi Duty and Local Duties & Taxes:

Normally, goods to be supplied to government departments against government contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. However, on some occasions, the local bodies (like town body, municipal body etc.) as per their regulations allow such exemptions only on production of certificate to this effect from the concerned government department. Keeping this in view, the supplier shall ensure that the stores to be supplied by the supplier against the contract placed by the purchaser are exempted from levy of any such duty or tax and, wherever necessary, obtain the exemption certificate from the purchaser. The purchaser should issue the certificate to the supplier within 21 days from the date of receipt of request from the supplier.

However, if a local body still insists upon payment of such local duties and taxes, the same should be paid by the supplier to the local body to avoid delay in supplies and possible demurrage charges and obtain a receipt for the same. The supplier should forward the receipt obtained for such payment to the purchaser to enable the purchaser reimburse the supplier and take other necessary action in the matter.

13.5.5 Customs Duty:

The Purchaser will pay the Customs duty wherever applicable.

- 13.6 For transportation of imported goods offered from abroad, relevant instructions as incorporated under GCC Clause 10 shall be followed.
- 13.7 For insurance of goods to be supplied, relevant instructions as provided under GCC Clause 11 shall be followed.
- 13.8 Unless otherwise specifically indicated in this TE document, the terms FCA, FOB, FAS, CIF, CIP, DDP etc. for imported goods offered from abroad, shall be governed by the rules & regulations prescribed in the current edition of INCOTERMS, published by the International Chamber of Commerce, Paris
- 13.9 The need for indication of all such price components by the tenderers, as required in this clause (viz., GIT clause 13) is for the purpose of comparison of the tenders by the purchaser and will no way restrict the purchaser's right to award the contract on the selected tenderer on any of the terms offered.

#### **14. Indian Agent**

- 14.1 If a foreign tenderer has engaged an agent in India in connection with its tender, the foreign tenderer, in addition to indicating Indian agent's commission, if any, in a manner described under GIT sub clause 12.2 above, shall also furnish the following information:
  - a) The complete name and address of the Indian Agent and its permanent income tax account number as allotted by the Indian Income Tax authority.
  - b) The details of the services to be rendered by the agent for the subject requirement.
  - c) Details of Service outlets in India, nearest to the consignee(s), to render services during Warranty and CMC period.
  - d) A copy of agreement between the Agent & their principal detailing the terms & conditions as well as services and after sales services as above to be rendered by the agent and the precise relationship between them and their mutual interest in the business as laid out in section VII (Technical specifications).

#### **15. Firm Price**

- 15.1 Unless otherwise specified in the SIT, prices quoted by the tenderer shall remain firm and fixed during the currency of the contract and not subject to variation on any account.
- 15.2 However, as regards taxes and duties, if any, chargeable on the goods and payable, the conditions stipulated in GIT clause 13 will apply.

#### **16. Alternative Tenders**

- 16.1 Alternative Tenders are not permitted.
- 16.2 However the Tenderers can quote alternate models meeting the tender specifications of same manufacturer with single EMD.
- 16.3 Only one tenderer is permitted to quote for the same manufacturer irrespective of models

#### **17 Documents Establishing Tenderer's Eligibility and Qualifications**

- 17.1 Pursuant to GIT clause 11, the tenderer shall furnish, as part of its tender, relevant details and documents establishing its eligibility to quote and its qualifications to perform the contract if its tender is accepted.
- 17.2 The documentary evidence needed to establish the tenderer's qualifications shall fulfil the following requirements:



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

**18. Documents establishing good's Conformity to TE document.**

- 18.1 The tenderer shall provide in its tender the required as well as the relevant documents like technical data, literature, drawings etc. to establish that the goods and services offered in the tender fully conform to the goods and services specified by the purchaser in the TE documents. For this purpose the tenderer shall also provide a clause-by-clause commentary on the technical specifications and other technical details incorporated by the purchaser in the TE documents to establish technical responsiveness of the goods and services offered in its tender.
- 18.2 In case there is any variation and/or deviation between the goods & services prescribed by the purchaser and that offered by the tenderer, the tenderer shall list out the same in a chart form without ambiguity and provide the same along with its tender.
- 18.3 If a tenderer furnishes wrong and/or misguiding data, statement(s) etc. about technical acceptability of the goods and services offered by it, its tender will be liable to be ignored and rejected in addition to other remedies available to the purchaser in this regard.

**19. Earnest Money Deposit (EMD)**

- 19.1 Pursuant to GIT clauses 8.1 and 11.1 A (i) the tenderer shall furnish along with its tender, earnest money for amount as shown in the List of Requirements. The earnest money is required to protect the purchaser against the risk of the tenderer's unwarranted conduct as amplified under sub-clause 19.7 below.
- 19.2 The tenderers who are currently registered and, also, will continue to remain registered during the tender validity period with Directorate General of Supplies & Disposals or with National Small Industries Corporation, New Delhi for the specific goods as per tender enquiry specification shall be eligible for exemption from EMD. In case the tenderer falls in these categories, it should furnish copy of its valid registration details (with DGS&D or NSIC, as the case may be).
- 19.3 The earnest money shall be denominated in Indian Rupees or equivalent currencies as per GIT clause 12.2. The earnest money shall be furnished in one of the following forms:
  - i) Account Payee Demand Draft
  - ii) Banker's cheque and
  - iii) Bank Guarantee
- 19.4 The demand draft or banker's cheque shall be drawn on any commercial bank in India or country of the tenderer, in favour of the "HLL Lifecare Limited" payable at New Delhi. In case of bank guarantee, the same is to be provided from any commercial bank in India or country of the tenderer as per the format specified under Section XIII in these documents.

- 19.5 The earnest money, if paid in Bank Guarantee, shall be valid for a period of forty-five (45) days beyond the validity period of the tender. As validity period of Tender as per Clause 20 of GIT is 120 days, the EMD shall be valid for 165 days from Techno – Commercial Tender opening date.
- 19.6 Unsuccessful tenderers' earnest money will be returned to them without any interest, after expiry of the tender validity period, but not later than thirty days after conclusion of the resultant contract. Successful tenderer's earnest money will be returned without any interest, after receipt of performance security from that tenderer.
- 19.7 Earnest Money is required to protect the purchaser against the risk of the Tenderer's conduct, which would warrant the forfeiture of the EMD. Earnest money of a tenderer will be forfeited, if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender or if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged without prejudice to other rights of the purchaser. The successful tenderer's earnest money will be forfeited without prejudice to other rights of Purchaser if it fails to furnish the required performance security within the specified period.
- 19.8 In the case of Bank Guarantee furnished from banks outside India (i.e. foreign Banks), it should be authenticated and countersigned by any nationalised bank in India by way of back-to-back counter guarantee and the same should be submitted along with the bid.

## **20. Tender Validity**

- 20.1 If not mentioned otherwise in the SIT, the tenders shall remain valid for acceptance for a period of 120 days (One hundred and twenty days) after the date of tender opening prescribed in the TE document. Any tender valid for a shorter period shall be treated as unresponsive and rejected.
- 20.2 In exceptional cases, the tenderers may be requested by the purchaser to extend the validity of their tenders up to a specified period. Such request(s) and responses thereto shall be conveyed by surface mail or by fax/ telex/cable followed by surface mail. The tenderers, who agree to extend the tender validity, are to extend the same without any change or modification of their original tender and they are also to extend the validity period of the EMD accordingly. A tenderer, who may not agree to extend its tender validity after the expiry of the original validity period the EMD furnished by them shall not be forfeited.
- 20.3 In case the day up to which the tenders are to remain valid falls on/ subsequently declared a holiday or closed day for the purchaser, the tender validity shall automatically be extended up to the next working day.

## **21. Signing and Sealing of Tender**

- 21.1 The tenderers shall submit their tenders as per the instructions contained in GIT Clause 11.
- 21.2 Deleted
- 21.3 The original tender shall either be typed or written in indelible ink and the same shall be signed by the tenderer or by a person(s) who has been duly authorized to bind the tenderer to the contract.
- 21.4 The tender shall be duly signed at the appropriate places as indicated in the TE documents and all other pages of the tender including printed literature, if any shall be initialled by the same person(s) signing the tender. The tender shall not contain any erasure or overwriting, except as necessary to correct any error made by the tenderer and, if there is any such correction; the same shall be initialled by the person(s) signing the tender.

## D. SUBMISSION OF TENDERS

### 22. Submission of Tenders

22.1 The tender shall be submitted online and in physical form (except price bid) in three parts/covers as mentioned below:

- (i) Tender Fee and EMD (**Both online and physical**)
- (ii) Pre-qualification and Technical compliance as per following documents (**Online submissions for all the documents and physical submission only for affidavit as per point i below and original Technical brochures/catalogues against point j**):
  - a) Manufacturer's authorization in case bid is submitted by an Indian agent (A declaration must be attached here in case directly quoted by a manufacturer or a document establishing the relation of the Indian office with the manufacturer in case quoted by Indian office of the manufacturer).
  - b) Tender Form as per section X.
  - c) Copy of PAN.
  - d) Certificate of Incorporation/Declaration being a proprietary firm.
  - e) Annual report of last 3 years (Balance sheet and Profit & Loss Account)
  - f) Name, address and details of account with respect to bidder and/or beneficiary of L/C.
  - g) Quality Control Requirements as per Section VIII
  - h) Performance statement along with required PO copies and its corresponding end user's satisfactory performance certificate as per section IX.
  - i) Affidavit as per Section XIX
  - j) Technical Bid along with clause-by-clause technical compliance statement for the quoted goods vis-à-vis the Technical specifications in the tender enquiry (Both online and physical)
- (iii) Price Bid (Only online).

Bidders are requested not to submit the hard copy of Financial Bid along with the physical form of tender. In case the hard copy of financial bid is submitted in physical form, the tender shall be straightway rejected. Also, uploading of the price bid in prequalification bid or technical bid will result in rejection of the tender.

Unless otherwise specified, the tenderers are to submit its tender online and deposit the physical form of tenders in the tender box kept for this purpose at **HLL Lifecare Limited, Procurement and Consultancy Division, B-14 A, Sector-62, Noida-201 307, Uttar Pradesh.**

22.2 The tenderers must ensure that they deposit their tenders not later than the closing time and date specified for submission of tenders. It is the responsibility of the tenderer to ensure that their Tenders whether sent by post or by courier or by person, are dropped in the Tender Box by the specified clearing date and time. In the event of the specified date for physical submission of

tender falls on /is subsequently declared a holiday or closed day for the purchaser, the tenders will be received up to the appointed time on the next working day.

**23. Late Tender**

- 23.1 A tender, which is received after the specified date and time for receipt of tenders will be treated as “late” tender and will be ignored.

**24. Alteration and Withdrawal of Tender**

- 24.1 The tenderer, after submitting its tender, is permitted to alter/ modify its tender so long as such alterations/ modifications are received duly signed, sealed and marked like the original tender, within the deadline for submission of tenders. Alterations/ modifications to tenders received after the prescribed deadline will not be considered.
- 24.2 No tender should be withdrawn after the deadline for submission of tender and before expiry of the tender validity period. If a tenderer withdraws the tender during this period, it will result in forfeiture of the earnest money furnished by the tenderer in its tender.

## **E. TENDER OPENING**

**25. Opening of Tenders**

- 25.1 The purchaser will open the tenders at the specified date and time and at the specified place as indicated in the NIT.

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

- 25.2 Authorized representatives of the tenderers, who have submitted tenders on time may attend the tender opening provided they bring with them letters of authority from the corresponding tenderers.

The tender opening official(s) will prepare a list of the representatives attending the tender opening. The list will contain the representatives’ names & signatures and corresponding tenderers’ names and addresses.

- 25.3 The **Techno - Commercial Tenders** are to be opened in the first instance, at the prescribed time and date as indicated in NIT. These Tenders shall be scrutinized and evaluated by the competent committee/ authority with reference to parameters prescribed in the TE document. During the Techno - Commercial Tender opening, the tender opening official(s) will read the salient features of the tenders like brief description of the goods offered, delivery period, Earnest Money Deposit and any other special features of the tenders, as deemed fit by the tender opening official(s). Thereafter, in the second stage, the Price Tenders of only the Techno - Commercially acceptable offers (as decided in the first stage) shall be opened for further scrutiny and evaluation on a date notified after the evaluation of the Techno–Commercial tender. The prices, special discount if any of the goods offered etc., as deemed fit by tender opening official(s) will be read out.

## F. SCRUTINY AND EVALUATION OF TENDERS

### 26. Basic Principle

26.1 Tenders will be evaluated on the basis of the terms & conditions already incorporated in the TE document, based on which tenders have been received and the terms, conditions etc. mentioned by the tenderers in their tenders. No new condition will be brought in while scrutinizing and evaluating the tenders.

### 27. Scrutiny of Tenders

27.1 The Purchaser will examine the Tenders 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 stamped and whether the Tenders are generally in order.

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

27.3 Deleted

27.4 The tenders will be scrutinized to determine whether they are complete and meet the essential and important requirements, conditions etc. as prescribed in the TE document. The tenders, which do not meet the basic requirements, are liable to be treated as non-responsive and will be rejected.

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

- (i) The bidder has submitted hard copy of financial bid (only online submission price bids are allowed).
- (ii) Tender validity is shorter than the required period.
- (iv) Required EMD (Amount, validity etc.)/ exemption documents have not been provided.
- (v) Tenderer has quoted for goods manufactured by other manufacturer(s) without the required Manufacturer's Authorisation Form as per Section XIV.
- (vi) Tenderer has not agreed to give the required performance security of required amount in an acceptable form in terms of GCC clause 5, read with modification, if any, in Section - V – "Special Conditions of Contract", for due performance of the contract.
- (vii) Tenderer has not agreed to other essential condition(s) specially incorporated in the tender enquiry like terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism applicable law.
- (viii) Poor/ unsatisfactory past performance.
- (ix) Tenderers who stand deregistered/banned/blacklisted by any Govt. Authorities.
- (x) Tenderer is not eligible as per GIT Clauses 5 & 17.1.
- (xi) Tenderer has not quoted for the entire quantity as specified in the List of Requirements in the quoted schedule.
- (xii) Tenderer has not agreed for the delivery terms and delivery schedule.

### 28. Minor Infirmary/Irregularity/Non-Conformity

28.1 If during the evaluation, the purchaser find any minor informality and/or irregularity and/or non-conformity in a tender, the purchaser will convey its observation on such 'minor' issues to the tenderer by registered/speed post/courier/e-mail/fax etc. asking the tenderer to respond by a specified date. If the tenderer does not reply by the specified date or gives evasive reply without clarifying the point at issue in clear terms, that tender will be liable to be ignored.

### 29. Discrepancies in Prices

29.1 If, in the price structure quoted by a tenderer, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall

prevail and the total price corrected accordingly, unless the purchaser feels that the tenderer has made a mistake in placing the decimal point in the unit price, in which case the total price as quoted shall prevail over the unit price and the unit price corrected accordingly.

- 29.2 If there is an error in a total price, which has been worked out through addition and/or subtraction of subtotals, the subtotals shall prevail and the total corrected; and
- 29.3 If there is a discrepancy between the amount expressed in words and figures, the amount in words shall prevail, subject to sub clause 29.1 and 29.2 above.
- 29.4 If, as per the judgement of the purchaser, there is any such arithmetical discrepancy in a tender, the same will be suitably conveyed to the tenderer by registered / speed post. If the tenderer does not agree to the observation of the purchaser, the tender is liable to be ignored.

### **30. Discrepancy between original and copies of Tender**

- 30.1 In case any discrepancy is observed between the text etc. of the original copy and that in the other copies of the same tender set, the text etc. of the original copy shall prevail. Here also, the purchaser will convey its observation suitably to the tenderer by register / speed post and, if the tenderer does not accept the purchaser's observation, that tender will be liable to be ignored.

### **31. Qualification Criteria**

- 31.1 Tenders of the tenderers, who do not meet the required Pre Qualification and/or Qualification Criteria prescribed in Section IX, will be treated as non - responsive and will not be considered further.

### **32. Conversion of tender currencies to Indian Rupees**

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

### **33. Schedule-wise Evaluation**

Deleted.

### **34. Comparison of Tenders**

- 34.1 Unless mentioned otherwise in Section – III – Special Instructions to Tenderers and Section – VI – List of Requirements, the comparison of the responsive tenders shall be carried out on Delivery Duty Paid (DDP) consignee site basis. The quoted turnkey prices and CMC prices will also be added for comparison/ranking purpose for evaluation. **Net Present value (NPV) of the Comprehensive Annual Maintenance charges (CMC) quoted (for required period as mentioned in the list of requirement) after the warranty period shall be added to the bid price for evaluation and will be calculated at a discounted rate of 10% per year.**

### **35. Additional Factors and Parameters for Evaluation and Ranking of Responsive Tenders**

- 35.1 Further to GIT Clause 34 above, the purchaser's evaluation of a tender will include and take into account the following:
- i) In the case of goods manufactured in India or goods of foreign origin already located in India, sales tax & other similar taxes and excise duty & other similar duties, Service Tax, Works Contract Tax etc which will be contractually payable (to the tenderer), on the goods if a contract is awarded on the tenderer; and

ii) in the case of goods of foreign origin offered from abroad, customs duty and other similar import duties/taxes, which will be contractually payable (to the tenderer) on the goods if the contract is awarded on the tenderer.

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

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

### **36. Tenderer's capability to perform the contract**

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

36.2 The above-mentioned determination will, inter alia, take into account the tenderer's financial, technical and production capabilities for satisfying all the requirements of the purchaser as incorporated in the TE document. Such determination will be based upon scrutiny and examination of all relevant data and details submitted by the tenderer in its tender as well as such other allied information as deemed appropriate by the purchaser.

### **37. Contacting the Purchaser**

37.1 From the time of submission of tender to the time of awarding the contract, if a tenderer needs to contact the purchaser for any reason relating to this tender enquiry and / or its tender, it should do so only in writing.

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

## **G. AWARD OF CONTRACT**

### **38. Purchaser's Right to accept any tender and to reject any or all tenders**

38.1 The purchaser reserves the right to accept in part or in full any tender or reject any or more tender(s) without assigning any reason or to cancel the tendering process and reject all tenders at any time prior to award of contract, without incurring any liability, whatsoever to the affected tenderer or tenderers.

### **39. Award Criteria**

39.1 Subject to GIT clause 38 above, the contract will be awarded to the lowest evaluated responsive tenderer decided by the purchaser in terms of GIT Clause 36.

### **40. Variation of Quantities at the Time of Award/ Currency of Contract**

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

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

**41. Notification of Award**

41.1 Before expiry of the tender validity period, the purchaser will notify the successful tenderer(s) in writing, by registered / speed post or by fax/ telex/cable (to be confirmed by registered / speed post) that its tender for goods & services, which have been selected by the purchaser, has been accepted, also briefly indicating therein the essential details like description, specification and quantity of the goods & services and corresponding prices accepted. The successful tenderer must furnish to the purchaser the required performance security within thirty days from the date of dispatch of this notification, failing which the EMD will be forfeited and the award will be cancelled. Relevant details about the performance security have been provided under GCC Clause 5 under Section IV.

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

**42. Issue of Contract**

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

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

42.3 The Purchaser/Consignee reserves the right to issue the Notification of Award consignee wise.

**43. Non-receipt of Performance Security and Contract by the Purchaser/Consignee**

43.1 Failure of the successful tenderer in providing performance security and/or returning contract copy duly signed in terms of GIT clauses 41 and 42 above shall make the tenderer liable for forfeiture of its EMD and, also, for further actions by the Purchaser/Consignee against it as per the clause 24 of GCC – Termination of default.

**44. Return of E M D**

44.1 The earnest money of the successful tenderer and the unsuccessful tenderers will be returned to them without any interest, whatsoever, in terms of GIT Clause 19.6.

**45. Publication of Tender Result**

45.1 The name and address of the successful tenderer(s) receiving the contract(s) will be mentioned in the notice board/bulletin/web site of the purchaser.

**46. Corrupt or Fraudulent Practices**

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

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

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



- (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition;
- (b) will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- (c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract by the purchaser if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing the contract.

**SECTION - III**  
**SPECIAL INSTRUCTIONS TO TENDERERS**  
**(SIT)**

The following Special Instructions to Tenderers will apply for this purchase. These special instructions will modify/substitute/supplement the corresponding General Instructions to Tenderers (GIT) incorporated in Section II. The corresponding GIT clause numbers have also been indicated in the text below:

In case of any conflict between the provision in the GIT and that in the SIT, the provision contained in the SIT shall prevail.

**Submission of Tenders**

- (i) All the necessary documents as prescribed in the NIT shall be prepared and scanned in different files (in PDF or JPEG format as prescribed) and uploaded for on-line submission of Proposal. However, **physical documents** as per NIT to be submitted in ‘**ORIGINAL**’ to HLL Lifecare Ltd before the prescribed date & time for submission of physical tender restricted to the following documents only.
  - a) Demand Draft towards Tender Fee in favour of HLL Lifecare Ltd
  - b) EMD in the prescribed format in favour of HLL Lifecare Ltd (or Copy of document for exemption of EMD)
  - c) Technical Data Sheet and original technical literature/ Brochure (if any)
  - d) Affidavit as per Section XIX
- (ii) All document(s)/ information(s) other than above including the Financial Proposal (i.e. **FORMAT FOR SUBMISSION OF FINANCIAL PROPOSAL**) should be uploaded **online only** in the prescribed format given in the website. No other mode of submission shall be acceptable.
- (iii) The prospective bidders may **scan the documents in low resolution (75 to 100 DPI)** instead of 200 DPI. The documents may be scanned for further lower resolution (if possible). This would reduce the size of the Cover and would be uploaded faster.
- (iv) The prospective bidders may upload Drawing files, if any, in “**.dwf**” format so that the size of document is less. This is a generic format and all software supports this format.
- (v) At the time of cover content creation, the prospective bidders would have to define the document type as “**.rar**” format.
- (vi) The prospective bidders should be asked to zip all the .dwf files to a .rar file and upload it.

**SECTION - IV****GENERAL CONDITIONS OF CONTRACT (GCC)  
TABLE OF CLAUSES**

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## **GENERAL CONDITIONS OF CONTRACT (GCC)**

### **1. Application**

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

All documents submitted physically or uploaded as scanned copies must be self-attested, legible and numbered.

### **2. Use of contract documents and information**

- 2.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract or any provision thereof including any specification, drawing, sample or any information furnished by or on behalf of the purchaser in connection therewith, to any person other than the person(s) employed by the supplier in the performance of the contract emanating from this TE document. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for the purposes of such performance for this contract.
- 2.2 Further, the supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC sub-clause 2.1 above except for the sole purpose of performing this contract.
- 2.3 Except the contract issued to the supplier, each and every other document mentioned in GCC sub-clause 2.1 above shall remain the property of the purchaser and, if advised by the purchaser, all copies of all such documents shall be returned to the purchaser on completion of the supplier's performance and obligations under this contract.

### **3. Patent Rights**

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

### **4. Country of Origin**

- 4.1 All goods and services to be supplied and provided for the contract shall have the origin in India or in the countries with which the Government of India has trade relations.
- 4.2 The word "origin" incorporated in this clause means the place from where the goods are mined, cultivated, grown, manufactured, produced or processed or from where the services are arranged.
- 4.3 The country of origin may be specified in the Price Schedule

### **5. Performance Security**

- 5.1 Within fifteen (15) days from date of the issue of notification of award by the Purchaser/Consignee, the supplier, shall furnish performance security to the Purchaser/Consignee for an amount equal to ten percent (10%) of the total value of the contract, valid up to sixty (60) days after the date of completion of all contractual obligations by the supplier, including the warranty obligations, initially valid for a period of minimum sixty six (66) months from the date of Notification of Award

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

It shall be in any one of the forms namely Account Payee Demand Draft or Fixed Deposit Receipt drawn from any Scheduled bank in India or Bank Guarantee issued by a Scheduled bank in India, in the prescribed form as provided in section XV of this document in favour of the Purchaser/Consignee. The validity of the Fixed Deposit receipt or Bank Guarantee will be for a period up to sixty (60) days beyond Warranty Period.

- 5.3 In the event of any failure /default of the supplier with or without any quantifiable loss to the government including furnishing of consignee wise Bank Guarantee for CMC security as per Proforma in Section XV, the amount of the performance security is liable to be forfeited. The Administration Department may do the needful to cover any failure/default of the supplier with or without any quantifiable loss to the Government.
- 5.4 In the event of any amendment issued to the contract, the supplier shall, within fifteen (15) days of issue of the amendment, furnish the corresponding amendment to the Performance Security (as necessary), rendering the same valid in all respects in terms of the contract, as amended.
- 5.5 The supplier shall enter into Annual Comprehensive Maintenance Contract as per the 'Contract Form – B' in Section XVI with respective consignees, 3 (three) months prior to the completion of Warranty Period. The CMC will commence from the date of expiry of the Warranty Period.
- 5.6 Subject to GCC sub – clause 5.3 above, the Purchaser/Consignee will release the Performance Security without any interest to the supplier on completion of the supplier's all contractual obligations including the warranty obligations & after receipt of Consignee wise bank guarantee for CMC security in favour of Head of the Hospital/ Institute/ Medical College of the consignee as per the format in Section XV.

## **6. Technical Specifications and Standards**

- 6.1 The Goods & Services to be provided by the supplier under this contract shall conform to the technical specifications and quality control parameters mentioned in 'Technical Specification' and 'Quality Control Requirements' under Sections VII and VIII of this document.

## **7. Packing and Marking**

- 7.1 The packing for the goods to be provided by the supplier should be strong and durable enough to withstand, without limitation, the entire journey during transit including transshipment (if any), rough handling, open storage etc. without any damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or otherwise of transport and handling facilities at all points during transit up to final destination as per the contract.
- 7.2 The quality of packing, the manner of marking within & outside the packages and provision of accompanying documentation shall strictly comply with the requirements as provided in Technical Specifications and Quality Control Requirements under Sections VII and VIII and in SCC under Section V. In case the packing requirements are amended due to issue of any amendment to the contract, the same shall also be taken care of by the supplier accordingly.
- 7.3 Packing instructions:

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

- a. contract number and date
- b. brief description of goods including quantity
- c. packing list reference number

- d. country of origin of goods
- e. consignee's name and full address and
- f. supplier's name and address

## **8. Inspection, Testing and Quality Control**

- 8.1 The purchaser and/or its nominated representative(s) will, without any extra cost to the purchaser, inspect and/or test the ordered goods and the related services to confirm their conformity to the contract specifications and other quality control details incorporated in the contract. The purchaser shall inform the supplier in advance, in writing, the purchaser's programme for such inspection and, also the identity of the officials to be deputed for this purpose. The cost towards the transportation, boarding & lodging will be borne by the purchaser and/or its nominated representative(s).
- 8.2 The Technical Specification and Quality Control Requirements incorporated in the contract shall specify what inspections and tests are to be carried out and, also, where and how they are to be conducted. If such inspections and tests are conducted in the premises of the supplier or its subcontractor(s), all reasonable facilities and assistance, including access to relevant drawings, design details and production data, shall be furnished by the supplier to the purchaser's inspector at no charge to the purchaser.
- 8.3 If during such inspections and tests the contracted goods fail to conform to the required specifications and standards, the purchaser's inspector may reject them and the supplier shall either replace the rejected goods or make all alterations necessary to meet the specifications and standards, as required, free of cost to the purchaser and resubmit the same to the purchaser's inspector for conducting the inspections and tests again.
- 8.4 In case the contract stipulates pre-despatch inspection of the ordered goods at supplier's premises, the supplier shall put up the goods for such inspection to the purchaser's inspector well ahead of the contractual delivery period, so that the purchaser's inspector is able to complete the inspection within the contractual delivery period.
- 8.5 If the supplier tenders the goods to the purchaser's inspector for inspection at the last moment without providing reasonable time to the inspector for completing the inspection within the contractual delivery period, the inspector may carry out the inspection and complete the formality beyond the contractual delivery period at the risk and expense of the supplier. The fact that the goods have been inspected after the contractual delivery period will not have the effect of keeping the contract alive and this will be without any prejudice to the legal rights and remedies available to the purchaser under the terms & conditions of the contract.
- 8.6 The purchaser's/consignee's contractual right to inspect, test and, if necessary, reject the goods after the goods' arrival at the final destination shall have no bearing of the fact that the goods have previously been inspected and cleared by purchaser's inspector during pre-despatch inspection mentioned above.
- 8.7 Goods accepted by the purchaser/consignee and/or its inspector at initial inspection and in final inspection in terms of the contract shall in no way dilute purchaser's/consignee's right to reject the same later, if found deficient in terms of the warranty clause of the contract, as incorporated under GCC Clause 15.
- 8.8 Principal/ Foreign supplier shall also have the equipment inspected by recognised/ reputed agency like SGS, Lloyd, Bureau Veritas, TUV prior to despatch at the supplier's cost and furnish necessary certificate from the said agency in support of their claim.

## **9. Terms of Delivery**

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

## **10. Transportation of Goods**

### **10.1 Instructions for transportation of imported goods offered from abroad:**

The supplier shall not arrange part-shipments and/or transshipment without the express/prior written consent of the purchaser. The supplier is required under the contract to deliver the goods under CIP (Named port of destination) terms; the shipment shall be made by Indian flag vessel or by vessels belonging to the conference lines in which India is a member country through India's forwarding agents/coordinators. In case the forwarding agent/coordinators are unable to provide timely adequate space in Indian flag vessel or by vessels belonging to the conference lines, the supplier shall arrange shipment through any available vessel to adhere to the delivery schedule given in the contract.

In case of airlifting of imported goods offered from abroad, the same will be done only through the National Carrier i.e. Air India wherever applicable. In case the National Carrier is not available, any other airlines available for early delivery may be arranged.

### **10.2 Instructions for transportation of domestic goods including goods already imported by the supplier under its own arrangement:**

In case no instruction is provided in this regard in the SCC, the supplier will arrange transportation of the ordered goods as per its own procedure.

## **11. Insurance:**

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

- i) in case of supply of domestic goods on Consignee site basis, the supplier shall be responsible till the entire stores contracted for arrival in good condition at destination. The transit risk in this respect shall be covered by the Supplier by getting the stores duly insured for an amount equal to 110% of the value of the goods from ware house to ware house (consignee site) on all risk basis. The insurance cover shall be obtained by the Supplier and should be valid till 3 months after the receipt of goods by the Consignee.
- ii) in case of supply of the imported goods on CIP Named port of Destination Basis, the additional extended Insurance (local transportation and storage) would be borne by the Supplier from the port of entry to the consignee site for a period including 3 months beyond date of delivery for an amount equal to 110% of the overall expenditure to be incurred by the purchaser from ware house to ware house (consignee site) on all risk basis.

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

## **12. Spare parts**

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

- a) The spare parts as selected by the Purchaser/Consignee to be purchased from the supplier, subject to the condition that such purchase of the spare parts shall not relieve the supplier of any contractual obligation including warranty obligations; and
- b) In case the production of the spare parts is discontinued:
  - i) Sufficient advance notice to the Purchaser/Consignee before such discontinuation to provide adequate time to the purchaser to purchase the required spare parts etc., and
  - ii) Immediately following such discontinuation, providing the Purchaser/Consignee, free of cost, the designs, drawings, layouts and specifications of the spare parts, as and if requested by the Purchaser/Consignee.

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

### **13. Incidental services**

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

- i) Installation & commissioning, Supervision and Demonstration of the goods
- ii) Providing required jigs and tools for assembly, minor civil works required for the completion of the installation.
- iii) Training of Consignee's Doctors, Staff, operators etc. for operating and maintaining the goods
- iv) Supplying required number of operation & maintenance manual for the goods

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

The supplier shall send all the relevant despatch documents well in time to the Purchaser/Consignee to enable the Purchaser/Consignee clear or receive (as the case may be) the goods in terms of the contract.

Unless otherwise specified in the SCC, the usual documents involved and the drill to be followed in general for this purpose are as follows.

A) For Domestic Goods, including goods already imported by the supplier under its own arrangement

Within 24 hours of despatch, the supplier shall notify the purchaser, consignee, and others concerned if mentioned in the contract, the complete details of despatch and also supply the following documents to them by registered post / speed post / courier (or as instructed in the contract):

- (i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
- (ii) Two copies of packing list identifying contents of each package;
- (iii) Inspection certificate issued by the nominated Inspection agency, if any.
- (iv) Certificate of origin;
- (v) Insurance Certificate as per GCC Clause 11.
- (vi) Manufacturers/Supplier's warranty certificate & In-house inspection certificate.

B) For goods imported from abroad

Within 24 hours of despatch, the supplier shall notify the purchaser, consignee, and others concerned if mentioned in the contract, the complete details of despatch and also supply the



following documents to them by registered post / speed post (or as instructed in the contract). Any delay or demurrage occurred during the customs clearance on account of the non-availability of technical support/ clarifications /documents from the supplier shall be borne by the supplier:

- (i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
- (ii) Original and four copies of the negotiable clean, on-board Bill of Lading/Airway bill, marked freight pre paid and four copies of non-negotiable Bill of Lading/Airway bill;
- (iii) Four Copies of packing list identifying contents of each package;
- (iv) Insurance Certificate as per GCC Clause 11.
- (v) Manufacturer's/Supplier's warranty certificate;
- (vi) Inspection Certificate for the despatched equipments issued by recognized/ reputed agency like SGS, Lloyd, BEAUREU VERITAS, TUV prior to despatch
- (vii) Manufacturer's own factory inspection report;
- (viii) Certificate of origin
- (ix) Port of Loading;
- (x) Port of Discharge and
- (xi) Expected date of arrival.

## 15. Warranty

- 15.1 The supplier warrants comprehensively that the goods supplied under the contract is new, unused and incorporate all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials, manufacturing or workmanship or from any act or omission of the supplier that may develop under normal use of the supplied goods under the conditions prevailing in India.
- 15.2 The **warranty** shall remain valid for the period as mentioned in the list of requirement/ General Technical specification, after the goods or any portion thereof as the case may be, have been delivered, installed and commissioned at the final destination.
- a. No conditional warranty will be acceptable.
  - b. Warranty as well as Comprehensive Maintenance contract will be inclusive of all accessories and Turnkey work and it will also cover the following wherever applicable:-
    - Any kind of motor.
    - Plastic & Glass Parts against any manufacturing defects.
    - All kind of sensors.
    - All kind of coils, probes and transducers.
    - Printers and imagers including laser and thermal printers with all parts.
    - UPS including the replacement of batteries.
    - Air-conditioners
  - c. Replacement and repair will be under taken for the defective goods.
  - d. Proper marking has to be made for all spares for identification like printing of installation and repair dates.
- 15.3 In case of any claim arising out of this warranty, the Purchaser/Consignee shall promptly notify the same in writing to the supplier. The period of the warranty will be as per G.C.C clause number 15.2 above irrespective of any other period mentioned elsewhere in the bidding documents.

- 15.4 Upon receipt of such notice, the supplier shall, within 8 hours on a 24(hrs) X 7(days) X 365(days) basis respond to take action to repair or replace the defective goods or parts thereof, free of cost, at the ultimate destination. The supplier shall take over the replaced parts/goods after providing their replacements and no claim, whatsoever shall lie on the purchaser for such replaced parts/goods thereafter. The penalty clause for non-rectification will be applicable as per tender conditions
- 15.5 In the event of any rectification of a defect or replacement of any defective goods during the warranty period, the warranty for the rectified/replaced goods shall be extended to a further period of twenty four (24) months from the date such rectified / replaced goods starts functioning to the satisfaction of the purchaser.
- 15.6 If the supplier, having been notified, fails to respond to take action to repair or replace the defect(s) within 8 hours on a 24(hrs) X 7 (days) X 365 (days) basis, the purchaser may proceed to take such remedial action(s) as deemed fit by the purchaser, at the risk and expense of the supplier and without prejudice to other contractual rights and remedies, which the purchaser may have against the supplier.
- 15.7 During Warranty period, the supplier is required to visit at each consignee's site at least once in 6 months commencing from the date of the installation for preventive maintenance of the goods
- 15.8 The Purchaser/Consignee reserve the rights to enter into Annual Comprehensive Maintenance Contract between Consignee and the Supplier for the period as mentioned in Section VII, Technical Specifications after the completion of warranty period.
- 15.9 The supplier along with its Indian Agent and the CMC provider shall ensure continued supply of the spare parts for the machines and equipments supplied by them to the purchaser for 10 years from the date of installation and handing over.
- 15.10 The Supplier along with its Indian Agent and the CMC Provider shall always accord most favoured client status to the Purchaser vis-à-vis its other Clients/Purchasers of its equipments/machines/goods etc. and shall always give the most competitive price for its machines/equipments supplied to the Purchaser/Consignee.

**16. Assignment**

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

**17. Sub Contracts**

- 17.1 The Supplier shall notify the Purchaser in writing of all sub contracts awarded under the contract if not already specified in its tender. Such notification, in its original tender or later, shall not relieve the Supplier from any of its liability or obligation under the terms and conditions of the contract.
- 17.2 Sub contract shall be only for bought out items and sub-assemblies.
- 17.3 Sub contracts shall also comply with the provisions of GCC Clause 4 ("Country of Origin").

**18. Modification of contract**

- 18.1 If necessary, the purchaser may, by a written order given to the supplier at any time during the currency of the contract, amend the contract by making alterations and modifications within the general scope of contract in any one or more of the following:
- a) Specifications, drawings, designs etc. where goods to be supplied under the contract are to be specially manufactured for the purchaser,
  - b) Mode of packing,
  - c) Incidental services to be provided by the supplier
  - d) Mode of despatch,
  - e) Place of delivery, and

f) Any other area(s) of the contract, as felt necessary by the purchaser depending on the merits of the case.

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

## **19. Prices**

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

## **20. Taxes and Duties**

20.1 Supplier shall be entirely responsible for all taxes, duties, fees, levies etc. incurred until delivery of the contracted goods to the purchaser. However, for goods directly imported shall be guided by the INCOTERM.

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

## **21. Terms and Mode of Payment**

### **21.1 Payment Terms**

Payment shall be made subject to recoveries, if any, by way of liquidated damages or any other charges as per terms & conditions of contract in the following manner.

#### **A) Payment for Domestic Goods Or Foreign Origin Located Within India.**

Payment shall be made in Indian Rupees as specified in the contract in the following manner:

##### **1. On delivery:**

80% payment of the contract price shall be paid on receipt of goods in good condition and upon the submission of the following documents:

- (i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
- (ii) Consignee Receipt Certificate as per Section XVII in original issued by the authorized representative of the consignee;
- (iii) Two copies of packing list identifying contents of each package;
- (iv) Inspection certificate issued by the nominated Inspection agency, if any.
- (v) Insurance Certificate as per GCC Clause 11;
- (vi) Certificate of origin.

##### **2. On Acceptance:**

Balance 20% payment would be made against 'Final Acceptance Certificate' as per Section XVIII of goods to be issued by the consignees subject to recoveries, if any, either on account of non-rectification of defects/deficiencies not attended by the Supplier or otherwise. Final acceptance certificate will be released by the consignee on completion of installation, commissioning, training, successful running of equipment (at least 2-3 weeks) and handing over the equipment to the consignee.

**B) Payment for Imported Goods:**

Payment for foreign currency portion shall be made in the currency as specified in the contract in the following manner:

**a) On Shipment:**

Eighty (80)% of the net CIP price (CIP price less Indian Agency commission) of the goods shipped shall be paid through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the supplier in a bank in his country and upon submission of documents specified hereunder:

- (i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
- (ii) Original and four copies of the negotiable clean, on-board Bill of Lading/ Airway bill, marked freight pre paid and four copies of non-negotiable Bill of Lading/Airway bill;
- (iii) Four Copies of packing list identifying contents of each package;
- (iv) Insurance Certificate as per GCC Clause 11 and documents also to be submitted for payment of LC confirming that dispatch documents has already been sent to all concerned as per the contract within 24 hours;
- (v) Manufacturer's/Supplier's warranty certificate;
- (vi) Inspection certificate issued by the nominated inspection agency, if applicable as per contract;
- (vii) Manufacturer's own factory inspection report and
- (viii) Certificate of origin by the chamber of commerce of the concerned country;
- (ix) Inspection Certificate for the despatched equipment issued by recognized/ reputed agency like SGS, Lloyd, BUREAU VERITAS and TUV prior to despatch.

**b) On Acceptance:**

Balance payment of 20% of net CIP price of goods would be made against 'Final Acceptance Certificate' as per Section XVIII to be issued by the consignees through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the Foreign Principal in a bank in his country, subject to recoveries, if any. Final acceptance certificate will be released by the consignee on completion of installation, commissioning, training, successful running of equipment (at least 2-3 weeks) and handing over the equipment to the consignee.

**c) Payment of Incidental Costs till consignee site & Incidental Services** (including Installation & Commissioning, Supervision, Demonstration and Training) will be paid in Indian Rupees to the Indian Agent on proof of final installation, commission and acceptance of equipment by the consignee.

**d) Payment of Indian Agency Commission:**

Indian Agency commission will be paid to the manufacturer's agent in the local currency for an amount in Indian rupees indicated in the relevant Price Schedule (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject to further escalation / exchange variation.

**C) Payment of Turnkey, if any:**

Turnkey payment will be made as indicated in the relevant Price Schedule (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject to further escalation/ exchange variation.

**D) Payment for Annual Comprehensive Maintenance Contract Charges:**

The consignee will enter into CMC with the supplier at the rates as stipulated in the contract. The payment of CMC will be made on six monthly basis after satisfactory completion of said period, duly certified by the consignee on receipt of bank guarantee for an amount equivalent to 2.5% of the cost of the equipment as per contract in the prescribed format given in Section XV valid till 2 months after expiry of entire CMC period.

- 21.2 The supplier shall not claim any interest on payments under the contract.
- 21.3 Where there is a statutory requirement for tax deduction at source, such deduction towards income tax and other tax as applicable will be made from the bills payable to the Supplier at rates as notified from time to time.
- 21.4 Irrevocable & non – transferable LC shall be opened by the respective consignees. However, if the supplier requests specifically to open confirmed LC, the extra charges would be borne by the supplier. If LC is required to be extended and/or amended for reasons not attributable to the purchaser/consignee, the charges thereof shall be borne by the supplier.
- 21.5 The payment shall be made in the currency / currencies authorised in the contract.
- 21.6 The supplier shall send its claim for payment in writing, when contractually due, along with relevant documents etc., duly signed with date, to respective consignees.
- 21.7 While claiming payment, the supplier is also to certify in the bill that the payment being claimed is strictly in terms of the contract and all the obligations on the part of the supplier for claiming that payment has been fulfilled as required under the contract.
- 21.8 While claiming reimbursement of duties, taxes etc. (like sales tax, excise duty, custom duty) from the Purchaser/Consignee, as and if permitted under the contract, the supplier shall also certify that, in case it gets any refund out of such taxes and duties from the concerned authorities at a later date, it (the supplier) shall refund to the Purchaser/Consignee forthwith.
- 21.9 In case where the supplier is not in a position to submit its bill for the balance payment for want of receipted copies of Inspection Note from the consignee and the consignee has not complained about the non-receipt, shortage, or defects in the supplies made, balance amount will be paid by the paying authority without consignee's receipt certificate after three months from the date of the preceding part payment for the goods in question, subject to the following conditions:
- (a) The supplier will make good any defect or deficiency that the consignee (s) may report within six months from the date of despatch of goods.
  - (b) Delay in supplies, if any, has been regularized.
  - (c) The contract price where it is subject to variation has been finalized.
  - (d) The supplier furnishes the following undertakings:

“I/We, \_\_\_\_\_ certify that I/We have not received back the Inspection Note duly receipted by the consignee or any communication from the purchaser or the consignee about non-receipt, shortage or defects in the goods supplied. I/We \_\_\_\_\_ agree to make good any defect or deficiency that the consignee may report within three months from the date of receipt of this balance payment.

**22. Delivery**

- 22.1 The supplier shall deliver the goods and perform the services under the contract within the time schedule specified by the Purchaser/Consignee in the List of Requirements and as incorporated in the contract. The time for and the date of delivery of the goods stipulated in the schedule shall be deemed to be of the essence of the contract and the delivery must be completed not later than the date (s) as specified in the contract.

- 22.2 Subject to the provision under GCC clause 26, any unexcused delay by the supplier in maintaining its contractual obligations towards delivery of goods and performance of services shall render the supplier liable to any or all of the following sanctions:
- (i) imposition of liquidated damages,
  - (ii) forfeiture of its performance security and
  - (iii) termination of the contract for default.
- 22.3 If at any time during the currency of the contract, the supplier encounters conditions hindering timely delivery of the goods and performance of services, the supplier shall promptly inform the Purchaser/Consignee in writing about the same and its likely duration and make a request to the Purchaser/Consignee for extension of the delivery schedule accordingly. On receiving the supplier's communication, the Purchaser/Consignee shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier's contractual obligations by issuing an amendment to the contract.
- 22.4 When the period of delivery is extended due to unexcused delay by the supplier, the amendment letter extending the delivery period shall, inter alia contain the following conditions:
- (a) The Purchaser/Consignee shall recover from the supplier, under the provisions of the clause 23 of the General Conditions of Contract, liquidated damages on the goods and services, which the Supplier has failed to deliver within the delivery period stipulated in the contract.
  - (b) That no increase in price on account of any ground, whatsoever, including any stipulation in the contract for increase in price on any other ground and, also including statutory increase in or fresh imposition of customs duty, excise duty, sales tax/ VAT, Service Tax and Works Contract Tax or on account of any other tax or duty which may be levied in respect of the goods and services specified in the contract, which takes place after the date of delivery stipulated in the contract shall be admissible on such of the said goods and services as are delivered and performed after the date of the delivery stipulated in the contract.
  - (c) But nevertheless, the Purchaser/Consignee shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, excise duty, sales tax/ VAT, Service Tax and Works Contract Tax or any other duty or tax or levy or on account of any other grounds, which takes place after the expiry of the date of delivery stipulated in the contract.
- 22.5 The supplier shall not dispatch the goods after expiry of the delivery period. The supplier is required to apply to the Purchaser/Consignee for extension of delivery period and obtain the same before despatch. In case the supplier dispatches the goods without obtaining an extension, it would be doing so at its own risk and no claim for payment for such supply and / or any other expense related to such supply shall lie against the purchaser.
- 22.6 Passing of Property:
- 22.6.1 The property in the goods shall not pass to the purchaser unless and until the goods have been delivered to the consignee in accordance with the conditions of the contract.
  - 22.6.2 Where there is a contract for sale of specific goods and the supplier is bound to do something to the goods for the purpose of putting them into a deliverable state the property does not pass until such thing is done.
  - 22.6.3 Unless otherwise agreed, the goods remain at the supplier's risk until the property therein is transferred to the purchaser.

**23. Liquidated damages**

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

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

#### **24. Termination for default**

- 24.1 The Purchaser/Consignee, without prejudice to any other contractual rights and remedies available to it (the Purchaser/Consignee), may, by written notice of default sent to the supplier, terminate the contract in whole or in part, if the supplier fails to deliver any or all of the goods or fails to perform any other contractual obligation(s) within the time period specified in the contract, or within any extension thereof granted by the Purchaser/Consignee pursuant to GCC sub-clauses 22.3 and 22.4.
- 24.2 In the event of the Purchaser/Consignee terminates the contract in whole or in part, pursuant to GCC sub-clause 24.1 above, the Purchaser/Consignee may procure goods and/or services similar to those cancelled, with such terms and conditions and in such manner as it deems fit and the supplier shall be liable to the Purchaser/Consignee for the extra expenditure, if any, incurred by the Purchaser/Consignee for arranging such procurement.
- 24.3 Unless otherwise instructed by the Purchaser/Consignee, the supplier shall continue to perform the contract to the extent not terminated.

#### **25. Termination for insolvency**

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

#### **26. Force Majeure**

- 26.1 Notwithstanding the provisions contained in GCC clauses 22, 23 and 24, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure.
- 26.2 For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of , the party claiming to be affected by such event and which has caused the non – performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees , lockouts excluding by its management, and freight embargoes.
- 26.3 If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall

continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

- 26.4 If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.
- 26.5 In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs.

## **27. Termination for convenience**

- 27.1 The Purchaser/Consignee reserves the right to terminate the contract, in whole or in part for its (Purchaser's/Consignee's) convenience, by serving written notice on the supplier at any time during the currency of the contract. The notice shall specify that the termination is for the convenience of the Purchaser/Consignee. The notice shall also indicate inter alia, the extent to which the supplier's performance under the contract is terminated, and the date with effect from which such termination will become effective.
- 27.2 The goods and services which are complete and ready in terms of the contract for delivery and performance within thirty days after the supplier's receipt of the notice of termination shall be accepted by the Purchaser/Consignee following the contract terms, conditions and prices. For the remaining goods and services, the Purchaser/Consignee may decide:
- a) To get any portion of the balance completed and delivered at the contract terms, conditions and prices; and / or
  - b) To cancel the remaining portion of the goods and services and compensate the supplier by paying an agreed amount for the cost incurred by the supplier towards the remaining portion of the goods and services.

## **28. Governing language**

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

## **29. Notices**

- 29.1 Notice, if any, relating to the contract given by one party to the other, shall be sent in writing or by cable or telex or facsimile and confirmed in writing. The procedure will also provide the sender of the notice, the proof of receipt of the notice by the receiver. The addresses of the parties for exchanging such notices will be the addresses as incorporated in the contract.
- 29.2 The effective date of a notice shall be either the date when delivered to the recipient or the effective date specifically mentioned in the notice, whichever is later.

## **30. Resolution of disputes**

- 30.1 If dispute or difference of any kind shall arise between the Purchaser/Consignee and the supplier in connection with or relating to the contract, the parties shall make every effort to resolve the same amicably by mutual consultations.
- 30.2 If the parties fail to resolve their dispute or difference by such mutual consultation within twenty-one days of its occurrence, then, unless otherwise provided in the SCC, either the Purchaser/Consignee or the supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided the applicable arbitration procedure will be as per



the Arbitration and Conciliation Act, 1996 of India. In the case of a dispute or difference arising between the Purchaser/Consignee and a domestic Supplier relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitrator appointed by the Director-Principal, Rajiv Gandhi Super Speciality Hospital. The award of the arbitrator shall be final and binding on the parties to the contract subject to the provision that the Arbitrator shall give reasoned award in case the value of claim in reference exceeds Rupees One lakhs (Rs. 1,00,000/-)

30.3 Venue of Arbitration: The venue of arbitration shall be at New Delhi, India.

30.4 Jurisdiction of the court will be at New Delhi, India

### 31. **Applicable Law**

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

### 32 **Withholding and Lien in respect of sums claimed**

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

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

### 33. **General/ Miscellaneous Clauses**

33.1 Nothing contained in this Contract shall be constructed as establishing or creating between the parties, i.e. the Supplier/its Indian Agent/CMC Provider on the one side and the Purchaser on the other side, a relationship of master and servant or principal and agent.

33.2 Any failure on the part of any Party to exercise right or power under this Contract shall not operate as waiver thereof.

33.3 The Supplier shall notify the Purchaser/Consignee of any material change would impact on performance of its obligations under this Contract.

33.4 Each member/constituent of the Supplier/its Indian Agent/CMC Provider, in case of consortium shall be **jointly and severally liable** to and responsible for all obligations towards the Purchaser/Consignee/Government for performance of contract/services including that of its Associates/Sub Contractors under the Contract.

33.5 The Supplier/its Indian Agent/CMC Provider shall at all times, indemnify and keep indemnified the Purchaser/Consignee against all claims/damages etc. for any infringement of any Intellectual Property Rights (IPR) while providing its services under CMC or the Contract.

33.6 The Supplier/its Agent/CMC Provider shall, at all times, indemnify and keep indemnified the Purchaser/Consignee against any claims in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by its employees or agents or by any other third party resulting from or by any action, omission or operation conducted by or on behalf of the supplier/its associate/affiliate etc.

33.7 All claims regarding indemnity shall survive the termination or expiry of the contract.

**SECTION – V**

**SPECIAL CONDITIONS OF CONTRACT (SCC)**

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

These Special Conditions will modify/substitute/supplement the corresponding (GCC) clauses. Whenever there is any conflict between the provision in the GCC and that in the SCC, the provision contained in the SCC shall prevail.

**The Warranty and CMC period will be strictly as mentioned in the list of requirement (Section VI, part I) only irrespective of any other period mentioned elsewhere in the tender enquiry. Also, CMC only to be quoted after warranty period instead of AMC mentioned (if any) in the tender specification.**

## SECTION - VI

## LIST OF REQUIREMENTS

## Part I

Sl. No	Tender_ID	Name of the item	User Department	Qty.	Warranty Period CMC Period	CMC Period
1	2016_HFWD_104215_1	Fully automated Electrolyte Analyzer	Biochemistry	1	5 Years	5 Years
2	2016_HFWD_104215_2	High Speed Centrifuge	Biochemistry	3	5 Years	5 Years
3	2016_HFWD_104215_3	Fully Automatic Electrophoresis System	Biochemistry	1	5 Years	5 Years
4	2016_HFWD_104215_4	Deep Freezers -40 degree Celsius	Blood Bank	1	5 Years	5 Years
5	2016_HFWD_104215_5	Deep Freezers -80 degree Celsius	Blood Bank	1	5 Years	5 Years
6	2016_HFWD_104215_6	Laboratory Centrifuge Machine	Blood Bank	2	5 Years	5 Years
7	2016_HFWD_104215_7	Laminar Air Flow (Bio-Safety Cabinet)	Blood Bank (2) Microbiology (2)	4	5 Years	5 Years
8	2016_HFWD_104215_8	Ambulatory BP Monitors	Cardiology	3	5 Years	5 Years
9	2016_HFWD_104215_9	3D Mapping System	Cardiology	1	5 Years	5 Years
10	2016_HFWD_104215_10	Rotablator Machine	Cardiology	1	5 Years	5 Years
11	2016_HFWD_104215_11	OCT & FFR Integrated System	Cardiology	1	5 Years	5 Years
12	2016_HFWD_104215_12	Intra-aortic balloon pump (IABP)	Cardiology	1	5 Years	5 Years
13	2016_HFWD_104215_13	TMT Machine	Cardiology	3	5 Years	5 Years
14	2016_HFWD_104215_14	Fully Automated ESR Analyser	Cardiology	1	5 Years	5 Years
15	2016_HFWD_104215_15	EP Lab with RF generator	Cardiology	1	5 Years	5 Years
16	2016_HFWD_104215_16	Endoscopy System	Gastroenterology	1	5 Years	5 Years
17	2016_HFWD_104215_17	Syringe Infusion Pumps	ICU	50	5 Years	5 Years
18	2016_HFWD_104215_18	BOD Incuabator	Microbiology	1	5 Years	5 Years
19	2016_HFWD_104215_19	Fully Autoamted Elisa Processor (Reader and Washer)	Microbiology	2	5 Years	5 Years
20	2016_HFWD_104215_20	Bacteriology Incubator	Microbiology	1	5 Years	5 Years
21	2016_HFWD_104215_21	Hot Air Oven	Microbiology	1	5 Years	5 Years
22	2016_HFWD_104215_22	Hemodialysis Machine with HDF Facility	Nephrology	1	5 Years	5 Years
23	2016_HFWD_104215_23	Hemodialysis Machine	Nephrology	6	5 Years	5 Years
24	2016_HFWD_104215_24	Hemodialysis Machine with SLED	Nephrology	4	5 Years	5 Years
25	2016_HFWD_104215_25	Dialysis Reprocessing System	Nephrology	2	5 Years	5 Years
26	2016_HFWD_104215_26	Tissue Embedding Station	Pathology	1	5 Years	5 Years
27	2016_HFWD_104215_27	Fully Automated Tissue Processor For Histopathology Lab	Pathology	1	5 Years	5 Years
28	2016_HFWD_104215_28	Semi-Automatic Rotary Microtome	Pathology	2	5 Years	5 Years
29	2016_HFWD_104215_29	Fully Automated Cryo Microtome	Pathology	1	5 Years	5 Years
30	2016_HFWD_104215_30	Fully Automated Slide Stainer for Histo Lab	Pathology	1	5 Years	5 Years
31	2016_HFWD_104215_31	3.0 Tesla MRI Scanner	Radiology	1	5 Years	5 Years
32	2016_HFWD_104215_32	Digital Flat Panel Fluoroscopy with DSA	Radiology	1	5 Years	5 Years

Sl. No	Tender_ID	Name of the item	User Department	Qty.	Warranty Period CMC Period	CMC Period
33	2016_HFWD_104215_33	ACT Machine	Cardiac Surgery	5	5 Years	5 Years
34	2016_HFWD_104215_34	Cell Saver	Cardiac Surgery	1	5 Years	5 Years

**Part II: Required Delivery Schedule:**

**a) For Indigenous goods or for imported goods if supplied from India:**

90 days (for items at sl. no. 31 & 32) and 60 days (for all other items in this Tender Enquiry Document) from date of Notification of Award to delivery at consignee site. The date of delivery will be the date of delivery at consignee site (Tenderers may quote earliest delivery period).

**b) For Imported goods directly from foreign:**

90 days (for items at sl. no. 31 & 32) and 60 days (for all other items in this Tender Enquiry Document) from the date of opening of L/C. The date of delivery will be the date of Bill of Lading/Airway bill. (Tenderers may quote the earliest delivery period).

**c) Installation and commissioning shall be done within 90 days (for item at sl. no. 31) and 15 days (for all other items in this Tender Enquiry Document) of receipt of the stores/ goods at site or within 90 days (for item at sl. no. 31) and 15 days (for all other items in this Tender Enquiry Document) of handing over the site for installation, whichever is later.**

**Note:** Indigenous goods or imported goods if supplied from India (offered in INR) which are linked with supply of directly imported goods are to be supplied within the contractual delivery period as stated in para b) above.

**Part III: Scope of Incidental Services:**

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

**Part IV:**

Turnkey (if any) as per details in Technical Specification.

**Part V:**

Warranty period as per details in general technical specification and as specified in Part I above. Warranty period will be 60 months from the date of installation, commissioning and acceptance or 66 months from the date of last shipment/dispatch, whichever is earlier.

Comprehensive Maintenance Contract (CMC) as per details in Technical Specification as specified in Part I above

**Part VI:**

**Required Terms of Delivery and Destination.**

**a) For Indigenous goods or for imported goods if supplied from India:**

At Consignee Site(s)

**b) For Imported goods directly from abroad:**

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

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

**Destination/Consignee details are given in Section XXI**

**Section – VII**  
**Technical Specification**

**Sl. No. 1**

**FULLY AUTOMATED ELECTROLYTE ANALYZER**

1. The Analyzer should have option to measure Blood/Serum/Plasma/Urine and other biological fluids.
2. The Analyzer should be able to measure Na, K, Cl.
3. Should have Integrated Pack to avoid Wastage Handling.
4. Should have at least 100 Samples results Storage.
5. Sample volume should be less than 120 µl.
6. Should have economy mode to save Reagents Consumption.
7. Should have In-Built Thermal Printer.
8. Up gradation with Autoloader.
9. Should have option to feed Patient Name and Patient ID.
10. Should have Barcode Scanner.
11. Should have suitable UPS with maintenance free batteries of minimum one hour back up should be supplied with the system.
12. Training of staff with their reagents
13. Should be European CE and/or USFDA approved

**Sl. No. 2**

**High speed centrifuge**

1. Fixed angle rotor head, rotor speed up to 13000 rpm, Tube capacity 24-36 size 5-15ml.
2. Digital-electronic speed control system.
3. Closed lid operation.
4. Short acceleration and deceleration.
5. Digital display of speed, RCF and running time with quick key for short and continuous run.
6. Timer of 99 minutes.
7. Working conditions should be ambient temperature.
8. Shock and chemical resistant.(aerosol tight lid).
9. Centrifuge should be European CE and/Or USFDA approved

10. Specify the volume for rotor.

**Sl. No. 3**

**Fully Automatic Electrophoresis System**

1. The system should run the Serum Protein, Hemoglobin's, lipoprotein, isoenzymes etc. tests in full Automation from sample application to gel drying.
2. The analytical system must use support medium (Polyacrylamide gel in case of vertical system offered and in case of horizontal system Agarose gel.)
3. System should be equipped with automated sample applicator(s) that apply sample directly on the gel without any manual intervention.
4. The instrument must work with a dry migration chamber.
5. The Migration chamber must have a Pelletier controlled temperature control system.
6. System should have possibility to use more than 2 electrodes in same migration chamber if required.
7. The system must guarantee at least 25 samples of Serum proteins per hour.
8. The system must have the lowest number of manual interventions made by the operator during the Processing of the serum proteins.
9. System should not mandate transfer of gel from one module to another by an operator.
10. It is preferred that system also has protocols pre-programmed for special assays like high resolution Protein electrophoresis and SDS urine protein electrophoresis.
11. System should offer possibility to apply samples in the same sample plate without previous pre-treatment of turbid or viscous samples or serum containing cryoprecipitate.
12. System should have an external computer attached for quantification and report analysis.
13. System software should offer capability to assign the suspected monoclonal component in an automated fashion.
14. System software should have built-in LAN connectivity option where same sample data can be observed simultaneously at multiple computers.
15. System should offer capability of result authorization.
16. All analytical phases must be visualized with the same PC used for the data management.
17. System software offer possibility to customize each method via software.
18. System software should have patient result recall option for better patient monitoring.

19. System software should have facility for interfacing with LIMS.
20. System software should offer customizable reporting format.

**Sl. No. 4**

**DEEP FREEZERS -40°C**

- 1 Should be suitable for plasma storage in blood banks.
- 2 Temperature range -20°C to -40°C
- 3 Internal capacity minimum 400 litres.
- 4 Vertical Cabinet (upright).
- 5 Powder coated solid outer cabinet to prevent corrosion.
- 6 Inner cabinet should be made of stainless steel.
- 7 Separate inner doors to prevent cold loss.
- 8 It should have 4 or more inner shelves inner shelves of stainless steel (adjustable) with inventory racks.
- 9 Automatic closing of the front door below a opening angle of 90°.
- 10 Hold over time 2 hrs at ambient temperature.
- 11 Microprocessor control for operation with integrated audio visual temperature alarm function with digital monitoring display.
- 12 Minimum 4 hours battery back for display back up.
- 13 Seven days inkless graphic temperature recorder with range of -50°C to 100°C, with data logger.
- 14 Heavy duty hermetically sealed compressor air cooled refrigeration system, maintains inner temperature below -40°C.
- 15 Refrigerant should be CFC free.
- 16 **Cooled down time**: Full load of plasma bag at 25°C. Maximum of 5 hours for all packs to reach below -40° C.
- 17 **Optional**: Access port for CO<sub>2</sub> back up system for refrigeration.
- 18 Reliable mounting and fixtures to ensure minimize noise and vibration.
- 19 Heating device on frame to avoid condensation.
- 20 Alarm history: Temperature maximum and minimum, average temperature during alarm period, time of duration of alarm.
- 21 Have the possibility to check the internal temperature on display, during power failure.
- 22 Door opening audio and visual display alarm.
- 23 Casing & door should have vacuum insulation panel as per standards.
- 24 Should have lockable castors for free and easy mobility.
- 25 Automatic defrosting preferred.
- 26 Should have compressor running time < 60 to 70%.
- 27 Should have facility for connection to external monitoring system.
- 28 To be operational on 220 to 240 Volts at 50 Hz. Single phase.
- 29 Should be USFDA or European CE approved product
- 30 A Line Voltage Corrector as per the specification provided below should form part of standard configuration.



**Sl. No. 5**

**DEEP FREEZERS -80° Celsius**

- 1 Should be suitable for plasma storage in blood banks.
- 2 Temperature range -50°C to -86°C and adjustable with a setting accuracy of +10°C.
- 3 Internal capacity minimum 400 liters.
- 4 Vertical Cabinet (upright).
- 5 Powder coated solid outer cabinet to prevent corrosion.
- 6 Inner cabinet should be made of stainless steel.
- 7 Separate inner doors to prevent cold loss.
- 8 It should have 5 or 6 inner shelves of stainless steel (adjustable) with inventory racks.
- 9 Automatic closing of the front door below a opening angle of 900.
- 10 Hold over time 2 hrs. at ambient temperature.
- 11 Microprocessor control for operation with integrated audio visual temperature alarm function with digital monitoring display
- 12 Minimum 4 hours battery back for display back up.
- 13 Seven days inkless graphic temperature recorder with range of -50°C to -100°C, with data logger.
- 14 Heavy duty hermitically sealed compressor air cooled cascade refrigeration system, maintains inner temperature below -80°C.
- 15 Refrigerant should be CFC free.
- 16 **Cooled down time:** Full load of plasma bag at 25°C. Maximum of 5 hours .for all packs to reach below – 50°C.
- 17 **Optional:** Access port for CO<sub>2</sub> back up system for refrigeration.
- 18 Reliable mounting and fixtures to ensure minimize noise and vibration
- 19 Heating device on frame to avoid condensation.
- 20 Alarm history: Temperature maximum and minimum, average temperature during alarm period, time of duration of alarm.
- 21 Have the possibility to check the internal temperature on display, during power failure.
- 22 Door opening audio and visual display alarm.
- 23 Casing & door should have vacuum insulation panel with polyurethane foam as per standards.
- 24 Should have lockable castors for free and easy mobility.
- 25 Automatic defrosting preferred.
- 26 Should have compressor running time < 60 to 70%.
- 27 Should have facility for connection to external monitoring system.
- 28 To be operational on 220 to 240 Volts at 50 Hz. Single phase.
- 29 Should be USFDA or European CE approved product
- 30 A Line Voltage Corrector as per the specification provided below should form part of standard configuration.

**Sl. No. 6**

**LABORATORY CENTRIFUGE MACHINE**

**Description:** Bench-top centrifuge machine with swing-out rotor; Rotor head capacity of 12 x 15ml tubes;  
Range of centrifugal force 2000-3000g; Speed controller and timer;  
Digital display of rotational speed and time.  
Autoclavable buckets; to work on standard electrical supply configuration(**aerosol tight lid**).  
System should be European CE and/Or USFDA approved.  
Essential Accessories must be supplied with the main consignment & committed in the bid

1. Additional buckets – 1 set.
2. Power cord of Indian type.

**Sl. No. 7**

**LAMINAR AIR FLOW**

1. Features Floor model, Horizontal flow, well-lighted, work surface, low vibration and noise, easy to man oeuvre due to castor wheel provision. Over all dimension of work space of approximately 1200 mm x 600 mm x 600 mm.
2. **Construction**
  - 2.1 **Cabinet:** Stainless steel sheet of 20 SWG lining.
  - 2.2 **Front Panels:** Removable transparent scratch resistance sheet of approximately 6mm thickness.
  - 2.3 **Side Panels:** Fixed transparent scratch resistance sheet of approximately 6 mm Thickness.
  - 2.4 **Work Table:** Stainless Steel of 20 SWG lining.
  - 2.5 **Pre-filters:** Filtration efficiency of 98% for all types of particles of sizes 8 micron and larger.
  - 2.6 **Hepafilters (fine filters):** Filtration efficiency 99.9% for all types of particles of sizes 0.3 micron and larger. Housed in a frame with leak proof gaskets.
  - 2.7 **Motor Blower:** Dynamically balanced and specially constructed to suit low noise and vibration with adjustable speed. Motor shall conform to ISS or any international specifications.
  - 2.8 Air Velocity should not be more than 100 fpm over the work area.
  - 2.9 **Lighting:** Fluorescent tube lights with diffuser acrylic to get 120 deca lux on work surface
  - 2.10 **Ultra Violet light source:** Shall be provided.
3. **Power Supply :** 220/240 volts, 50 cycles, single phase. The equipment shall be provided

with both 5Amp and 15Amp plug units inside the cabinet along with a line voltage connector of appropriate rating.

4. Installation, commissioning and trial run will be the responsibility of the supplier
5. **Line Voltage:** Copper wound single phase automatic line voltage Corrector: corrector conforming to IS:9815/89 with latest amendment fitted with a voltmeter and switch to indicate output/input voltage as under:
  - a) **Capacity rating KVA:** As per the requirement of the equipment
  - b) **Input voltage:** 160 to 260 volt, 50 cycles
  - c) **Output voltage :** 220 to 240 volts adjustable
  - d) The equipment should be supplied with 220 meter cord at input and fitted with plugs of appropriate rating (15Amp.)
  - e) Make of the line voltage corrector shall be indicated.
  - f) Manufacturers shall submit the manufacturer's test certificate of each LVC as per IS to be supplied along with the equipment, however, type test certificate for one number of LVC shall be submitted at the time of inspection.
6. Manometer Should be provided with appropriate digital or analog Manometer to measure the air pressure.
7. **Technical Literature:** The firm shall positively submit printed illustrated technical literature/leaflet including the model quoted by them. If quoted model is modified version of their any standard model that also be indicated in the offer.

## Sl. No. 8

### **Ambulatory BP Monitors**

#### Portability

- The recorder should weigh maximum 250g (including batteries) and is palm top size.

#### Operation & management

- Clock and automatic measurement parameters may be set as needed.
- If you connect to a computer and use the optional software, clock and automatic measurement parameters can be set easily.
- There should be three modes for automatic measurement.
- The recorder can transmit data to a printer directly.
- The recorder should have the built-in chargeable coin Li battery to keep the clock and automatic measurement parameters.

#### Analysis

- The time interval may be changed as needed.
- The patient's blood pressure can be measured immediately at any time.

#### Smart measurement

- In the automatic measurement, these inflation value and stop value at exhaust should be managed to reduce the measurement time.

### **Functions and Specifications**

- Blood pressure measurement
- There are two ways of blood pressure measurement.
  - o Automatic measurement ---- This automatic measurement should works in accordance with internal clock, preset time intervals and preset mode. The measurement data is saved in memory.
  - o Manual measurement ---- Any time you press the START STOP key, a blood pressure measurement should be performed immediately.
- The measurement data should be saved in the memory.

### **Automatic measurement**

- This measurement starts or stops using the AUTO ON/OFF key. When this measurement is started, the recorder should begin to work in accordance with preset time intervals from the preset time of the internal clock.
- The recorder should automatically measure the patient's blood pressure at the time that is pointed out by "the frequency" and "the start time" (by the programed time intervals).
- When a measurement error occurs and there is 8 minutes until the next measurement, the measurement should be retried after approx. 30 seconds.
- If a measurement is retried, only the data from the retry is saved.
- The recorder automatically adjusts the proper pressure, exhaust velocity and end of measurement.

### **Stopping a measurement**

- If you press the START STOP key during a measurement, the recorder exhausts the air and stops the measurement.

### **Concealing the measurement value**

- This function should works only while using automatic measurement.
- This function does not display the SYS, DIA or pulse rate for the automatic measurement, but the data is saved in memory.
- This function should select "reveal" or "conceal" at "Parameters for the display and clock". If you select "conceal", the recorder should displays the clock during a measurement.
- If you reset the recorder, this parameter should set to "reveal".

### **Pressurization**

- The pressure should be automatically selected by the recorder while in the automatic measurement mode.

### **Memory**

- The recorder can store 300 sets of data (the memory capacity is 300).
- A data set should consists of a SYS, a DIA and a pulse rate.
- When memory becomes full, the recorder should displays an "M".

**ID number**

- The ID number can be set using the optional software.

**Performance specifications**

- Measurement method Oscillometric
- Pressurization micro-pump
- Display range 0 ~ 320 mmHg
- Automatic measurement 85 ~ 300 mmHg(Fitted)
- Manual measurement 185 mmHg (Fixed)
- Measurement range Systolic Blood Pressure 60 ~ 280 mmHg
- Diastolic Blood Pressure 40 ~ 60 mmHg
- Pulse rate 30 ~ 200 bpm
- Accuracy Pressure +3 mmHg
- Blood pressure Conforming to 1992 AAMI standard
- Pulse rate +5 %
- Minimum display division Pressure 1 mmHg
- Pulse rate 1 bpm
- Depressurization Constant exhaust Controlled ceramic valve
- Exhaust Ceramic valve
- Measurement Automatic measurement
- Manual measurement
- Number of measurement Apporx. 200 times (It may reduce this number due to environment and capacity of Ni-Cd batteries)
- Memory Up to 300 sets of data
- Display Normal Clock
- During a measurement Pressure value
- After a measurement SYS, DIA and pulse rate
- Error code, function of concealing the measurement data
- Clock 24-hours (1997~2096year, automatic leap year setting)
- Batteries 3 x Alkaline battery (type LR6, type AA, Mignon) or
- 3 x Ni-Cd battery (type AA, Mignon)
- Type of protecting against electric shock
- Internally powered equipment type BF
- Should be CE Marked
- Should have certification from Association for the Advancement of Medical Instrumentation

**Sl. No. 09**

**3D Mapping system**

Should offer an advanced 3D mapping system

**3 D MAPPING SYSTEM SPECIFICATION**

Following general features should be available.

- 1 Capable of 3D non-fluoroscopic mapping of arrhythmia facilitates radio frequency ablation.
- 2 Electro anatomic 3D mapping should be based on location technique using magnetic field or electrical field current
- 3 Platform based on PC computer
- 4 The equipment should be State of Art with capability to create 3D map of multiple Arrhythmias.
- 5 System should be based upon open Platform allowing the use of any make of regular EP catheters from multiple manufacturers for both 3D Mapping & Ablation.
- 6 Intuitive Graphical representation of catheters & upto 256 Shadows to identify previous position.
- 7 System should offer both Contact & Advanced Non-Contact Mapping for multiple arrhythmias.
- 8 Should have the capability of Single Beat Non-Contact Mapping to treat Non sustained arrhythmias & create Voltage Map from a SINGLE PVC beat.
- 9 Intuitive Simultaneous Graphical display with Real time navigation. Should offer uninterrupted view of unlimited number EP catheters and minimum 128 Catheter Electrodes in a three Dimensional Map.
- 10 Must have the capability to record simultaneously upto 3000 Virtual Unipolar Electrograms & display them as selected by user.
- 11 Should store permanently at least 10 beats of patient data & have the facility to make a Map from stored ECG in the Review mode.
- 12 Should have Respiration/**gating** compensation facility by measuring actual change by impedance & modest patient movement should not affect the procedure.

- 13 Should have the capability of creating Real time geometry from upto 20 electrodes on the catheter
- 14 Should incorporate clinically useful features like Dynamic Substrate mapping & Digital Landmark Mapping.
- 15 Should offer Fly Eye mode to check the electrode signals & impedance.
- 16 Should offer 1 TB Hard drive with separate partition of 400 GB of patient data storage
- 17 Should offer option of doing pediatric cases as well on the 3D system.
- 18 Should offer feature of simultaneous Real time and review Options.
- 19 Should be able to display clearly areas of slow conductions
- 20 Should quickly identify areas of micro-reentry.
- 21 While doing complex fractionated electrogram (CFE) mapping system should allow user to define data collection interval from 1-8 seconds.
- 22 3D system should be able to integrate with all the equipments in the cath lab including wide range of Recording system, Generators (including Cryo) and Intracardiac ultrasound machine (ICE)
- 23 3D System should have a minimum of 2 KHz sampling rate for best signal quality.
- 24 Should be CE and FDA approved as mark of quality standard.

**Sl. No. 10**

**Rotablator machine**

- i. Percutaneous rotational coronary angioplasty with adjunctive balloon angioplasty
- ii. To perform Highly Calcific Lesions and diffused disease.
- iii. 220-240 V A.C Voltage with the frequency of 50-60 Hz
- iv. Multiple Rotalink Catheters of varying sizes and with a single Rotalink Advancer for easier more effective debulking.
- v. Rotational speed of 0-2,50,000 rpm.
- vi. Console compatibility with DynaGlide system.
- vii. Diamond coated elliptical burr with sizes 1.25mm,1.5 mm,1.75mm,2.00mm and 2.25 mm,2.38mm and 2.5 mm and with Catheter Length of 135 cm in length.
- viii. Compatibility with) .014(tip)/.009” Rota wire with 325 cm in length and Floppy, Standard and Extra Support System.
- ix. Approval International standards agency US FDA or Equivalent

**Sl. No. 11**

**OCT & FFR Integrated System**

- The system should utilize FFR & OCT in single console
- The system should have wireless FFR set up in one or multiple labs
- The system should switch FFR & OCT modalities in one touch

**A. The Optical Coherence Tomography (OCT) System for Integrated system**

- i. The system should have an imaging engine that is based on the fiber optic technology.
- ii. It should utilize catheter that emit near infra-red light to produce high resolution real time images.
- iii. Should have two monitors (17” and 19”) plus remote video output for multiple sightlines.
- iv. The system should have an integrated drive-motor and Optical Controller (DOC).
- v. Should have an isolation transformer.
- vi. Should have a computer, a keyboard, and a mouse.
- vii. 22\*CD/DVD RW dual player DVD RAM drive for faster image management.

**B. The system should allow the user to:**

- i. Acquire, save and subsequently retrieve images for review.
- ii. Allow to acquire and review images in L-Mode (lateral view).
- iii. Overlay color maps to optimize contrast resolution.
- iv. Enlarge a defined area of interest (zoom).
- v. Make measurements and calculations of % Area stenosis
- vi. Make measurement and calculations of % Diameter stenosis
- vii. Add text annotations.
- viii. Play back and edit images with a full range of playback and editing capabilities.
- ix. Export still images and movies in raw OCT format or in standard AVI, TIFF, JPEG, BMP, or DICOM formats.
- x. Import OCT format images and review and edit them with full OCT review and edit capability.
- xi. Perform basic file management functions.

**C. The imaging Parameters of the system should be:**

- i. Maximum frame rate: 100 fps
- ii. Nominal pullback speed of 20mm/sec
- iii. No. of lines per frame: 500
- iv. Scan diameter:10 mm
- v. Axial Resolution: 15 microns

**D. FFR (Fractional Flow Reserve) Measurement System specifications for Integrated System**

- i. Console to determine FFR with sensor based wire able to assess Arterial Pressure through Cath Lab transducer system.
- ii. Should communicate with PC.



- iii. Should be compatible with printer
- iv. Should be able to assess distal Pressure through device.
  - v. Display both real time pressure and mean pressure values.
- vi. Should give Graphical presentation of pressure waves.
- vii. Screen window should display real time FFR in both numerical and graphical form.
- viii. Should be capable of reading temperature readings in the range of 15-42.
- ix. Should be able to measure pressure in a range of -30 to 300 mm Hg
  - x. Should be operator friendly, guide steps to follow for procedure.
- xi. Should have a frequency response of 0-25Hz
- xii. Allows different beat settings in accordance with the cath lab system.
- xiii. Should have memory to save and record the data
- xiv. Allows analysis of recorded data through software.

**E. Device (Wire with Sensor element to determine Pressure/Temperature) Consumable**

- i. Should be .014” guide wire
- ii. Should preferably have hydrophilic coating.
- iii. Should have continuous tapered core design.
- iv. Should have a radio opaque tip.
  - v. Should be CE approved
- vi. Should be FDA approved
- vii. Should be DCGI approved

**Sl. No. 12**

**INTRA-AORTIC BALLOON PUMP**

- 1. The IABP should be of latest generation
- 2. It should be transportable, compact IABP with at least 03 hours of Battery Backup.
- 3. Should have Fast Pneumatics - Scroll compressor
- 4. System should automatically re-calibrate, in case it is unable to calibrate an alarm should be after 5 in minutes.
- 5. Fibre optic pressure signal out-put should be available for external monitor to eliminate need for additional pressure monitoring site & transducer.
- 6. Should have Automatic and Semi-Automatic modes of operations.
- 7. System should be capable of automatically selecting appropriate Trigger i.e ECG (Primary) or Pressure and also accurately select the Inflation and Deflation points, Automatic mode.
- 8. In Automatic mode of Operation user should be in control of the deflation point.
- 9. It should be able to remain in ECG Trigger (Primary trigger mode) and minimizes the need to switch to pressure trigger.
- 10. ECG Inflation marker to indicate inflation period on ECG which can be useful when arterial pressure waveform is not available

11. In Automatic and Semiautomatic Mode, Advance Software should automatically adapt the timings for various rhythms and rate variations, without any user intervention
12. In Automatic and Semiautomatic Mode, it should automatically identify Atrial Fibrillation & adopt R-Wave (improve tall T wave rejection) deflation mode for better patient support, without any user intervention
13. Should be able to display at least 3 waveform as ECG, Invasive Pressure and Balloon Pressure waveform
14. Should have Dual Helium tanks internal (for transportation only) and external.
15. Should have On-screen indication for Helium level in the cylinder & Battery level for timely intervention and correction with user indication for shuttle gas loss.
16. Should have Optical Blood back detect for early indication of blood coming into the balloon lumen due to IABC leak.
17. Should have extensive Help Text available during startup to make the system easy to use even for new users
18. Should give extensive Help messages to correct the alarm conditions that are specific to the alarm condition. This should help the user to overcome the alarm problems immediately and with ease.
19. Should be capable of removing Condensation automatically without user intervention and should be maintenance free.
20. Should have Faster Pneumatic Shuttle speed as Helium travels shorter and straight path due to new condensation removal system in less time from pump to catheter.
21. Zeroing should be possible after insertion of the catheter.
22. Should have Peripheral Vascular Doppler for checking Limb Ischemia, which is tethered to the main equipment
23. Should have automatic Altitude correction to make it safer for use during Air Transport.
24. Should have PCIABP Software which allows the user to monitor the IABP from any remote location via a modem.
25. Should have in-built Comprehensive Service Diagnostics to help the technician to locate the fault immediately.
26. Should have capability to connect on the hospital network.
27. System should be supplied with the following accessories:
  - ECG Cable with Leadwires: 2sets
  - Reusable Invasive Blood Pressure Transducer: 2 No.
  - Refillable Helium Cylinder compatible with the IABP system Qty: 3 Nos
  - Intra-Aortic Balloon F/o Catheter for Adult, size 34cc Qty: 20 nos.
  - Intra-Aortic Balloon F/o Catheter for Adult, size 40cc Qty: 20 nos.
  - Intra-Aortic Balloon Catheter for Adult, size 50cc Qty: 20 nos.
28. The system should be USFDA or European CE approved product and certificate for model approval should be submitted along with the bid.
29. Compliance statement should be submitted tabulating and highlighting the all parameters of the specification in the datasheet. Original data sheet should be

submitted. Bid will be rejected for Non submission of data sheet and compliance in the bid.

30. All parts of the system should be covered under warranty expect the items required in the accessories para.
31. All accessories unit rates should be offered separately.

### **Sl. No. 13**

#### **TMT Machines**

1. Should be PC based cardiac workstation combines Resting & Exercise ECG in one unit.
2. Should have blue tooth connectivity
3. Should eliminates noise & gives distortion free ECG signal.
4. Should have full disclosure of all 12 leads for beat-to-beat analysis & extended documentation.
5. Should be adaptive to user configured Multiple Report Format for Resting & Exercise ECG.
6. The final report Should include information on Blood Pressure, Heart Rate, Treadmill Speed/Grade, ST Trends relating to stage wise & recovery phase.
7. Should have Simultaneous acquisition & display of 12 lead Raw ECG during the resting & exercise ECG mode.
8. Time based METS calculation.
9. Online Linked Median printing.
10. Treadmill Soft Stop option for stopping the treadmill after 20 seconds in Recovery Mode.
11. Should have 6 Choice of displaying Lead with Maximum ST Level Depression or Elevation in the Average Complex.
12. Should have Web enabled software that allows sending images via email.
13. Facility to get system generated Auto Statement Report
14. The system should be USFDA/ European CE approved
15. The treadmill should be imported and should be USFDA/ European CE approved.

### **Sl. No. 14**

#### **Fully Automated ESR Analyser**

1. Should be based on **Westergren principle** and conforming to the recommendations of ICSH.
2. Should be able to accept EDTA blood samples in closed tubes with continuous loading possibilities.

3. System preferably should not involve costly disposables, and offer very low running cost employing 100 or more precision bore Westergren glass tubes, with automatic wash and reuse.
4. Should have facility to take any cell counter rack in a universal rack adapter for walk away operation.
5. System should have ability to have upto five racks at one location, each rack with a capacity to hold 10-12 samples on an average.
6. Should have bi-directional interface with LIMS for check of bar code and select from rack only those samples meant for ESR, and without need for separation of ESR from non ESR samples!
7. Machine should be equipped with autoloader and **open access to sampling all the time** when space is available, with positive sample identification built-in bar code reader.
8. Accurate and automatic on-board dilution with citrate solution and automatic temperature correction to 18.3°C should be available.
9. One hour standard mode, with built in half an hour method for quick turn around, if needed with on line ESR results, should be possible.
10. Whole blood sample volume should not exceed **1.40 ml** with total automation.
11. The tubes should be automatically cleaned on board, followed by a drying cycle with automatic waste control, for low cost runs.
12. Should have the ability to detect even haziness in samples and measure the position of the meniscus accurately, and consistently, always for precise results.
13. System should have a minimum throughput of 180-200 samples per hour, in half an hour mode, in **continuous usage**.
14. The system should be ideally microbiologically safe for the operator and environment.
15. The system should be USFDA and/or European CE approved.
16. Five years warranty period and 5 years CAMC after expiry of warranty period to be quoted.

**Sl. No. 15**

**EP Lab with RF generator**

EP Lab System

1. Should have a 12 -Body Surface ECG
2. Should have at least of Bipolar Intra-cardiac Channels 52 or more Inputs
3. Should have a facility of Invasive pressure recording & display- 2 Channels
4. Digital Stimulator must be provide with keyboard operation & touch screen operation
5. Should have a facility of off-line Software/Hardware system to "Review Data"
6. Should have a facility of Single, Double, Triple pacing channels with up to 5 extra stimulation
7. Must be supplied with compatible laser printer
8. Operating system must be Windows **with licensed software** based having HDD minimum 500 GB, 4GB RAM, High end VGA card, Data storage in standard HDD, Patient data writable DVD/CDSCD
9. Easy to use with simple commands using one Keyboard
10. ECG triggered mode display of single beat with stable display
11. Should provide retro recording for minimum of 30 sec.
12. Should have minimum 9 pre-programmed protocol and 10 programmable protocol
13. Must have a facility of real time beat by beat display
14. Continuous surface ECG visualization
15. Facility of Split screen display for template viewing & matching
16. On-line view of real time & review data simultaneously
17. Selectable amount of data to be stored per patient
18. Computer based display of RF parameter
19. Amplifier with 32-bit sample conversation rate at 2KH or more.
20. Should have option of automatic export of screen page to power point slide
21. Adequate filtering for good signal quality
22. User configurable reporting format
23. Data transfer to Power Point, JPEG or similar format
24. Free of cost software upgrade in warranty & CMC Period.
25. Suitable On-Line UPS with 30 Min battery backup.
26. Mains power supply: 220V/50 Hz/Single phase
27. On-line display of RF parameters graphically in the EP software
28. Aggregate report of RF delivery per case
29. Should have Single display template comparison
30. The system should be European CE and USFDA approved

Radiofrequency Ablator System

1. Should have minimum 100 Watt RF Ablator.
2. Must be compatible with Thermister and Therocouple sensors in Ablation technology.
3. Compatible to Dual sensing catheters & irrigated tip catheter.
4. Should have a memory features for ablation parameter storage & recall.
5. Must have a facility of continuous update of Bioimpedence: pre, post & during ablation.
6. Must have Hypothermia cut-off intelligence feature in RF Ablator.

7. Must have temperature & power control mode available.
8. The system should be European CE and USFDA approved

**Sl. No. 16**

**Endoscopy System**

**High Definition Video Colonoscope – 1 No.:**

- Built in HDTV compatible CCD with (Dual) Near & Normal focus observation capacity.
- Should have Narrow Band Imaging or I scan for detailed mucosal study
- Inbuilt features like Variable stiffness or graduated stiffness, High force transmission & Passive bending for ease of insertion.
- Fully immersible in disinfectant solution (with or without soaking cap) & one touch connectivity.
- In built scope identification memory chip for monitor display of scope's model no. serial no., white balancing memory, no. of connections/cumulative uses etc.
- Auxiliary water jet for mucosal cleaning

Field of view : In Normal focus 140 deg or above,  
In Near Focus -160 deg or more

Direction of view : 0 degree, forward viewing

Depth of field : Normal- 4-100 mm, near 2-3 mm or better

Distal end outer diameter : 13.2 mm or less

Insertion tube outer diameter : 12.8 mm or less

Tip Bending range : Up & Dn 180 deg, Lt & Rt 160 deg.

Working length : L : 1680 mm I: 1330 mm or more

Channel inner diameter : 3.7 mm or more

Minimum Visible distance of instrument used thru channel : 4 mm (Normal) or closer from distal end.

**High Definition Extra Paediatric Video Colonoscope – 1 No.:**

1. Clear, sharp, high-quality images in a large-size display.
2. High Definition CCD for better image quality.
3. Highly acclaimed variable Stiffness or graduated stiffness for insertion tube flexibility to suit the patient's anatomy.
4. Scope ID function.
5. Compatible for Band Imaging preferably NBI function.
6. Ergonomically designed grip to enhance scope manoeuvrability.
7. Four user programmable switches to improve operability.
8. Auxiliary water-jet function.
9. Should have digital zoom of 1.5 x.

Specification

Optical System	Field of view:	140°
	Direction of view	Forward viewing
	Depth of field	4 to 100 mm

Distal End	Outer diameter	9.8 mm or less
Insertion Tube	Outer diameter	9.8 mm or less
Bending Section		Up 180°, Down 180°, Right 160°, Left 160°
	Angulation range	
Working Length		1650 mm or more
Total Length		2000 mm or more
Instrument Channel	Inner diameter	2.8 mm or more
	Minimum visible distance	3 mm from the distal end

**. Video Processor with Trolley – 1 No.:**

- Should be compatible with Analog, HD-SDI and DVI output & 16:9 & 16:10 output for a HDTV monitor should be available.
- should contain the electronics to operate dual focus for clear visibility of near & far objects
- Equipped with high resolution HDTV Imaging capacity.
- Compact, lightweight (10-11 kg) and ergonomically designed
- Narrow Band Imaging (NBI) or I Scan capacity for compatibility with NBI Videoscopes.
- Recording of both still & moving images
- Portable Memory & USB Slot for image recording
- Automatic IRIS control & automatic white balance
- Picture in Picture display & Index functionality
- Electronic Zoom upto 1.5X.
- Should have pre freeze function for image stabilization
- Should have endoscopic trolley from same manufacturing company

**Light Source (Xenon short arc Ozone free 300 Watt lamp) – 1 No. :**

- Equipped with Narrow Band Imaging (NBI) or I Scan capability with high intensity Xenon Light source (300W) with 500 hours life.
- Equipped with special filter for Narrow Band Imaging (NBI) or I Scan
- Backlit front panel indicators.
- Emergency halogen/LED backup for lamp
- Equipped with automatic light adjustment forced aircooling, regulated airfeeding pump and fan with low noise.

**High Definition LCD Monitor – 1 No.:**

- 26 inch full HD LCD /LED monitor with high resolution 1920X1200 (WUXGA)/1920 x 1080p.
- Lower Power consumption
- Aspect ratio 16:9 / 16:10 with output of (1080/60I:NTSC) (1080/50I:PAL) with RGB or YPbPr
- Should have Picture-in-Picture and Picture-out-Picture for viewing side-by-side split screen images.

**Important:**

1. HD processor and Xenon light source can be combined unit or individual units.

2. Discontinued models should not be quoted or offered and undertaking should be submitted from the principal manufacturer.
3. Video processor should be Full HD.

**Sl. No. 17**

**Set of Five Syringe Infusion Pumps in One Stack**

1. Must have flow rate programmable from 0.1 to 999ml/hr or more. Volume over Time (V/T) infusion mode must be available.
2. Bolus rate should be programmable up to 999ml/hr or more with infused volume display.
3. Display of full Drug Names with a provision of memorizing about 35-50 names of commonly used drugs must be there.
4. Keep Vein Open (KVO) when selected volume is delivered must be available 1.0/2.0 ml/hr or set rate if lower than 1.0 ml. or continue or OFF after VTBI achieved.
5. Selectable Occlusion pressure trigger levels from 100-900 mmHg or similar in at least 9 steps with a choice to select the default setting by the operator is must. Facility to display the actual pumping pressure in numeric as well as graphical form in the backlit display should be there.
6. Should have comprehensive alarm package including Occlusion limit exceed alarm, Near end of infusion pre-alarm and alarm, Volume limit pre-alarm & alarm, KVO rate flow, Low battery pre-alarm and alarm, AC power failure, Drive disengaged, preventive maintenance warning, pressure drop/increase alarm, etc.
7. Should work on standard disposable Syringes of 10, 20 & 50/60 ml sizes of different makes. Wider choice preset syringe brands are required. Volumetric accuracy must be within +/- 2%. Syringe loading from front and not top loading type.
8. Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe (flanges out of slot, disengaged plunger or barrel not secured etc.).
9. Anti bolus system to reduce pressure on sudden release of bolus.
10. Rechargeable NiMH having at least 5 hrs backup for about 5ml/hr flow rate with 50ml syringes. Indication of residual battery life is must.
11. Programmable PAUSE up to 12 hours or more will be preferred & after selection of parameter key pad locking should be available for security purpose.
12. A heavy duty Power Management stand must be quoted separately that has a wheel base of 70 cm or more with double casters. 2 of the 5 casters must be lockable. There should be one power cord for powering up to 4/5 pumps.
13. The pump must be supplied with communication device & interface cable to integrate the infusion data with the HIS software through one RJ45 cable for all the five syringe pumps of one stack.
14. The equipment shall comprise of one communication port, one stack and one set of five syringe infusion pumps.



**Sl. No. 18**

**BOD INCUBATOR**

- Double walled construction, inner chamber stain less steel, inner glass/ transparent door.
- Facility for adjustable shelves to convenient heights, 10 removable shelves of stainless steel/ anodized aluminium to be supplied.
- Interior lighting facility, insulated door fitted with heavy hinges handles locking, mechanical door lock.
- Temperature range 0°C to 80°C with accuracy 0.5°C high quality, environment friendly refrigerant.
- Independent temperature measuring through PT 100 sensor with indicator LCD display.
- Recovery time short, precise regulation of temperature and acoustic alarm.
- Digital safety thermostat (class 3).
- Adjustable ventilation rate 10 – 100% thin form air circulation.
- Size of inner chamber approximately 50x60x50 cm.
- All consumables required for installation and standardization of system to be given free of cost.
- The unit shall be capable of operating continuously in ambient temperature of 10 -45°C and relative humidity of 15-95%.

**Power Supply:**

- Power input to be 220-240VAC, 50Hz fitted with plug compatible with local electrical socket.
- Resettable over current breaker shall be fitted for protection
- Suitable Stabilizer/CVT
- Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

**Standards and Safety:-**

- Comprehensive onsite training for lab staff and support services till familiarity with the system.
- Should be USFDA and European CE approved product.
- Should be compliant to ISO 13485:/ ISO 9001 Quality systems or equivalent.

- Certificate of calibration and inspection from factory.

**Sl. No. 19**

**Fully Automated Elisa Reader And Washer**

1. Should have reading capability of 1 to 96 wells individually.
2. Should have a linear measurement range of 0 to 3.000Abs.
3. Should have wavelength range from 400 to 750nm.
4. Should have a photometric accuracy of  $\pm 2\%$  or better.
5. Should have a resolution of 0.001Abs.
6. Should have variable speed plate shaking capability.
7. Should have easy access 8 position filter wheel.
8. Machine should be supplied with **at least 6** standard filters.
9. Should have automatic filter selection.
10. Should have automatic calibration before each reading.
11. Should have at least 8 second reading speed.
12. Should have facility for storage of calibration curves.
13. Should have different types of blanking facility like air wise and well wise.
14. Should be capable of reading U.V and flat type wells
15. Should be capable of reading 8 or 12 well strip plates.
16. Should use halogen light source and two spare bulbs should be provided.
17. Should have internal thermal printer and 5 rolls of thermal should be supplied along with the unit.
18. Should have external printer connectivity option.
19. Firm will have to supply compatible UPS with minimum half hr backup along with the equipment free of cost.
20. System should be IVD compliant and European CE and/or USFDA approved.
21. Electrical: The equipment should be able to run on the existing electrical provision.

**Specification for ELISA Washer**

1. Should have capability to wash flat, U or V bottomed micro plates or 8 or 12 well strip plates.
2. Should have 8 or 12 way manifold.
3. Should have 25 wash program memory or more.
4. Should have programmable washing time, volume and soaking time.
5. Should have minimum 6 wash cycles.
6. Should have continuous operating cycle.
7. Should have residual volume less than 2 $\mu$ l.
8. Should have removable and autoclavable plate carrier.
9. Should have in-built vacuum and dispensing pumps to ensure accurate and quite washing.
10. Should have waste bottle with full bottle alarm or sufficient mechanism to avoid spillage and damage to equipment.
11. Should work with input 200 to 240Vac 50 Hz supply.
12. Should be **European CE and US FDA approved product**

13. Certificate / STQC S certificate or valid detailed electrical and functional safety test.
14. Report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
15. Should supply compatible UPS with minimum half hr backup along with the equipment

**Sl. No. 20**

**BACTERIOLOGICAL INCUBATOR**

- Size of inner chamber: 100-150 liters capacity.
- Double walled construction with complete inner chamber made of highly polished stainless steel.
- Outer chamber should be of steel sheet finished with powder coated paint.
- Insulation to maintain desired temperature.
- Inner chamber should be fabricated with ribs for adjusting shelves to convenient height and 3 shelves to be supplied.
- Shelves should be made of polished stainless steel sheet as per chamber.
- Doors to be insulated and fitted with heavy hinges and should have double glass window.
- Temperature should be thermostatically controlled with range from 20-80° C. Air ventilators to be provided on both sides.
- The equipment should be provide with control panel having a thermostat control knob, on-off switch, pilot lamp and timer, digital indicator.
- Should be supplied with power cord and plug suitable to operate on 220 V, single phase, 50 Hz, AC supply.

**Sl. No. 21**

**HOT AIR OVEN**

- Should be Microprocessor based digitally controlled equipment suitable for daily usage.
- Should have double walled construction, special high quality insulated steel.
- Facility for adjustable shelves, 10 removable shelves to be provided.

- Size of inner chamber approx. 55x55x70 cm with internal lighting facility.
- Insulated door fitted with heavy hinges, mechanical door lock.
- Temperature range 30-250oC, digitally temperature setting accuracy.
- Separate PT 100 sensor and display for temperature (LCD).
- Forced uniform air circulation, Digital safety thermostat.
- Delayed start and stop function, high quality heating element.
- Supplied with cord & plug, operate at 220V/50 Hz AC supply.
- Should have all the accessories required for the functioning of the equipment.
- USFDA & CE approved or other equivalent quality certification.
- All electrical peripherals required for smooth functioning e.g. voltage stabilizer provided with the equipment.

**Sl. No. 22**

**Hemodialysis Machine with HDF Facility**

General Requirements		
	Microprocessor Based Control	Should be microprocessor controlled & capable of providing therapies such as Conventional HD, Online HDF, HF & features such as Online priming, Acetate & Bicarb dialysis, Volumetric UF, Sodium/UF profiling, Online help options (in case of alarm cond.), BPM, OCM
	Graphical User Interface (Display)	High resolution TFT touch screen with functional keys & provide cumulative graphical display of treatment data & physiological trends including sodium & UF profiles. Freely rotatable & adjustable design. Should display different menus (preferably 9) indicating blood system, preparation, dialysate, UF, Treatment, Reinfusion, Cleaning, System parameters, & screen saver option. Should have integrated Patient card reader system where atleast 03 treatment data can be recorded.

	Safety Features	Should be a close system design with volumetric balancing system, i.e volume in=volume out for fresh & used dialysate. Volumetric dilution of concentrates with RO water & Volumetric UF. Self-Test after switching ON, Start up T1 test before each treatment, to ensure functioning of all hardware components. Leak sensor & Connection test as additional safety.
Performance Requirements		
Blood Circuit	Vascular Access	Single Needle click clack should be available Blood pump with features such as flow range of 30-600ml/min, with 10ml increments & accuracy upto $\pm 10\%$ . Effective blood rate should be displayed in accordance to the setting & tubing size with diameter 2mm – 10mm could be used. An emergency hand crank should be provided to enable reinfusion in case of power failure. Emergency button enabled bolus, UF control, BPM control. Air free pressure measurement on arterial line, in view of reducing chance of blood clot. Protective cover for whole entire EBM (Extracorporeal Blood ckt.)
	Heparin Pump	Should be automatic or manual start/stop, with infusion rate of 0.5-10ml/hr in 0.1ml/hr increments & $\pm 5\%$ accuracy. Heparinization stop time should be user-adjustable in 1min increment, & positive/negative extracorporeal blood ckt pressure should not affect infusion rate. Auto Bolus administration should be programmable from 1-20ml/hr.
	Pressure Monitoring & Alarms	Venous pressure monitoring & adjustment in case of alarm condition. (Range: -100 to +500mmHg, Accuracy: $\pm 7\%$ ) Arterial pressure monitoring & adjustment in case of alarm condition. (Range: -300 to +300mmHg, Accuracy: $\pm 7\%$ )
	Air Detection	Ultrasonic design & should be activated for air & micro bubbles over entire blood flow range. Sensitivity of detection mechanism should be specified in terms of air bubble size & on detection of excessive air, venous clamp should activate & blood pump stop. Reference point for level detector measurement should be about $13 \pm 4\text{mm}$ , from upper edge of venous chamber.

Dialysis Circuit	Treatments/Therapies	Should facilitate Acetate & Bicarbonate dialysis. Variable sodium & bicarbonate options. Volumetric UF & Sodium/UF profile options.
	Dialysate flow rates	A Range of 100-1000ml/min should be available, with resolution of 100ml/min, with Accuracy- $\pm 10\%$ , & provide good clinical outcome on EDDF therapy for acute patient Autoflow function should be available with ON/OFF feature, in view to save electricity & water consumption & synchronize with blood flow changes. Ecoflow function should be available when preparation phase is finished to save dialysate, water, electricity. Pre-programmed more than 10 types of concentrates should be available & its change should not be necessary for calibration.
	Temperature Control & Alarm	Control Range: 34.0 to 39.0 deg Celsius with 0.5 increment Alarm Limits: 33.5 to 40.0 deg Celsius
	Conductivity Control & Alarm	Range: 12.8 to 15.7 mS/cm Accuracy: $\pm 0.1$ mS/cm Dialysate conductivity should be adjustable by sodium concentration, for Acetate Dialysis-with range from 125 to 151mmol/l in increment of 1mmol/l. For Bicarbonate dialysis, range from 125 to 151mmol/l in increment of $\pm 8$ mmol/l.

	Blood leak detection	Photo detector used, & alarm should be activated for blood loss rates <0.5ml/min, with HCT of 20-25%.
	Volumetric UF	Control Range: 0-4L/hr, given by set values of UF volume & treatment time, with accuracy $\pm 1\%$ UF volume: 0-9.99L adjustable in 1ml increment Treatment time: adjustable up to 9 hr 59 min. in 1 min increment TMP monitoring: -100 to +400 mmHg. Isolated ultrafiltration process should be provided.
		Equipment should be capable of on-line preparation of bicarbonate dialysis fluid & It should be handle by one hands only
	Ultra-pure Dialysate filter	Should have hygienic connection for ultra-pure dialysate filter Should have endotoxin retention capacity not less than $10^6$ IU. Machine should have an automatic program to change filter, including emptying & filling cycles. Filter should have life span not less than 12weeks or 100 treatments Filter should be arranged in cross flow setting & equipment should perform flushing during treatment automatically every 1hr. Filter change reminder should be available.
Online Fluid Circuit	For HDF	Both option of Pre-dilution & post-dilution of blood should be available. Automatic control substitution program with pre/post dilution identity integrate function, dialyser integrate function, Effective blood flow rate integrate, HCT integrate function, Total protein integrate & UF rate integrate functions. Equipment should have 2 ultra- pure filters to prepare the online substitution fluid Should be capable of online preparation of substitution fluid for priming & rinsing of extracorporeal ckt for HD/HDF/HF/ or as injection-bolus & reinfusion at the end of treatment. Substitution fluid delivery rate: 25 to 600ml/min in 1ml/min increment, with accuracy $\pm 0.1$ ms/cm & exchange volume -210L (max.)

Dialysis Parameter Display	Equipment should display parameters -	Arterial Pressure, Venous Pressure, Blood flow rate, Dialysate Conductivity, TMP, UF volume, UF rate, Remaining treatment time, Heparin infusion rate, Alarm info, etc.
Online Clearance Monitor (OCM)	Equipment should have	Inbuilt measurement & monitoring of effective Urea clearance K, Dialysis dose Kt/v, & Plasma sodium during dialysis This measurement should be done without any additional cost & disposable during each treatment Measuring accuracy: Clearance +/-6% Kt/V +/-9% OCM conductivity evaluation should be 12 bit with 2 channels & 2 CD cells (1 cell for basic machine function) & Measuring range: 12.8 – 15.7 mS/cm, Accuracy: 0.05 mS/cm. OCM temperature evaluation should be 12 bit with 2 channels & 2 NTC (1 NTC for basic machine function) & Measuring range: 33.5 – 41 °C, Accuracy: 0.2 °C
Blood Pressure Monitor (BPM)	Equipment should have	Should be Build in non-invasive device for measuring the patient blood pressure automatically Measuring Range should be Cuff pressure range: 10-325 mmHg or wider choice Systolic range: 30-280 mmHg or wider choice MAP range: 20-255 mmHg or wider choice Diastolic range: 10-240 mmHg or wider choice Pulse rate range: 20-245 1/min or wider choice Alarm values should be Systolic range: 90 & 165 mmHg MAP range: 70 & 120 mmHg Diastolic range: 50 & 100 mmHg Pulse range: 40 & 150 1/min
Battery Backup		The equipment should be able to operate and monitor the extracorporeal circuit without interruption for 20-30 min. in case of AC power failure by backup battery.
Disinfection and Cleaning		Both chemical and heat disinfections should be performed Sodium hypochlorite should be used as cleansing disinfectant Various Programmable Cleansing Cycles should be provided with different phases and timings in accordance with different disinfectants. Should be One-touch fully automatic operation including pre-rinse, chemical-intake for combined disinfection & decalcification, post-chemical mandatory rinse, and automatic power-off; without the need of any end-user handling during this whole disinfection process.



**Sl. No. 23**

**Heamodialysis Machine**

1. Acetate and Bicarbonate dialysis with dry bicarbonate facility.
2. Variable Bicarbonate, sodium and ultra-filtration profiling.
3. High flux dialysis should be possible.
4. Programmable auto start option and auto self-testing completely software driven.
5. Heparin pump flow rate from 0.5ml to 10 ml per hour. It should work with syringe of different volumes.
6. Automatic recalibration whenever machine is switched on.
7. Blood pump rate from 50 to 600 ml/min adaptable to all standard A-V lines.
8. Dialysate fluid flow rate 300 to 700 ml/min.
9. Volumetric ultra-filtration for every accurate UF to the accuracy of plus minus 1%. Volume controlled via Balance Chamber with separate UF pump.
10. Disinfection – chemical and thermal, automatic with both short & long disinfection program with Day-Night, Weekly schedules.
11. Automatic diagnosis of malfunctioning with on line ability to show the faults with trouble shooting so that the faults should be rectified quickly.
12. Should have longer stand by time to save the acid concentrate and the R/O water.
13. Should have large colour TFT screen monitor and display.
14. Should be able to monitor pulse rate and Blood Pressure.
15. Sequential Ultra-filtration & Heamodialysis should be possible.
16. Should have inbuilt Kt/v with graphical representation of clearance.
17. Upgradeable to link with central monitoring and bi-directional networking.
18. Audio-Visual alarms. It should store alarms in the machine during dialysis so that they could be retrieved later on.
19. There should be conductivity, temperature blood leak, air leak, trans- membrane pressure alarm, end of dis-infection alarm, along with bypass facility and blood pump stop alarm.
20. Should have dialyzer inlet pressure monitoring.
21. Pressure monitor – arterial, venous.
22. Voltage 220v, 50-60 Amp
23. Should be European CE & USFDA certified.
24. Suitable RO Plant for 500Ltrs/hour with suitable storage tank

**Sl. No. 24**

**Heamodialysis Machine with SLED facility**

1. Acetate and Bicarbonate dialysis with dry bicarbonate facility.
2. Variable Bicarbonate, sodium and ultra-filtration profiling.
3. High flux dialysis should be possible.
4. Programmable auto start option and auto self-testing completely software driven.
5. Machine should be upgradable for options like online BTM and BVM.
6. Heparin pump flow rate from 0.5ml to 10 ml per hour. It should work with syringe of different volumes.

7. Automatic recalibration whenever machine is switched on.
8. Blood pump rate from 50 to 600 ml/min adaptable to all standard A-V lines.
9. Dialysate fluid flow rate 100 to 700 ml/min.
10. Volumetric ultra-filtration for every accurate UF to the accuracy of plus minus 1%. Volume controlled via Balance Chamber with separate UF pump.
11. Disinfection – chemical and thermal, automatic with both short & long disinfection program with Day-Night, Weekly schedules.
12. Automatic diagnosis of malfunctioning with on line ability to show the faults with trouble shooting so that the faults should be rectified quickly.
13. Should have longer stand by time to save the acid concentrate and the R/O water.
14. Should have large colour TFT touch screen monitor and display.
15. Should be able to monitor pulse rate and Blood Pressure.
16. Sequential Ultra-filtration & Heamodialysis should be possible.
17. Should have inbuilt Kt/v with graphical representation of clearance.
18. Upgradeable to link with central monitoring and bi-directional networking.
19. Audio-Visual alarms. It should store alarms in the machine during dialysis so that they could be retrieved later on.
20. There should be conductivity, temperature blood leak, air leak, trans- membrane pressure alarm, end of dis-infection alarm, along with bypass facility and blood pump stop alarm.
21. Should have dialyzer inlet pressure monitoring.
22. Pressure monitor – arterial, venous.
23. Voltage 220v, 50-60 Amp
24. Should be European CE & USFDA certified.

### **Sl. No. 25**

### **DIALYZER REPROCESSING SYSTEM**

1. Fully Automatic operation.
2. Ability to clean both high flux and low flux dialyzers and haemodiafilters.
3. Facility to test and display residual volume and membrane integrity.
4. Both audible and visual alarms.
5. Facility to check fiber bundle leakage at 250mm hg.
6. Facility to disinfect dialyzer membrane.
7. Should be able to use eligible and authorized disinfectant.
8. Inbuilt dedicated software and facility to upgrade software.
9. Ability to store, display and print/ dialyzer and Patient History data.
10. Should have bar code printer for label printing an scanner for bar code scanning.
11. To test blood port connection and dialyzer header caps for proper fittings.
12. To provide disinfectant consumption and remaining quantity to display.
13. Provision to pressure gauge 0-100 PSI.
14. Provision of disinfectant uptake tube assembly, drain out let pipe and drip tray.
15. To use disinfectant cold reprocessing and sanitization.
16. Separate cycle for water sample collection.
17. RO water requirement should be as low as 14-18 liters per dialyzer.

18. No pre dilution of disinfectant and to use negative pressure test on fiber.
19. Filling of bundle volume should be 3 times.
20. FDA (USA) & CE (European) certified.

**Sl. No. 26**

**TISSUE EMBEDDING STATION**

1. The instrument should incorporate two separate systems for cold plate and heated paraffin embedding module.
2. Temperature range of cold plate: -5 to 15 deg C.
3. >60 cassette molds capacity of tissue holding tank with acrylic cover.
4. Paraffin collection tray 1 in numbers.
5. Heated embedding module should have adjustable paraffin dispenser control with paraffin flow rate adjustment.
6. Paraffin reservoir capacity of at least 3 litres.
7. Precise paraffin dispenser to deliver the right amount of paraffin.
8. Large warm working surface on either side for keeping a minimum 10 cassettes on each side.
9. Heated removable paraffin waste tray.
10. Six forceps holder with approximately 70 degree C temperature.
11. Sufficient Working surface of cold plate with facility to keep at least 30 blocks electrically heated forceps (5 nos.) with Magnifier Lens (1 No.).
12. Should have a magnifying lens (1No.) adjustable in any position and white light illumination for specimen orientation.
13. All functions of the system controlled through electronic system with digital programmable on and off timer.
14. The system should work on 220-240 V, 50 Hz. with Indian plug.
15. Five years warranty period and 5 years CAMC after expiry of warranty period to be quoted.
16. Suitable online UPS with one hour backup facility accessories, spares of consumable to be provided with the equipment.
  - a) Standard size cassette with cover-1000
  - b) Paraffin imbedding rings-5000
  - c) Stainless steel mould of following sizes-80 each
    - SS Mould 15 x 15 x 5 mm pack of 12
    - SS Mould 24 x 24 x 5 mm pack of 12
    - SS Mould 24 x 30 x 5 mm pack of 12
  - d) Magnifying lens-1 no.
  - e) Paraffin scrapper- 3
  - f) Electrically heated forceps-5 nos.
  - g) Halogen bulbs/LED lamps -2
  - h) Fuse-2
17. The system should be USFDA and/or European CE approved.

**Sl. No. 27**

**Fully Automated Tissue Processor For Histopathology Lab**

1. Fully automatic tissue processor with all accessories, Carousel type with 12 stations of minimum 1.8-2 Ltr. each, 10 reagent stations, 2/3 wax baths with easy accessibility to all reagent stations.
2. The system should have inbuilt vacuum which can be applied to any of stations preferably with efficient fume control system.
3. Metal Reagent containers with beaker carriers
4. Metal tissue basket capacity approx. 100-200 cassettes. Second tissue basket to be provided for additional tissue cassettes with three wax baths.
5. Wax baths should be maintained at the temperature of 50-60 deg C. with facility for over temperature release.
6. Audible alarms, error message and warning codes.
7. Display of warning in case of faulty running of the stations - exceeding time limit at one station.
8. Ergonomic control panel with foil - protected keyboard and LCD screen display of time, date, cycles and step by step record of processing
9. Facility for editing and changing of programs, during a processing run.
10. Delayed start function facility to be available
11. Infiltration time separately programmable for each station.
12. Freely selectable programs.
13. Possibility of interrupting an automatic process for reloading or removing cassettes for special applications before the end of the run.
14. Baskets should automatically immerse in station during the power failure.
15. Program should resume at the point of interruption once power is restored.
16. Instrument should supply Voltage of 230-240V, 50Hz. Fitted with Indian plugs
17. A list of installation to be provided, preferably of Government Hospital in Delhi
18. A certificate of satisfactory working and service to be provided preferably from teaching medical colleges in NCR.
19. The system should be USFDA and/or European CE approved model. It should be an open system capable of using standard cassette from open market.
20. Suitable online UPS with maintenance free batteries and 30 min backup.
21. Accessories, spares and consumable to be provided the equipment free of cost.
  - SS basket-2
  - Reagents vessels preferably metal with handle of minimum of 1.8 -2 Ltr capacity, qty-11,
  - Beaker cover, qty -11
  - Wax baths tissue capsules with perforation- qty.2
22. Five years warranty period and 5 years CAMC after expiry of warranty period to be quoted
23. The system should have the capability of LIS/HIS

**Sl. No. 28**

**Semi-Automatic Rotary Microtome**

1. Semi- automated rotary microtome along with manual operation having microprocessor controlled panel ergonomic tabletop compact equipment.
2. Precision machine suitable for both delicate as well as hard tissue sectioning.
3. Mechanical automated feeding system with stop function to allow the specimen in a defined feed position.
4. Integrated lockable hand wheel capable of being locked in any desired position
5. Section thickness via precision stepping motor from 1 to 100 micron.
6. Trimming thickness up to 500 micron onwards with provision of step trimming
7. Horizontal feed of approximately 28-30mm Vertical specimen stroke approximately 60-70 mm for cutting of larger tissues.
8. In vertical and horizontal direction precise specimen orientation with an orientation  $8^\circ$  X-Y axis helps in making perfect orientation of the sample for sectioning.
9. Stable blade holder to ensure that no vibrations occur when section is being cut.
10. Specimen retraction of varying microns. Specimen retraction should occur in return stroke facility to turn off specimen retraction.
11. Facility for precise specimen orientation in horizontal and vertical directions.
12. Spacious removable section waste tray for easy cleaning.
13. Knife angle position locking facility
14. Universal knife holder base and knife holders for high and low profile disposable blades.
15. Control panel with LED digital display of section thickness, trimming thickness and cutting strokes.
16. Spare low and high profile blades in dispenser pack of 50 blades: 20 packets each and Microtome Lubricant oil 5 Bottles.
17. Standard tools & accessories required for the working of the equipment.
18. A list of installations along with the certificate of satisfactory working and after sales service to be provided preferably from teaching medical colleges/hospitals/research institutes of central and state government.
19. The system should be USFDA and/or European CE approved model 230 V. 50 Hz. with Indian power plugs.
20. Five years warranty period and 5 years CAMC after expiry of warranty period to be quoted.

**Sl. No. 29**

**Fully Automated Cryo Microtome**

1. The Cryostat should be a floor standing model with power requirements of 230V, 50-60 Hz.
2. Cryo chamber temperature setting should be  $0^\circ\text{C}$  -  $35^\circ\text{C}$  cooling via two separate compressor systems with specimen cooling.
3. Specimen cooling facility available should be in the temperature range of  $-10$  to  $-50$  C or higher.
4. Maximum cooling time up to maximum low temperature should be less than 4 hours after start up.
5. Actively cooled quick freezing shelf should be up to  $-40^\circ\text{C}$  or higher.
6. Specimen storage shelf should store 6-8 chucks.

7. . Maintenance free microtome with section thickness setting range from 1 to 100 micrometer section thickness setting should be outside the cryo- chamber.
8. Fully Automatic Sectioning with an option of manual operation.
9. Equipment should be suitable for sectioning of maximum specimen size: 40mm x 55mm or better.
10. Vertical specimen stroke length available should be approximately 45-59mm, with a horizontal specimen feed of 20-30mm.
11. Motorized rapid and slow coarse feed preferably at two speeds 500µm/s & 1000 µm/s should be available.
12. . Trimming facility should be available.
13. Disposable blade holder system with lateral displacement and integrated glass anti-roll guide should be available.
14. Glass anti-roll guide with anti-static feature to facilitate perfect stretching of sections should be available. Integrated vacuum system for stretching of sections and suction of debris (optional).
15. Specimen precision orientation by 8 deg. (in x/y/z axis i.e. 360 degree) should be available.
16. Instrument should have closed drainage system to allow controlled disposal of fluids.
17. Automatic & manual chamber defrost facility should be available with one automatic defrost cycle / 24 hours.
18. Duration of the defrost cycle should be 6 – 12 minutes.
19. Facility of UV lamp decontamination should be available with heated sliding window.
20. Electronic locking key to avoid any inadvertent changes in program setting should be available.
21. System should be quoted with Disposable Blade system.
22. The equipment should be USA- FDA/European- CE.
23. The equipment should be supplied with 5 packets of disposable blade, 5 bottles of freezing compound & 2 sets of brushes, 6 specimen checks, spare anti-roll guide.
24. Satisfactory performance from institutions of national importance (minimum of one) should be provided.
25. Should be supply with suitable online power backup of 2 hrs.
26. Training for the technician along with installation manual and log book.
27. Five years of comprehensive warranty with spares & UPS and subsequent 5 years of CAMC

**Sl. No. 30**

**Fully Automated Slide Stainer for Histo Lab**

- 1 Automatic Slide Stainer is used for staining histological and cytological slides.
- 2 Should be freely programmable for routine H & E & other special stains.
- 3 Should hold atleast 30 slides per basket
- 4 Minimum basket chemical capacity should be upto 400ml.
- 5 Five wash stations with 24 work stations,(Programmable) with timing in minutes & seconds with upto 18-20 reagent stations.
- 6 Agitational facility.
- 7 Equipment should be complete in all aspects along with all accessories

- 8 Equipment should be working from day one of installation.
- 9 Power input to be 220-240VAC, 50Hz fitted with Indian plug
- 10 Comprehensive training for lab staff and support services till familiarity with the system. Should be US FDA or European CE approved product
- 11 Certificate of calibration and inspection from factory.
- 12 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
- 13 User/Technical/Maintenance manuals to be supplied.
- 14 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.
- 15 List of installations, List of user feedback and performance certificates to be provided.
- 16 Fume containment hood with filter and vacuum control. Easy to use menu and atleast 10-15 programmes with memory facility.
- 17 To provide 5 spare reagent containers with 10 spare baskets.
- 18 Provision for staining programme to be terminated at any reagent with racks removed before completion of staining protocol computer display and keyboard.
- 19 Five years warranty period and 5 years CAMC after expiry of warranty period to be quoted.
- 20 Provision of suitable power backup of atleast 30 minutes to complete staining protocol in case of power failure.

### **Sl. No. 31**

### **3.0 Tesla MRI Scanner**

Technical specifications for 3.0 Tesla MRI Scanner for Rajiv Gandhi Super Specialty Hospital, Tahirpur, New Delhi

Whole Body 3.0 Tesla Magnetic Resonance Imaging System optimized for maximal performance in Whole Body and Vascular examinations with superconducting magnet, high performance gradients and digital Radio Frequency System. The vendor should quote the latest model. Any update / standard features launched prior to the installation of the equipment should be part of the supply, even if not quoted at the submitting the bid. The vendor should quote the highest channel available with them. Please mention the year of launch of quoted model.

The offered model should be USFDA approved. Authentic and legible certificate for the same to be annexed.

Sr. No.	
1	MAGNET
A	3.0T active shielded super conductive magnet should be short and non-claustrophobic.
B	It should have at least 70 cm patient bore with flared opening.
C	Magnet length should be less than 200cm.
D	Homogeneity of magnet should be less than 1.5 ppm over 40 cms DSV. (Guaranteed homogeneity) Homogeneity should be maintained in large FOV, fat saturation and applications like cardiac, functional MRI, diffusion tensor imaging and spectroscopy. System with the highest homogeneity to be quoted

E	The magnet should be well ventilated and illuminated with built in 2 way intercom for communication with patient.
F	Cryogen vessel to be of Helium only with appropriate super thermal shielding and refrigeration facility for minimum Helium boils off . It should have a built in cryo-cooler such that helium consumption does not exceed 0.05 lit/ hour.
G	There should be a Helium level monitoring equipment in the magnet and facility for appropriate quick shutdown of the magnet in the event of emergency
H	Active shielding/Fringe field –quote values for 5 Gauss and 1 Gauss line
I	External shielding – external interference shield (sufficient to house the magnet, anaesthesia and physiologic monitors) should be provided.
2	SHIM SYSTEM
A	High performance, highly stable shim system with global and localized automated shimming for high homogeneity magnetic field for complete imaging and spectroscopy. (3D shimming for volume imaging and CSI).
B	Auto shim should be available to shim the magnet with patient in position
3	GRADIENT SYSTEM
A	Actively shielded Gradient system X,Y,Z planes
B	The gradient should be actively shielded with each axis having an independent slew rate of at least 200 T/m/s and a peak amplitude of 40mT/m. These true slew rates should be available in each axis independently, for overall better duty cycle performance of the gradient.
C	The system should have efficient and adequate Eddy current compensation
D	Effective cooling system for gradient coil and power supply
4	RF SYSTEM
A	A fully digital RF system capable of transmitting power of at least 25 KW or more (Single/ dual) with a combination of RF power amplifiers. System should be capable of Multi Transmit with Multi amplifier driving /true shape/True Form for better B1 homogeneity. Specify transmitter frequency range (10-86 MHz).
B	It should also have at least 32 independent RF receiver channels with each having bandwidth of 1 MHz or more along with necessary hardware to support quadrature ICP array/Matrix coils. The highest receiver channels available / mentioned in the product catalogue with the vendor should be quoted.
C	It should support Parallel acquisition techniques and Highest PAT factor to be quoted.
D	Should allow remote selection of coils and / or coil elements
E	Please quote whether there is possibility of having 1 or 2 access points in the RF cage.
5	PATIENT TABLE
A	The table should be fully motorized with computer controlled table/trolley movements in: vertical and horizontal directions. Position accuracy should be +/- 1.0 mm or better.
B	A CCTV system with LCD display to observe the patient should be provided: Moving table angiography should be possible
C	There should be a hand held or auto alarm for patients
D	Emergency manual traction of the patient from the table should be possible
E	Table Technology – Bolus chasing with automatic/continuous moving table should be offered and should be available with fluoro triggered MR angiography for manual and fast switch over in less than 1 sec for CE-MRA. Latest table technology available with the vendor should be quoted eg. TIM-CT/Smart prep/Mobile track.
6	COMPUTER SYSTEM /IMAGE PROCESSOR/ OPERATOR CONSOLE
A	The main Host computer should have a 19 inches or more high resolution LCD TFT or



	LED color monitor with 1024 x 1024 matrix display
B	The system should have image storage capacity of 100 GB for at least 2,00,000 images in 256x256 matrix.
C	Additional storage of 25 terabytes to be offered. It should be possible to transfer the images from this storage to main console or workstations
D	The reconstruction speed should be at least 10000 images per sec or more for full FOV 256 matrix.
E	The main console should have facility for music system for patient in the magnet room. The system should have DVD/CD/flash drive archiving facility. Supply 5000 DVDs along with the system. The system should be provided with auto DVD writer.
F	Two way intercom system for patient communication.
	Patient monitoring devices for ECG, respiratory rate, pulse rate, O <sub>2</sub> saturation at console
G	MRI System should be enabled and networked to RIS/HIS
7	<b>MEASUREMENT SYSTEM</b>
A	Largest Field of View should be <b>at least 45 cm</b> in all three axis. Specify the highest FOV and minimum FOV.
B	The measurement matrix should be from 128x128 to 1024x1024.
C	Minimum 2D slice thickness mm should be equal to or less than 0.5mm
D	Minimum 3D slice thickness mm should be equal to or less than 0.1mm
8	<b>COIL SYSTEM</b>
A	The main body coil integrated to the magnet must be Quadrature/CP of the latest technology. In addition to this following coils should be quoted
B	Multichannel Head coil with at least 15 channel for routine brain imaging.
C	Multichannel Head coil with 32 channels or more for EPI/DTI and fMRI applications.
D	Neuro-vascular Coil with 20 or more channels or Head/Neck Coil combined, capable of high resolution neuro-vascular imaging or combination of head and neck coil for similar coverage.
E	Spine Array/Matrix Coils for thoracic and lumbar spine imaging with atleast 32 channels acquisition per/exam.
F	Body Array/Matrix coil with at least <b>45 cm</b> z axis coverage for imaging of abdomen, with at least 32 channels acquisition for body parts angiograms and heart. In case one coil cannot provide this coverage than multiple coils should be offered. (the best available body coil with the vender must be supplied).
G	Dedicated Coil for peripheral angiography application of at least 32 channels
H	Dedicated shoulder coil at least 8 channels
I	Dedicated knee coils at least 8 channels or more transmit and receive coils.
J	Eye – Ear/TMJ Circular coil
K	Loop flex coil large and small (at least two to be provided)
L	Small flex coil 8 channel or more for pediatric applications and for neonatal head and neck imaging.
M	Dedicated Carotid coil (Standard)
N	Cardiac coil/suitable coil/ coil combination , 32 channels or more for dedicated cardiac work.
O	General purpose flexible coils (Small & Large) and circular coils (Small & Large). Highest channel to be quoted
P	Endorectal coil - 10 nos. (2 packs of 5 each) (Disposal part only) Must be supplied with the system. Also quote price of one pack separately (Disposal part only), which would be fixed five years.
Q	The coil system should permit coverage of 200cm.

R	A caddy to be provided for storage of coils
S	The system should continuously monitor the RF coils used during scanning to detect failure modes. RF coils should not require either set up time or coil tuning; Multi coil connection for up to 2 or more coils simultaneous scanning without patient repositioning i.e. like <b>TIM4G/GEM/ dSTREAM</b> stream coil combination should be quoted as standard.
T	Please specify the total numbers of coils quoted
9	APPLICATION PACKAGE
A	Data acquisition:
1.	The system should be capable of 2D and 3D acquisitions in conventional, fast and ultra-fast spin echo and gradient echo modes so that real-time online images can be observed if needed. All the sequences that are available with the vendor at the time of delivery should be provided as per their manual.
2.	2D multi-slice imaging should be possible in all planes (axial, sagittal, coronal, oblique and double oblique)
3.	Up to 1024 x 1024 matrix acquisitions preferred for all applications
4.	Half fourier or other techniques to reduce scan acquisition time while maintaining adequate SNR
5.	3D volume, multiple contiguous slabs, multiple interleaved and multiple overlapping slabs
6.	Slice thickness in 2D and partition in 3D to be freely selectable
7.	Dynamic acquisition (serial imaging) with capability to initiate scan sequences either from the magnet panel or from the console
8.	Dynamic acquisition: number of repeat scans with delay time either identical time interval or selectable
9.	Auto slice positioning from the localizer images
10.	Maximum-off center positioning both anterior-posterior and lateral direction and should be selectable
11.	Gating: physiological signals like ECG, pulse, respiratory
12.	External signal triggering (interface for triggering input pulse from external source). The provision should be available at the console also (for fMRI, EEG, etc)
13.	Simultaneous acquisition, processing and display of image data in 2D multi-slice mode.
14.	Selection of voxels from oblique slices should be possible while doing spectroscopy.
15.	Artifact reduction/ imaging enhancement/ image filtering/ image subtraction/ addition/ multiplication/ division techniques:
16.	Flow: 1st and 2nd order flow artifact compensation
17.	Presentation slabs: a number of re-locatable saturation bands to be placed either inside or outside the region of interest
18.	Graphic prescription
19.	Fat saturation techniques: frequency selective RF pulses to suppress fat signals in the measured image FOV. ROI selective (regional) fat suppression should also be given.
20.	Magnetization transfer saturation: Off resonance RF pulses to suppress signals from stationary tissue in FOV
21.	Phase contrast capability in 2D and 3D mode: Image intensity correction
22.	Breath hold acquisition
23.	EPI mode
24.	DTI with MDDW or equivalent with a minimum of 12 and selectable upto 32 direction encoding
25.	Data acquisition in all three standard planes (axial, sagittal and coronal) and oblique and double oblique planes or more oblique planes

26.	Higher matrix acquisition capability in single shot EPI. Acquisition time, TR, TE and slice thickness should be clearly mentioned and supported by data sheet reference.
27.	The vendor should offer multi coil acquisition in order to optimize throughput increase and increased effective FOV. Individual acquisition elements of every coil should be mentioned.
<b>B</b>	<b>IMAGING PULSE SEQUENCES:</b>
1.	All standard and special pulse sequences available at the time of quote/delivery should be offered and quoted in the bid. Fat suppression for high quality images both inversion recovery and Dixon method/ IDEAL/ 3D Dual Echo/ m-Dixen. The system should acquire motion artifact free images in T2 studies of the brain in restless patients (Propeller, Multivane XD, Blade, etc.). Dynamic study for pre and post contrast scans and time intensity studies.
2.	The system should be capable of selecting TR and TEs as per requirement in majority of the pulse sequences.
3.	Spin echo (SE): multi-slice single echo, multi-slice multi-echo (8 echo or more), SE with symmetrical and asymmetrical echo intervals and fast spin echo. MT-SE imaging sequence.
4.	Inversion recovery (IR): including short T1 modified IRSE, FLAIR, DIR (Double inversion recovery).
5.	Gradient echo (GE): with transverse gradient/ RF spoiling and transverse gradient re-phasing, e.g., GRASE or equivalent etc. 3D gradient echo with shortest TR and TE, free choice of angle selection, while maintaining SNR
6.	Fast sequences
7.	Fast spin echo and GE sequences in 2D and 3D mode with T1,T2 and PD contrast capable of acquiring maximum number of slices with a given TR at minimum TE, echo train should be at least 256 or more in fast spin echo mode
8.	Half fourier acquisition capabilities should be available with/without diffusion gradients and in combination with fast spin echo
9.	Fast inversion recovery with spin echo1
	Fast gradient spin echo IR multi-slice multi-echo mode with maximum ETL. Sequences should incorporate RF focusing to acquire ultra-fast gradient spin echo
11.	Fast gradient echo sequences should incorporate RF spoiling and other technique to acquire images in ultra-fast 2D and 3D modes, gradient echo with ETL of 255 or more.
12.	Fat and water suppressed imaging sequences
13.	EPI optimized sequences (with and without fat suppression) with ETL of 255 or more.
14.	For T1, T2, PD imaging, perfusion, regular diffusion values (at least 5b, 3 directions) EPI-FLAIR, EPI-IR, EPI-FLAIR diffusion tensor, EPI-MT-FLAIR, tensor diffusion (atleast 16 b values in minimum 32 directions) and diffusion studies. Suitable artifact/ fat suppression techniques to be incorporated in the sequence to have optimum image quality.
15.	There should be capability of calculating ADC map(isotropic and anisotropy from the regular diffusion and tensor data)
16.	Optimized sequence package for special applications.
<b>C</b>	Special application packages: The vendor must provide their specialized and optimized imaging sequences with post-processing packages for (i) neuro, (ii) body, (iii) oncology, (iv) cardiac, (v) angio, (vi) ortho, (vii) pediatric and other applications. For example, this includes packages like optional/ premium/ advanced/ application suite etc..Please give details of licences for acquisition, post-processing and for special packages quoted for the following applications
Neuro Applications BOLD Imaging	

1	2D Arterial spin labelling.
2	Perfusion imaging of brain with software for rBV, CBV etc. analysis.
3	Susceptibility weighted imaging with phase information SWI/SWIp/eSWAN/Venous bold imaging
4	Multi Direction DTI with minimum of 32 directions (complete package including quantification and tractography software). Prospective motion correction enabled software preferred. Spinal tractography should also be possible
5	T2 Relaxometry and volumetry for Hippocampus.
6	3D-T2 weighted turbo spin for volumetric acquisition reconstructed in any plane e.g for lumbar spine and for nerve root analysis.
7	High resolution imaging for inner ear, please specify sequences.
8	The system should have facility for flow quantification of CSF, aqueduct, spinal canal vessel flow. Both retrospective & Prospective gating should be possible.
9	Whole spine imaging with fusion software.
10	Real time brain wave, Pre-acquisition / post processing or inline BOLD or BOLD Specialist.
11	Sequences such as Double Inversion recovery for Plaque Imaging in carotids to be provided.
	MR Ventriculography, cisternography, myelography
b) Cardiac applications	
1	Advanced Cardiac applications to offered as standard package :Pulse gating, VCG gating , Morphology/wall motion : cine perfusion imaging , Myocardial viability imaging , Arrhythmia rejection techniques , Advanced Cardiac Ventricular Measurement Analysis , cine Cardiac Tagging Techniques. Myocardial tagging, STIR for cardiac use, stress perfusion, 3D acquisition of whole heart in one breath hold.
2.	Coronary artery techniques; real time interactive imaging, 2D/3D fast field echo/balanced/steady state techniques and evaluation package on workstation/client
3.	T1, T2, T2* imaging.
4.	Tools for automatic evaluation of iron in Heart muscles, MSK etc.
c) Musculoskeletal	
1	High resolution imaging for cartilage and musculoskeletal imaging. Parametric MAP be available. dGEMERIC or equivalent, radial imaging for menisci and labrum
2	Whole body screening imaging for metastasis should be possible upto 200 cm, without repositioning of the patient-(PET type of imaging on MR)
3	The system should have software package for evaluation of bone marrow (4D Tissue dynamics or equivalent)
d) Hepatobiliary and abdominal system	
1	High resolution Abdominal and Liver imaging in breath hold and free breathing modes with respiratory triggered volume acquisitions, liver fat quantification software, spectroscopy.
2	The system should have basic and advanced MRCP packages including free breathing and 3D techniques.

3	Liver iron quantification package to be offered
e) Vascular imaging	
1	MR angio imaging should have 2D/3D TOF, 2D/3D Phase contrast (with and without gating and Magnetization transfer saturation), black blood angiography for cerebral, pulmonary, abdominal and peripheral vessels and TONE, ceMRA, Facilities for high temporal and high resolution 4D angio imaging for time resolved vascular imaging with imaging frame of 40 frames/sec or more.
2	Bolus chasing with automatic and manual triggering from fluoroscopy mode to 3D acquisition mode with moving table facility for whole body application. Inline subtraction should be available
3	Non contrast enhanced peripheral angiography for arterial flow with Native / Trance / In hance sequences
4	Time resolved angiography with contrast kinetics like 4D TRACKS/ TWIST/TRICKS.
5	Fast acquisition and reconstruction approach like KT Blast/mSense & GRAPPA/ARC & ASSET for phase contrast velocity mapping
6	Perfusion study in organ systems like kidney, brain, heart etc.with permeability maps, and quantification of rCBF/rCBV, MIT, etc, with colour maps.
7	T1 perfusion with permeability quantification maps.
g) Diffusion weighted imaging with at least b value of 7000 or more	
1	Whole body diffusion weighted imaging with background suppression
h) Spectroscopy	
1	The system should have the Hydrogen, Single Voxel spectroscopy. Multivoxel. Multislice & Multiangle 2D, 3D Spectroscopy and Chemical shift imaging in 2D/3D. The complete processing/ post-processing software including color metabolite maps should be available on main console and on all clients concurrently. Complete prostate, breast, liver spectroscopy hardware and applications should be provided.
2	Water and lipid suppression in automated sequences
i)	Prostate imaging with parametric cards (ktrans, kep, ve, vp). Please quote whether facility for prostate biopsy is present. <b>(Should be offer as standard part of the system)</b>
j)	Productivity improvement. Techniques with availability of previous scans such as Smart Exam /DOT engine/ Ready for Brain etc. Integrated exam planning should be possible. All filming, viewing and export options should be possible.
D	OPTIONAL SOFT WARE AND HARDWARE PRICE TO BE QUOTED SEPERATELY :- i : Multi Nuclear Spectroscopy: Facility of P31 Imaging & Spectroscopy. Double tuned surface coil for P31 and C13, 23Na Imaging and spectroscopy for liver, calf muscle, heart, etc. The operating frequency should cover 23Na, 13C, and 31P nucleus ii : Double tuned head coil for 31P and C13, 23Na spectroscopy iii : MR elastography with quantification. iv : MRI- HIFU complete system with application for fibroid, prostate, bone etc.

	v : Silent Scan/Quiet Scan protocol & sequence (Non ART based) to be offered. Specify the sequence compatible /offered with silent mode. Also offer silent sequence along with motion correction.3DTI & PDC acoustics lower them 3dB at the IEC stated measuring location i.e. the acoustic measurements are acquired at the centre of the bore.
<i>E</i>	<p><b>WORK STATION</b></p> <p>Multimodality Client Server Architecture-Server with <b>Seven</b> Concurrent Clients (Dexus, Intellispace Portal, Syngo.Via etc.Capable of rendering 20000 images at peak performance.Wokstation hardware should be industry standards, and should be the latest with the vendors, as per their globally launched product catalogue. Please quote separate licenses for all the processing quoted.</p> <p>A reputed Anti-Virus Solution for Server as well as for all clients, workstations should be in place. The vendor should provide antivirus updates for five years and make sure of the updated antivirus every week (using automatic updates with internet facility by the vendor)It</p>
	A Server multimodality workstation with preferably the same user interface as of main console is required with the availability of all necessary software including.
i.	Basic post-processing software including MIP, MPR, surface reconstruction and volume rendering technique image fusion, 3D evaluation on all seven concurrent clients. Software for artifact reduction in abdominal imaging
ii.	Advanced post-processing applications including FMRI, perfusion quantification, advanced diffusion and DTI on all clients concurrently
iii.	Advanced cardiac evaluation (EF, Calculation, Wall motions, analysis) including perfusion analysis, processing of 2D/3D CSI data, with color metabolite mapping, quantification of CSF flow data, vascular analysis package on all clients concurrently. The client should display cardiac cine images in movie mode with rapid avi creation
iv.	Image Fusion Software: Image filtering and image fusion software for co-registering MRI/fMRI. Calculation of Diffusion/Perfusion Mismatch. Overlay of perfusion and diffusion maps on anatomical images ,overlay of DWI and PWI on each other. Overlay of MRI activation maps and DTI Software for Fusion of MRI and DSA. Advanced Spine applications package for nerve root analysis. Whole Body image fusion (composing)
v	Each client to have at least <b>24 inchLED</b> 2MB pixel color monitor, with hard disk of at least <b>One TB</b> for at least 100, 000 image storage in 256 matrix, and 4 GB RAM capacity- Total seven clients hardware and software to be provided. <b>(Dell Or HP Make).</b>
vi	Each of the client should enable printing in laser film camera and color printers.
vii	It should have necessary and adequate hardware and software for sending and receiving the patient data (text+ images)
viii	Clients are to be installed in HOD and consultants' room in main radiology department and in the MRI Block of the hospital, after consultation with HOD Radiology. The networking should be done in a manner that there is no loss of information during the transmission. All cabling to be done by the vendor.
ix	The system should have DICOM 3.0 compliant interface and enabled for networking connectivity to Linux/Windows based servers/clients with patient ID labelling and integration to generic hospital information system/PACS. Integration with existing

	network should be done.
F	<b>SAFETY FEATURES</b>
	The System should have following safety features
i	The magnet system should include an Emergency Ramp Down unit (ERDU) for fast reduction of the magnetic field with Ramp Down time below 3 minutes
ii	The magnet should have quench bands that contain the fringe fields to a specified value in the event of a magnet quench.
iii	Real time SAR calculation should be performed by software to ensure that RF power levels comply with regulatory guidelines and are displayed on each image
iv	The system shall have manual override of the motor drive for quick removal of the patients from the magnet bore.
v	Temperature sensor (built in) for magnet refrigeration efficiency must be provided
G	<b>DOCUMENTATION</b>
i	Two dry chemistry cameras with resolution of 500 dpi or more. Each unit should be digital DICOM 3.0 compliant The camera must be able to process up to 100 films/hour (min.) depending on the size The system must deliver its first film within 80 seconds from request The system must have contrast resolution of 16 bits/pixel or more The system must have at least three online film sizes, and should be capable to print on any of the 8x10,10x12,11x14,14x14, 14x17 sizes. The system must not involve any wet process and must give a dry film in single stage (without any users intervention) functionally Startup time should be less than 10 minutes Easy day light loading The system should be freely configurable by the user, to use any of the above mentioned size
ii	A color laser printer for printing color images and protocols on plain paper in 1200 dpi resolution and more than 20 ppm.
iii	The camera and color printer both must be DICOM compatible. (attach conformance statement.)
H	<b>UPS</b>
i	The system should be provided with UPS for the complete MRI unit with chiller & emergency light and for all accessories mentioned in the tender document with at least 30 minute back up, of capacity 200 KVA or more. Gensets of 250KVA to support complete system, ACs, lighting system and chiller to be provided ( <b>Price of Generator sets to be offered separately</b> ).
I	<b>SUITABLE RF ENCLOSURE</b>
i	RF Cabin: The system should be supplied with the imported RF cabin with RF room shielding, RF Door screen, and interiors for the same should be carried out suitably. An emergency door or hatch should be provided in RF cabin.
J	<b>ACCESSORIES</b>
i	Dual head MRI compatible pressure injector with Non- Ferrous, automatic syringe size detection

	It should be capable of performing single dual phase contrast injections, provides saline flush delivery and allows timed contrast delivery. It should be possible to observe progress of injection and view injection results
ii	Patient comfort accessories i.e. patient call button, two way communication, music system, head phones, non –magnetic I/V stand, restraint strap, comfort pads, knee support and positioning accessories to be supplied.
iii	Latest MRI Compatible Anesthesia Machine (for adult and pediatric patient) with integrated Ventilator, 2 vaporizers, vital signs monitor & pulse Oximeter and suction machine to be provided with all technical detail supported with DPS of the Anaesthesia machine. Specifications are attached in Annexure A
iv	Two non-ferromagnetic patient transfer trolleys and two wheel chairs of international make should be provided
v	Water Chiller for Cold Head & Gradients
vi	Coil storage cart/carts capable of storing all the coils offered with the system should be provided
vii	Two metal detector doors to be installed at the entrance point, Two hand held metal detector should also be supplied
viii	Fire Fighting System and smoke Detectors to installed in the entire MR centre. Two Fire Extinguishers to be installed in each room /corridors each having a capacity of 5 kg.
ix	Defibrillator Biphasic with ECG recording with adult and paediatric paddles.
x	MR compatible infusion pump
xi	Compatible decorative panel on the roof of the MRI room
xii	Closed circuit CCTV camera at the head side of the patient with viewing panel at the console
xiii	Phantoms (including structured phantoms) and quality assurance as per AAPM standard for SNR for different coils and nuclei, spatial resolution, magnetic field in homogeneity, eddy current compensation, RF power and in-homogeneity measurement. AAPM recommended distortion , measurement phantoms
xiv	Complete manuals and other necessary documentation's should be provided
Xv	Two PCs of reputed make, having latest configuration at the time of the installation with <b>24" LED monitors</b> with UPS . They should be preloaded <b>with licences</b> latest windows operating system , latest edition of MS office software and Radiology reporting software. <b>(Dell/HP Make)</b> .
Xvi	Three Monochrome Laser printers with printing speed of 18-19 ppm
Xvii	MR compatible transport ventilator.
Xviii	Comprehensive Radiology reporting software having normal reports of MRI and CT of various body parts one on each PC. It should be possible to edit the reports and generate customized reporting formats. It should be able to assign a unique ID for each report. It should be possible to search for the reports up to at least one year by entering patient details /date of examination etc. It should be possible to sort out the reports on day wise basis for purpose of archiving them on CD/DVD
Xix	Ultra thin x-ray film illuminator – triple panel : two in number Ultra Thin X-Ray Film illuminator using LED Lamps. The Thickness should be less than 25mm. It should be Suitable for viewing three 14" x 17". It should have LED Lamps having life-span of more than 100,000 hours. It should have easy insertion & removal of the film.



	<p>It should have homogeneous illumination &amp; having luminance of more than 1200 cd/m<sup>2</sup>.  It should have separate On-Off function &amp; separate rotary continuous adjustable brightness control at the bottom of each panel for convenient operation.  It should have fully electronic continuous brightness control, with adjustment range of approximately 90%.  It should be directly connectable to power supply without any external adaptor.  It should have Flicker free light for reduction of eye strain.  It should have external fuses for protection against power surge.  Manufacturer should be ISO 9000 certified</p>
Xx	Deleted
Xxi	Good quality air curtain at MRI entrance (for patient entry), to filter the dust and prevent the leakage of a/c.
Xxii	Projector: DLP Projector having Brightness of at least 3500 ANSI and contrast ratio of 3500:1
xxiii	<p>Multipanel x-ray &amp; imaging film illuminator – four panel</p> <ol style="list-style-type: none"> <li>i. Multipanel X-Ray Viewing System consisting of X-Ray &amp; Imaging Film Illuminator suitable for Four Sliding Panels.</li> <li>ii. Each Transparent Panel should have capacity to hang / display / hold six films of size 14” X 17” in two rows</li> <li>iii. It should have facility to park all four Panels on one side.</li> <li>iv. It should have transparent film holding clips fixed in order to facilitate hanging of all sizes of films.</li> <li>v. It should have total capacity to hold 24 films of size 14” X 17”</li> <li>vi. It should be sizeful for teaching, conferences, seminars, display and mass reporting.</li> <li>vii. It should be convenient to handle the bulk work.</li> <li>viii. It should have the facility for each Panel with pre-hanged films to bring by sliding before the illuminator for viewing.</li> <li>ix. It should be sturdy &amp; heavy Duty.</li> <li>x. It should be fitted on castors for mobility.</li> </ol> <p>Mention the overall size and floor area covered by the device.</p>
xxiv	An intercom system connecting all stations in MR complex with all faculty rooms, residents reporting room, office and CT scan.
xxv	3 sets of MR compatible headphones for music system
	<p><b><u>ANNEXURE A</u></b></p> <p><b>Specification for MRI compatible anaesthesia machine &amp; MRI compatible monitor</b></p> <p>MRI compatible anaesthesia machine :</p> <p>Should be MRI compatible at 3 T, antistatic, heavy frame &amp; base with good quality castors with front brakes, with following features:</p> <ol style="list-style-type: none"> <li>1. Three gas model, viz Oxygen, Nitrous oxide and Air</li> <li>2. Should be compact, ergonomic, easy to use and easy to maintain.</li> </ol>

3. Should have separate fresh gas outlet for use in open circuit.
4. Machine should have flow meters for Oxygen, Nitrous oxide and air. Emergency oxygen flush should be available. There should be facility to select oxygen air or oxygen nitrous oxide with the help of a separate switch or knob.
5. Dual flow sensing capability at inhalation and exhalation ports.
6. Should have paramagnetic /galvanic cell oxygen sensors. In case of galvanic cell sensors, the firm should supply free sensors for the entire warranty period of 5 years. In case of paramagnetic sensors, the firm shall ensure that there is no down time during repair of these sensors (if necessary) and provide a standby alternative.
7. Shall have back-up O<sub>2</sub> control which provides an independent fresh gas source and flow meter control in case of failure.
8. Pressure regulators shall be of modular design.
9. Should have oxygen fail-safe device & an auxiliary built in oxygen flow meter.
10. Electronic or Mechanical Hypoxic Guard to ensure minimum 25% O<sub>2</sub> across all O<sub>2</sub>-N<sub>2</sub>O mixtures and Oxygen Failure Warning.

Vaporisers:

11. Facility of mounting minimum two Vaporizers, latest technology, key filler, selectatec type, tool free installation, meaning any vaporizer of our choice can be mounted at will with interlocking facility. It should be preferably of the same make as that of machine.
12. Temperature, pressure and flow compensated with high accuracy of delivered concentration of volatile anaesthetic agent. Should be maintenance free.
13. Two vaporisers should be supplied (Isoflurane, Sevoflurane).

Ventilator:

14. The machine should have an integrated Anaesthesia Ventilator system, facility to vary respiratory parameters and should be able to ventilate adult and paediatric patients including infants.
15. Ventilator should have Controlled, manual, spontaneous modes and provision for PEEP
16. Tidal volume (inspired and expired), respiratory rate, I: E ratio, minute volume, Airway pressure, & FiO<sub>2</sub> should be continuously displayed.
17. Should have Tidal volume and fresh gas compensation mechanism
18. Audio-visual Alarms for high and low settings of pressure, volume and disconnection should be present.
19. Tidal Volume (VT) 20-1500 mL (Volume Control), Rate at least 4-80 BPM.
20. Inspiratory / Expiratory ratio (I:E) 2:1 to 1:6, & Peak Flow – 100 to 120 L/min.
21. Ventilator should have at least 30 min rechargeable battery backup for ventilator.
22. Machine should have an integrated breathing circuit with circle absorber of good quality, easy to clean, autoclavable, fewer parts to reduce leaks.
23. Machine should have mounting capability of one O<sub>2</sub> and one N<sub>2</sub>O pin-indexed cylinder.
24. Adult autoclavable (2 sets) breathing circuits & one paediatric circuit to be provided.
25. The machine should be equipped with AGSS.

MRI compatible monitor :

Specifications for MRI compatibility:

1. Monitor should be equipped with MRI shielding and set to Remote Communication Mode.
2. Should be MRI safe at 5,000 Gauss, 3.0 Tesla and 4 W/Kg SAR
3. System should include fiber optic SPO<sub>2</sub> finger sensor, MRI compatible ECG Patient

Leads and electrodes, NIBP cuffs, hoses and etCO<sub>2</sub> sampling kit and temperature probe

General specifications for monitor:

1. The monitor should have adult and neonatal applications and should be user friendly.
2. It should be capable of monitoring ECG, noninvasive blood pressure, oxygen saturation (SpO<sub>2</sub>), ETCO<sub>2</sub> and temperature
3. It should have an internal battery which should last for 30-40 min.
4. It should be operational at wide temperatures (10<sup>0</sup>C to 40<sup>0</sup>C) and humidity (20% to 90%)
5. It should have a facility of 24 hours data storage of trended parameters and trend graph of 1, 2, 3,6,12 or 24 hours display format.
6. Should have a facility to deactivate all the alarms if necessary.

ECG monitoring: Essential specifications:

1. Available leads: I, II, III, V, AVR, AVL, AVF with facility for recording 12 lead ECG.
2. Should display one or all the selected leads at a time
3. Accuracy of  $\pm 5\%$  of the rate.
4. Monitor Mode: Digital Signal Processing (DSP)
5. T-wave suppression for high field MRI
6. Should have arrhythmia monitoring facility.
7. Should have user selectable alarms.
8. Heart rate measuring range 15-300 beats/min

Pulse oximeter (SpO<sub>2</sub>)

1. Should provide a digital value of the arterial oxygen saturation as well as diagnostic plethysmographic pulse waveform.
2. Measurement range: 0% to 100%
3. User selectable upper and lower alarm limits.
4. Probes with finger and ear sensors for adult, paediatric and neonatal use.
5. Should be sensitive and function accurately even at low perfusion states of low blood pressure or hypothermic conditions.

ETCO<sub>2</sub> monitoring:

1. Should have sidestream CO<sub>2</sub> module and display both graphically and numerically.
2. Single beam, non-dispersive infrared (NDIR) absorption, radiometric measurement, no moving parts
3. Initialization time less than 10 seconds, full specifications within 1-2 minutes
4. CO<sub>2</sub> range should be 0 to 152 mmHg barometric pressure supplied by module itself
5. Should be able to detect breath rate in the range of 2-150 BPM
6. Respiratory rate accuracy should be + 1 breath
7. Barometric Pressure auto compensated from 400 mmHg to 850 mmHg  
Operator selectable O<sub>2</sub>, N<sub>2</sub>O, HE and Agent compensation.
8. No routine user calibration required. An offset calibration should run automatically when the ambient temperature is not stable
9. Sampling line should have both nasal sampling line and extension sampling line
10. Warm up time 10 seconds

Temperature monitoring:

	<ol style="list-style-type: none"> <li>1. Measuring range: 5 to 50<sup>0</sup>C</li> <li>2. Accuracy ±0.1<sup>0</sup>C</li> <li>3. User selectable upper and lower limit of alarm.</li> <li>4. Core and skin probe</li> </ol> <p>Non invasive blood pressure (NIBP) monitoring:</p> <ol style="list-style-type: none"> <li>1. Should automatically sense infant / adult cuffs and set appropriate inflation pressure and safety limits.</li> <li>2. Operating Modes: Automatic, Manual, Stat</li> <li>3. Accessories, NIBP cuff:             <ol style="list-style-type: none"> <li>a. Adult for thigh and arm</li> <li>b. Paediatric</li> <li>c. neonatal</li> </ol> </li> </ol>
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Turnkey works as per details mentioned below

**TURNKEY SPECIFICATIONS:**

General:

1. The MRI unit is to be installed on turnkey basis.
2. The vendor must take full responsibility for site preparation including civil, electrical, air-conditioning and fire safety work of the earmarked area, in consultation with the RGSSH.
3. The vendor must visit & assess the site before submitting their quote for the turnkey works and submit the certificate along with tender that the site is suitable for installation of equipment.
4. The vendor shall provide an accurate architectural and structural layout plan for housing the equipment. Logical workflow and safety norm should be adhered to. The layout plan should be made in consultation with the Director of the hospital.
5. The site works will be done as per approved plan to make it a homorganic complex.
6. During construction, minor modifications can be permitted by the Users/ Administrators of the hospital for more efficient utilization of space and resources.
7. The total area for the MRI MACHINE is mentioned as under:-

MRI MACHINE WITH CONSOLE + TECHNICIAN ROOM + REPORTING ROOM+ WAITING SPACE ETC Approx. 13500 x 12000 mm.

The MRI Complex will comprise of various rooms like MRI Examination room, console room, reporting room, conference room, changing room, Recovery room, technician’s room, electrical equipment and UPS room and any other required room for MRI facility.

8. All the material used for all turnkey work shall be of reputed make only and shall be got approved by the department prior to utilization.

**A. CIVIL WORKS:**

1. In the radiation areas all walls, doors, windows etc. to be Lead lined, to comply with the recommendations of AERB / BARC for radiation safety.
2. Flooring Examination Room – Antistatic rolled PVC flooring.  
Other Rooms - Anti-static Vitrified Tiles with Digital Prints.
3. Walls Finishing - Exam Rooms & Waiting Area
  - a. Lacquered glass pasted on ply with wooden framework.
  - b. 8’ x 4’ Backlit artificial acrylic surface on one main wall with cloud/stone finish.

- c. Toilets & Pantry - Glazed Ceramic Tiles up to false ceiling.
- d. Other Areas - Vitreous Ceramic Tiles up to false ceiling.
4. False Ceiling: Exam Room – Gypsum Board with Designer Cove Lighting  
Other Rooms – Aluminium Metal Panel Grid false ceiling.
5. Floor trenches with block board covers finished with matching flooring to be provided for the cables in catheterization and Equipment rooms.
6. Plumbing & Sanitary - Complete plumbing & sanitary works to be provided for the Toilets, Pantry & Scrub Stations with all accessories (like basins, geysers, taps, WC etc.)
7. Medical Gases connection points to be provided in the radiology complex by the hospital. The same needs to be coordinated during the turnkey works.
8. All doors, windows, partitions, onsite furniture to be provided with high quality wood work or block boards with high gloss laminates. All these should have adequate locking mechanisms supplied with all accessories.
9. All the rooms in the complex will be signposted with stainless steel plates.
10. Sun-film and Venetian blinds be provided in all windows.
11. All the doors should be provided with the necessary fitting with hydraulic type door closures (Dorma make).
12. The main entrance gate at both ends to be provided of un-breakable toughened glass with additional metal grill doors for security.
13. The entrances to the Radiology Complex to be felt padded at the junction of both doors to avoid dust and provide insulation.
14. Suitably located, attached and common toilets to be provided.
15. Active and passive room shielding for magnetic, fringe field should be provided as per requirement of the equipment.
16. Flooring in all the areas will be non-slippery vitreous ceramic tiles.
17. In the toilets, glazed tiles will be used for Dado up to the ceiling. .
18. The Walls, glazed/ceramics tiles will be used for Dado up to the ceiling.
19. Floor trenches with block board covers will be provided for the cables.
20. The entrances to the MRI Complex to be felt padded at the junction of both doors to avoid dust and provide insulation.
21. False ceiling in all the areas will comprise of metal suspension system, performance fire proof aluminium panels with integrated acoustic lining.
22. Piped in anesthesia gases/central oxygen supply will be provided by the Hospital. However, integration & co-ordination will be their responsibility
23. All fluorescent lights and smoke detectors to be accommodated/ integrated in the false ceiling.
24. All the rooms in the complex will be signposted. Sun-film and Venetian blinds be put in all windows.

**LIST OF APPROVED MAKES / BRANDS: - (CIVIL WORK)**

S#	DESCRIPTION	MAKES/BRANDS
1.	Ready mix concrete	L&T CONCRETE / J.K. LAKSHMI / ULTRATECH / KWIK MIX
2.	Grey cement 43 grade (OPC / PPC)	ACC / L&T / GUJRAT AMBUJA / VIKRAM / BIRLA / JK CEMENT / SHREE
3.	White cement	BIRLA WHITE / JK WHITE
4.	Reinforcement steel	SAIL / TISCO / RINL / IISCO
5.	Flush door shutters	CENTURY / KITPLY / NATIONAL / ANCHOR
6.	PVC door shutter	RAJSHREE / SINTEX PLAST / DURO PLAST

7.	Ply / commercial board	CENTURY / KITPLY / NATIONAL / ANCHOR
8.	Prelaminated board	ANCHOR / NOVAPAN / CPL GLUNZ / KITLAM
9.	Sunmica	FORMICA / KITMICA / DECOLAM
10.	Pressed steel frame / steel windows	SAN HARVIC, STEELMAN INDUSTRIES, PD INDUSTRIES, MEATL WINDOWS, CHANDNI INDUSTRIES, GANPATI UDYOG (RAJPURA)
11.	Aluminium / door fittings	ARGENT / CLASSIC / UNIVERSAL
12.	Mortise lock	GODREJ / HARRISON / PLAZA
13.	Door closure (Hydraulic)	UNIVERSAL / RITZ / EVEREST
14.	Helical and double action spring	RITZ / HERYKA / AVON
15.	Adjustable friction window stay	EARL BIHARI PVT. LTD. (EBCO) OR ANY OTHER BIS APPROVED PRODUCT
16.	Wall tiles	JOHNSON / SOMANI PILKINGSTON / ORIENT / KAJARIA / SUNHEART
17.	Ceramic Floor Tiles, Vitrified Tiles	KAJARIA / JOHNSON / NITCO / SUNHEART
18.	Precast Concrete Tiles (Terrazo / plain / chequered), Paver Blocks, PCC Kerbs & Channels.	NTC (PKL) / PAVING STONE / NITCO
19.	Vinyl flooring	TUSKAR / WONDER FLOOR / LG / ARMSTRONG
20.	Wooden flooring	ARMSTRONG / PERGO
21.	Float glass	MODIGUARD / TRIVENI / SAINT GOBIN / ATUL
22.	Paint (Synthetic Enamel / Plastic emulsion / Anti Fungal)	GOODLASS NEROLAC / ASIAN / BERGER / ICI
23.	Oil bound distemper	GOODLASS NEROLAC / ASIAN / BERGER / ICI
24.	Wood & steel primer	GOODLASS NEROLAC / ASIAN / BERGER / ICI
25.	Water proofing compound	CICO / PIDILITE / ROFEE / DR. BECK / DURASEAL
26.	Aluminium sections	INDALCO / HINDALCO / JINDAL
27.	Tile adhesive	PIDILITE / SIKA / FOSROC / BAL ENDURA
28.	Glass mosaic tiles	PIXEL GLASS / CORAL / ITALIA / BISAZZA / PALLADIO
29.	False ceiling: Mineral Fibre Gypsum  Wooden  Metallic	USG / ARMSTRONG / DAIKEN / DEXUNE GYPBOARD / SAINT GOBAIN / LAFARGE / ARMGYP KITPLY / ANCHOR / ARMSTRONG WOODWORKS LLYOD / ARMSTRONG / LUXLON / DEXUNE
30.	Silicon paint	PIDILITE / CICO / ROFF / CHOKSI
31.	Wall putty	JK / BIRLA / ASIAN
32.	Dash / anchor fasteners	HILTI / FISCHER

33.	Nuts / bolts & screws	GKW / ATUL
34.	Backer rod	SUPREME OR ANY OTHER BIS APPROVED PRODUCT
35.	Sealant	BASF INDIA / SIKA / FOSROC
36.	RCC pipe & Collars	ISI MARKED OR ANY OTHER BIS APPROVED PRODUCT
37.	G.S. Sheet (Corrugated)	TATA / SAIL / NIPPON

**B. PLUMBING WORKS:-**

1. Plumbing works has to be carried out as per the site requirement.
2. The waste pipes and accessories should be of centrifugally cast iron of ISI make and the connection of existing main hole in the public health shaft should be done.
3. All water pipes should be galvanized iron of Tata / Jindal make and fitting should be of SUW /UF /UNIK make.
4. The grafting should be of brass chrome plated.
5. All C.P fitting shall be of Jaguar or higher makes.
6. Taps above washbasin, soap dispensers should be with provided with sensors.

**LIST OF APPROVED MAKES / BRANDS (PLUMBING WORK):-**

S#	DESCRIPTION	MAKES/BRANDS
1.	Vitreous China Ware (1 <sup>st</sup> Class quality)	PARRYWARE / HINDUSTAN VITREOUS / CERA
2.	Plastic seat cover	PAARYWARE / COMMANDER / HINDWARE
3.	C.P. Fittings / Accessories	ESSCO / EBONY / JAGUAR
4.	PTMT fittings	PRAYAG / POLYTUF OR ANY OTHER BIS APPROVED PRODUCT
5.	Flush valve	JAGUAR / JAL / ESS ESS
6.	Stainless steel sink	COBRA / NEEL KANTH / AMC / NIRALI
7.	Soil waste pipes & fittings Centrifugal cast spun pipe  Sand cast iron pipes  Centrifugal cast spun LA pipe	NECO OR ANY OTHER BIS APPROVED PRODUCT NIF / RIF OR ANY OTHER BIS APPROVED PRODUCT ELECTRO STEEL / KESORAM
8.	GI & MS pipes	TATA / JINDAL / BST
9.	PVC water supply pipes & fittings	NOCIL / CHEMPLAST / WAVIN / SUPREME / DIZAYN / DIPLAST
10.	GI fittings (Malleable cast iron)	UF / SFW / UNIK
11.	Gun metal valve (Full way, check & globe valve)	LEADER / SANT / KILBURN
12.	Butter fly valve	CASTLE / C & R / ADVANCE / IVC / AUDCO
13.	C.I. double flanged sluice valve & check valve	IVC / KIRLOSKAR / LEADER
14.	C.I. double flanged non return valve	GEETA / KIRLOSKAR / C & R / AUDCO / CASTLE / ADVANCE
15.	Foot valve	LEADER / IVC / KIRLOSKAR

16.	C.I. Manhole cover & CI grating	RIF / ADHUNIK / BC
17.	Bib & stop cocks (Brass)	KPR / SANT / VIF
18.	Mirror glass	MODI GUARD / ATUL / GOLDEN FISH
19.	Insulation hot water pipes mineral wool)	LAPINUS OR ANY OTHER BIS APPROVED PRODUCT
20.	Bed pan sink	PAMINI OR ANY OTHER BIS APPROVED PRODUCT
21.	Elbow action surgical mixer. Taps & bed pan sink accessories	VIJAY OR ANY OTHER BIS APPROVED PRODUCT
22.	PVC tanks	DIPLAST / SINTEX / RAUNAQ
23.	Stone ware pipe & G.T.	PERFECT / CHANDIGARH CERAMICS / HIND
24.	PVC plumbing pipes/fittings	NOCIL / CHEMPLAST / WAVIN / SUPREME / DIAZYN / DIPLAST
25.	Ferrules	DHAWAN SANITARY UDYOG (PRIMA) OR ANT OTHER BIS APPROVED PRODUCT

### **C. ELECTRICAL WORK:**

1. A suitable Mains Power panel to be provided for the entire complex. The main input cable shall be provided by the hospital to the Electrical room.
2. Adequate safety measures will be incorporated in the electrical power supply system.
3. The use of earth leakage circuit breakers will be required. Switches, interlock devices and warning light / existing light is to be taken into the planning.
4. Dedicated isolated Earthing stations (at least 12 Nos.) to be provided for the complex.
5. The entire complex to be lit by reputed make (Philips, GE, Osram, Havells) light fixtures.
6. Dimmer controlled incandescent light fixtures are to be provided in the examination rooms and console rooms.
7. All the electric wiring (copper), switches, sockets, plugs, MCBs etc are to be Havells, Romex, Polycab wire PVC insulated, Finolex, TP-Link AV200 and as per ISI standards.
8. Different parts of the complex to have separate wiring for light and power circuit through MCBs of suitable capacity.
9. EPABX wiring (IP Phone LAN based) to be provided for the Radiology complex.
10. Fiber Optic cabling for data communication to be provided in the Radiology complex; and need to be hooked with hospital network.
11. Fire Safety: A Fire Alarm system of reputed make to be provided in the entire Radiology complex. The system to be hooked with the Hospital Fire Alarm system.
12. Suitable number of hand-held fire extinguishers to be provided.
13. Closed circuit cameras (CCTV system) to be installed in the Radiology.
14. A music system with speakers to be provided in the Radiology complex.
15. Switch & socket (modular type) should be MK/North West/ Mosaic (Legrand).
16. Energy efficient Fluorescent light fittings should be provided of Philip/Wipro/GE/ Bajaj.
17. General lights should be of mirror optic reflector type of Philips/ Wipro / GE/Cromptom make.
18. Exit signboard, Emergency lights to be provided (Legrand/ Philips make).
19. Power cables should be of copper: Havell's / Poly cab/ CCI/RR cables.
20. Main electrical panel make: EMCO / International Switch Gears / Bharat Electrical.
21. Dimmer controlled incandescent light fixtures are to be provided in the examination rooms and console room.



22. All the computers along with peripherals light points, fire alarm system, EPABX and view boxes to be supplied with the UPS power.
23. The following information needs to be provided to the hospital:-
  - b. Electrical load requirement of the equipment.
  - c. Electrical load requirement of air-conditioning plant.
  - d. General electrical loads and complete wiring diagram.
  - e. Two sets of plan drawing and panel drawing.
24. The MRI Complex, all required equipment and accessories are to be connected to the supplied UPS. Centralized UPS is available. Firm to give local details. One point supply should be provided.
25. Dimmer controlled incandescent light fixtures are to be provided in the Magnet room and console room.
26. All the electric Wiring (copper), switches, sockets, plugs, MCBs etc. are to be reputed make of rated capacity. Separate DB to be provided for light and power.
27. Different parts of the complex will have separate wiring for light and power circuit through MCBs of suitable capacity.
28. Adequate safety measures will be incorporated in the electrical power supply system.
29. Dedicated isolated earthing is to be provided for the equipment.
30. Audio call bell with intercom and remote locking/unlocking facility provided at the main door of the Complex.
31. Fire Safety measure: a fire alarm system of reputed make with smoke detectors, the above and suitable fire extinguishers to be provided.
32. Closed circuit cameras to be installed in the MRI complex and a parallel feed has to provided in the concerned Doctors room with DVR and storage facility for 15 days.
33. The firms shall be required to specify the total load requirements for the entire equipment the air-conditioning units, room lighting and for the accessories if any. The load will be provided by the institute to the distribution panel. The distribution's panel should have switch gear of Siemens/L &T/ Schneider /Legrand makes and shall be provided by the vendor. (Any specific requirement of any kind if required shall be the responsibility of the tendering firm).
34. The electrical work will include wiring, different lights and main switch fittings. The special ceiling light will be required particularly in the equipments room, which should have long life and should not be affected by frequent on and off.
35. The electrical work shall include the following:
36. Wiring- the wires shall be of copper of different capacity as per the load Switches light and power points should be of modular type General - LED light fixture of suitable wattage to have prescribed illumination as per standards/NBC to be provided. Fittings shall be down lighter and 2"x2" as required.
37. Telephone cables should be of FINOLEX/R.R.Cables.
38. Electrical load of the system to be added as per the tender/brand of the equipment
39. FAS: Photoelectric type of detectors to be provided. Small panel to be provided. Provision for integration with main panel to be provided. Make: Notifier/ Johnson/Ansul/ Honeywell.

#### **D. Air Conditioning:-**

The MRI complex Area is currently Air-Conditioned with the central Air conditioning plant of the building. However, suitable additional or standby air conditioning VRV/VRF type of 5 star rating and as per the requirement of the equipments for maintaining the 18 – 22 degree Celsius temperature may have to be done by company with the following specifications.

- i. He has to provide AC only for MRI machine, rest will be in scope of Hospital.

- ii. Cooling arrangement will be given technical details along with catalogue no. and makes and it is to be issued that machine is provided with equal stand by capacity. The chiller units shall be of air cooled type and will have automatic charge over arrangement in case of failure of one unit. Suitable alarm audio/video arrangement shall be provided for operation of AC units.
- iii. All weather AC with cooling, heating and humidity control capabilities is to be provided.
- iv. Air flow in various rooms should be adjustable to have some degree of control over temperature in different rooms of the complex.
- v. The AC units(s) should be microprocessor controlled for adequate temperature control.
- vi. The wall type split air-conditioning to be provided for standalone working in workstation room, console room, doctors room etc.
- vii. Suitable De-humidifiers to be provided in the equipment sections as required.
- viii. The total A/C capacity being offered for the complete centre to be clearly mentioned.

Make: - Hitachi, Daikin.

To maintain uniformity for all vendors, a minimum of 20 Tons of AC including standby capacity should be quoted

#### **E. Furniture:-**

1. The readymade furniture supply items should be of Godrej or Durian make.
2. Onsite wooden furniture should be customized to room requirements and made in block board with Korean laminate finishes designed in modular storage pattern.
3. The color and shades of the furniture to be approved by the user department.

#### **Schedule of Furniture:-**

Room Wise Furniture List (Radiology Complex).				
Sl. #	Room's Name	Particulars of the Item	Unit	Qty.
1	Examination Room	10'x2'6"x1'10" Modular storage Counter with Granite Top	No.	2
2		6'x4'x1'10" Modular Cupboard for Storage	No.	4
3		Drug / Medicine Trolley	Nos.	1
4		4'x2'X1'10" Wall mount Cupboard	Nos.	3
5	Console Room MRI	Workstation Table for Radiology Systems & Controls	No.	4
6		Executive Reclining Chairs with Castors	No.	8
7		4'x2'X1'10" Wall mount Cupboard	No.	2
8		Thin Film LED Viewer (2 Films)	Nos.	2
9	Reception & Waiting Area	5'x2' Reception Desk with Granite Top	No.	1
10		Reception Chair	No.	2
11		PVC moulded 3 chairs on common steel stand	Nos.	12
12		Water Dispensing Unit	No.	1
13		32" LED TV with Set-top Box	Nos.	1
14	Reporting	Workstation Table alongside wall with Storage	No.	2

15	Room	Executive Reclining Chairs with Castors	No.	8
16		4'x2'X1'10" Wall mount Cupboard	No.	2
17	Doctors & Staff Room	Workstation Table with Side Rack & Storage	No.	2
18		Executive Reclining Chairs with Castors	No.	2
19		Non Reclining Chairs	No.	4
20		4'x2'X1'10" Wall mount Cupboard	No.	2
21	Change Rooms	3'x2' Bevelled edge mirrors on wall in change room	No.	4
22		4'x2'6" Floor Mount Storage Cupboard	No.	4
23	Pantry	Microwave Oven - 20 Litres	No.	1
24		Refrigerator - 200 Litres	No.	1
25		4'x2'6" Floor Mount Storage Cupboard	No.	1
26		Tea / Coffee Vending Machine	No.	1

### **F. DEFECT LIABILITY:**

1. The works to be executed shall be guaranteed for a period of 5 years from the date of commissioning against any defective material / workmanship.  
The entire project of commissioning of the equipment & turnkey works should be completed within 6 months. Total project duration should not exceed 6 months (Turnkey and equipment installation) from the date of opening of the LC.

### **Important:**

In addition to the tendered specifications following items with hardware and software should be offered as Optional (Price to be quoted separately)

1. Silent Scan or Quiet suite
2. 3D PROMO or 3D Pace.
3. Body Navigator or auto Navigator.
4. HIFU

### **Sl. No. 34**

#### **Digital Flat Panel Fluoroscopy with DSA**

The X-ray tube and X-ray generator should be from the same principal manufacturer **of complete system**  
The unit should be completely integrated system (integrated X-ray generator and image acquisition control console) having the following specifications:

#### **Generator:**

- i. 1000 mA unit with microprocessor controlled high frequency X-ray generator with power output of 80 kW or more
- ii. Exposure kV range should be 40-150 kV

- iii. It should be able to work on 800 mA at 80 kW for Radiography and from 0.5 to 5 mA at fluoroscopy
- iv. System should have facility for pulsed fluoroscopy. Please provide details
- v. Generator should have minimum exposure time of 1 ms or less
- vi. System should have multiple user defined programs (vendor defined programs)
- vii. There should be provision for automatic exposure control (AEC)
- viii. It should have provision for overload protection device and self-diagnosis
- ix. It should have provision for digital display of kV. mA both for radiography and fluoroscopy mode
- x. Generator parameters should be automatically set

**1. X-ray tube:**

- i. One X-ray tube which is over couch
- ii. The X-ray tube should have dual focal spots. Small focus not more than 0.6 mm and large focus not more than 1.2 mm
- iii. X-ray tube rating should be compatible with X-ray generator output
- iv. Small focal spot power rating should be in the range of 30-50 kW
- v. Large focal spot power rating should be in the range of 70-100 kW
- vi. Anode heat storage capacity should at least be 600 kHU
- vii. Mention the heat dissipation rate and specify technology used for cooling
- viii. Should have provision of electromagnetic locks with collision protection sensors
- ix. Integrated computer controlled automatic X-ray beam filtering

**2. Table:**

- i. Floor mounted table with carbon fibre table top, scratch resistant surface – give details
- ii. System should be motor driven, height adjustable with longitudinal and horizontal table top movements. Please specify the range of movements
- iii. Table should have angulations from longitudinal to head down positions (vertical +90 degrees to Trendelenburg -40 degrees)
- iv. Table should support patient weight up to 200 kgs with full range of movements
- v. System should have well-designed foot switch for releasing fluoroscopy and acquisition
- vi. System should have provision for collision protection
- vii. Table should have integrated bucky unit for flat panel general radiography with a grid ratio of at least 8:1 or 40 lines/cm
- viii. Intercom system must be available to communicate with patients
- ix. Provision for control of all table movements both locally at the table as well as remote controlled on the console
- x. Minimum table height should be range between 50-90 cm
- xi. Remote controlled compression cone
- xii. System should have head to toe coverage without repositioning the patient. Please specify table dimensions

**3. Direct digital imaging system for fluoroscopy:**

- i. Field of view of at least 40 x 40 cms or more

- ii. Collimator should be automatic and remote controlled
- iii. System should have real time optimization techniques to maintain constant brightness at the lowest allowable dose to the patient
- iv. Should have cine loop facility and last image hold facility during fluoroscopy
- v. Acquisition matrix should be of at least 1024 x 1024 at 10 bit rate
- vi. Digital fluoro system in standard continuous fluoroscopic operating mode from single image display to serial exposure with varying frame rates up to 15 fps in pulsed fluoroscopy mode, it should be at least 6 frames per second
- vii. Software for image subtraction (mask and contrast images) to be provided
- viii. Should be fitted with integrated dose measuring device
- ix. Image storage capacity of at least 50,000 images internal and 50,000 external to be provided in 1024X1024 matrix at 10-12 bits

**4. Detector system:**

- i. Single digital flat panel detector, using CsI scintillator with TFT convertor
- ii. Detector must be at least 40 x 40 cms or more
- iii. Image matrix size 2.5k x 2.5k pixels or more
- iv. Pixel size should be 150 micron or less
- v. Should allow centred/ de-centred collimation
- vi. DQE should be at least 60% at 0.05fps/mm.

**5. DSA functionality:**

- i. System should have direct digital subtraction angiography facility in 1024 x 1024/12 bit matrix
- ii. Acquisition should have peripheral digital angiography with stepping
- iii. Pixel shift, remasking, image summation, land marking, peak opacification for iodine and CO<sub>2</sub> contrast. Please provide details
- iv. Road mapping
- v. Quantification and evaluation software with automatic and interactive detection of lesions and stenosis quantification is desirable
- vi. Post processing techniques:
  - a. Gray scale processing
  - b. Temporal frame averaging
  - c. Ability to measure on digital image
  - d. B/W reversal
  - e. Image flip
  - f. Electronic shuttering and annotationPlease provide full details

**6. Injector interface:**

- i. Automatic high pressure contrast injection system with variable pressure limits for all types of angiographies
- ii. The injector is to be interfaced with the generator for synchronized contrast release
- iii. The system should be compatible with all commercially available injector syringes

- iv. The vendor should supply 200 syringes with tubings and T-connectors which are well within the expiry date in small batches as required by the department in the warranty period

**7. Image display system:**

- i. Two monochrome monitors of 19” of medical grade to be provided, one in examination room and one in console room with resolution of 1 mega pixel or more
- ii. Post-acquisition image processing, viewing, reprocessing, hard copy documentation and onward transmission should be possible while doing fluoroscopy or radiography.
- iii. Two additional 19” medical grade monitors to be provided for DSA

**8. Control console:**

- i. All system movements of table shall be controlled by the operator at the table in the examination room and also at the console. Remote console switches available at the console
- ii. The system should have facility for edge enhancement, positive/ negative display, windowing, contrast/ brightness, electronic shuttering, image/ pixel shifting, vertical and horizontal image reversal, and zoom functions
- iii. The system should have fast and direct access to all series, single images, in both examination (remote controlled) and console room
- iv. System should have angle/ distance measurement, image labelling and patient positioning facilities

**9. Image storage and transmission:**

- i. Hard disc memory capacity of 8000 images with online image storage capacity of at least 50000 images in 1024 x 1024 matrix at 10/ 12 bits on the main system disk
- ii. The systems should support recording of images on compact discs/ DVD
- iii. The system should be DICOM 3.0 (or higher version) ready (like send, receive, print, record on CD/DVD, acknowledge, etc.) for connectivity to any network, computer/ PC, etc. in DICOM format
- iv. Dynamic viewing of CD images, single frame step by step, fast forward and fast rewind
- v. Image transfer from digital system should be possible in background mode without affecting system operation
- vi. Vendor should connect this with existing LAN system and other laser cameras already existing in the department without any extra cost
- vii. System should be PACS/ HIS/ RIS interface ready

**10. Independent work station for post processing:**

- i. Post-processing workstation should have a high resolution, multiple display monitor of at least 19”
- ii. The workstation should have a graphics card built in and support all common DICOM functions
- iii. The monitor should have minimum 2 mega pixel resolution and have a capability of portrait and landscape arrangement
- iv. The processor should be of dual core technology or better
- v. RAM should be of minimum 4 GB
- vi. The workstation should have a DVD writer for writing images and USB port
- vii. The workstation software should support the following:
  - a) Patient list with capability to query/ search based on various criterions such as:

- 1) Name, ID number, date of examination, etc.
- 2) Features such as DICOM viewing, windowing, zoom, pan, magnify, annotate, mark, measure, reporting (including volume viewer or equivalent software)
- 3) Connectivity to DICOM printers with multiform options to be provided
- 4) The workstation should have provision to connect to external storage devices and DICOM servers

**11. Accessories:**

- i. One Dry chemistry, Multiport, multiple films (14"x 17", 11"x 14" and 8"x 10" sizes) camera with resolution of 500 DPI or more, DICOM ready and online. At least three size film trays should be active. The vendor should connect this camera with other existing cameras in the department of Radio-diagnosis.
- ii. Laser printer with scanner and photocopier of HP/ Canon/ Epson or equivalent make
- iii. DICOM software with fast speed DVD combo (reader and writer separately)
- iv. Lead glass 100 x 150 cm for console room
- v. Two light weight 'zero lead' aprons, two thyroid shields, gonadal shields (all sizes both for boys and girls)
- vi. Radiation protection flaps
- vii. Suitable UPS for complete system with 30Min backup
- viii. Cupboard for storage – two
- ix. Swivel chairs with arm rests of reputed make (Godrej or equivalent) – four
- x. Table with storage space – one
- xi. Examination stool – one
- xii. Footstep for patient – one
- xiii. Hand grip
- xiv. Emergency light – one
- xv. Wall fans – two
- xvi. Fire extinguisher system to be connected to central system by vendor
- xvii. Patient fixing belts and compression devices (for performing excretory urography)
- xviii. Wall mounted hangars for protective aprons and gonadal shields
- xix. View boxes (3 x 1) slim type 2 nos. to be supplied (LCD type)
- xx. Separate PC station to download images from DSA for teaching, conferencing, presentation related to the angio studies. The hard disk should have a storage capacity of 1 terabyte and should be loaded Windows 7 and Microsoft office 2010
- xxi. A 6-channel monitor for ECG, blood pressure, respiration, SpO<sub>2</sub> and NIBP pulse oximeter (Adult and pediatric BP cuffs)
- xxii. One ceiling suspended examination lamp

**12. Essential certification:**

- i. **Radiation safety certificate: the offered model must have a valid AERB certificate at the time of submission of tender**
- ii. **Quality certification: CE (Europe) and USA FDA**

**13. Upgrading requirement:**

- i. A free comprehensive software upgrade (compatible with the existing platform) guarantee for 10 years after installation

**14. Installation:**

- i. Bidder should assist the user for getting site AERB type approval and Hospital will provide all documentary support
- ii. All turnkey work proposed by the selected firm will require approval of Faculty of Department of Radio-diagnosis, RGSS hospital before implementation
- iii. A complete site preparation plan will be required to be submitted as a turnkey project. The vendor will be eligible to inspect the proposed site in Department of Radio-diagnosis, RGSS hospital
- iv. The cost of alteration and preparation in specified built in area on turnkey basis which will include civil, electrical and air conditioning is to be borne by the firm. Requirement of power and air conditioning must be clearly specified
- v. A state of the art firefighting system with alarm and smoke detectors to be installed and connected to main control of hospital
- vi. Internal finishes: flooring and skirting of branded antiskid ceramic tiles of reputable firm (option of epoxy flooring to be kept); walls – POP with plastic emulsion paint; GI powder coated ceiling and brick wall partition between radiography room and console with lead glass. Complete details for all these works including bill of quantities for civil and electrical works, load of air-conditioning with make and tonnage, etc. to be mentioned in the turnkey.
- vii. Lead lining of walls and doors as required
- viii. Changing room with powder coated aluminium section of required size

**15. General Instructions for the Vendor:**

- i. All tenders should be in two bids. The technical and price bid should be provided in two separate envelopes
- ii. ISO certification for services of medical devices must be submitted
- iii. Please note that all technical features, facilities and accessories mentioned in the tender document are standard requirements and hence, these should be offered as the standard feature. None of these should be offered as optional items.
- iv. In price bid, cost of locally supplied items must be quoted separately in Indian currency.
- v. Please respond to each specification in the same format and order as mentioned in the tender document and specify/ indicate the verification document form the product data sheet against each column.
- vi. Original product data sheets, complete manuals and other necessary documents should be provided. Photocopies of these documents or printouts of the email/web pages will not be accepted.
- vii. When required, information other than those in the data sheets should be provided as a separate document from the principals only and should refer to the specific sections being addressed. When standard vendor data sheet disagrees with the bid response (offer/compliance statement), clarification should accompany in the form of certificate from the principals only. In absence of this, the vendor data sheet will prevail for the purpose of evaluation and decision of the technical committee shall be binding on the supplier.



- viii. The vendor has to station one application specialist and service engineer at site for a period of **30 days** necessary to familiarize the medical and technical staff to the machine protocols and enable them to achieve fast and efficient service.

**Turnkey for Digital Radiography.**

**Turnkey works as per details mentioned below**

**TURNKEY SPECIFICATIONS:**

**General:**

- 8. The FLUROSCOPY unit isto be installed on turnkey basis.**
9. The vendor must take full responsibility for site preparation including civil, electrical, air-conditioning and fire safety work of the earmarked area, in consultation with the RGSSH.
10. The vendor must visit & assess the site before submitting their quote for the turnkey works and submit the certificate along with tender that the site is suitable for installation of equipment.
11. The vendor shall provide an accurate architectural and structural layout plan for housing the equipment. Logical workflow and safety norm should be adhered to. The layout plan should be made in consultation with the Director of the hospital.
12. The site works will be done as per approved plan to make it a homorganiccomplex.
13. During construction, minor modifications can be permitted by the Users/ Administrators of thehospital for more efficient utilization of space and resources.
14. The total area for the FLUROSCOPY UNIT is mentioned as under:-

FLUROSCOPY MACHINE WITH CONSOLE = Approx. 8000 x 4600 MM.

**The FLUROSCOPY Complex will comprise of various rooms like FLUROSCOPY Examination room, console room, reporting room, conference room, changing room, Recovery room, technician's room, electrical equipment and UPS room and any other required room for FLUROSCOPY facility.**

- 8. All the material used for all turnkey work shall be of reputed make only and shall be got approved by the department prior to utilization.**

**D. CIVIL WORKS:**

25. In the radiation areas all walls, doors, windows etc. to be Lead lined, to comply with there commendations of AERB / BARC for radiation safety.
26. Flooring  
Examination Room – Antistatic rolled PVC flooring.  
Other Rooms - Anti-static Vitrified Tiles with Digital Prints.
27. Walls Finishing -  
Exam Rooms & Waiting Area
  - a. Lacquered glass pasted on ply with wooden framework.
  - b. 8' x 4' Backlit artificial acrylic surface on one main wall with cloud/ stone finish.
  - c. Toilets & Pantry - Glazed Ceramic Tiles up to false ceiling.
  - d. Other Areas - Vitreous Ceramic Tiles up to false ceiling.
28. False Ceiling  
Exam Room – Gypsum Board with Designer Cove Lighting  
Other Rooms – Aluminium Metal Panel Grid false ceiling.

29. Floor trenches with block board covers finished with matching flooring to be provided for the cables in catheterization and Equipment rooms.
30. Plumbing & Sanitary - Complete plumbing & sanitary works to be provided for the Toilets, Pantry & Scrub Stations with all accessories (like basins, geysers, taps, WC etc.)
31. Medical Gases connection points to be provided in the radiology complex by the hospital. The same needs to be coordinated during the turnkey works.
32. All doors, windows, partitions, onsite furniture to be provided with high quality wood work or block boards with high gloss laminates. All these should have adequate locking mechanisms supplied with all accessories.
33. All the rooms in the complex will be signposted with stainless steel plates.
34. Sun-film and Venetian blinds be provided in all windows.
35. All the doors should be provided with the necessary fitting with hydraulic type door closures (Dorma make).
36. The main entrance gate at both ends to be provided of un-breakable toughened glass with additional metal grill doors for security.
37. The entrances to the Radiology Complex to be felt padded at the junction of both doors to avoid dust and provide insulation.
38. Suitably located, attached and common toilets to be provided.
39. Active and passive room shielding for magnetic, fringe field should be provided as per requirement of the equipment.
40. Flooring in all the areas will be non-slippery vitreous ceramic tiles.
41. In the toilets, glazed tiles will be used for Dado up to the ceiling. .
42. The Walls, glazed/ceramics tiles will be used for Dado up to the ceiling.
43. Floor trenches with block board covers will be provided for the cables.
44. The entrances to the FLUROSCOPY Complex to be felt padded at the junction of both doors to avoid dust and provide insulation.
45. False ceiling in all the areas will comprise of metal suspension system, performance fire proof aluminium panels with integrated acoustic lining.
46. Piped in anaesthesia gases/central oxygen supply will be provided by the Hospital. However, integration & co-ordination will be their responsibility
- 47. All fluorescent lights and smoke detectors to be accommodated/ integrated in the false ceiling.**
- 48. All the rooms in the complex will be signposted. Sun-film and Venetian blinds be put in all windows.**

**LIST OF APPROVED MAKES / BRANDS: - (CIVIL WORK)**

S#	DESCRIPTION	MAKES/BRANDS
1.	Ready mix concrete	L & T CONCRETE / J.K. LAKSHMI / ULTRATECH / KWIK MIX
2.	Grey cement 43 grade (OPC / PPC)	ACC / L & T / GUJRAT AMBUJA / VIKRAM / BIRLA / JK CEMENT / SHREE
3.	White cement	BIRLA WHITE / JK WHITE
4.	Reinforcement steel	SAIL / TISCO / RINL / IISCO
5.	Flush door shutters	CENTURY / KITPLY / NATIONAL / ANCHOR
6.	PVC door shutter	RAJSHREE / SINTEX PLAST / DURO PLAST
7.	Ply / commercial board	CENTURY / KITPLY / NATIONAL / ANCHOR
8.	Prelaminated board	ANCHOR / NOVAPAN / CPL GLUNZ /

		KITLAM
9.	Sunmica	FORMICA / KITMICA / DECOLAM
10.	Pressed steel frame / steel windows	SAN HARVIC, STEELMAN INDUSTRIES, PD INDUSTRIES, MEATL WINDOWS, CHANDNI INDUSTRIES, GANPATI UDYOG (RAJPURA)
11.	Aluminium / door fittings	ARGENT / CLASSIC / UNIVERSAL
12.	Mortise lock	GODREJ / HARRISON / PLAZA
13.	Door closure (Hydraulic)	UNIVERSAL / RITZ / EVEREST
14.	Helical and double action spring	RITZ / HERYKA / AVON
15.	Adjustable friction window stay	EARL BIHARI PVT. LTD. (EBCO) OR ANY OTHER BIS APPROVED PRODUCT
16.	Wall tiles	JOHNSON / SOMANI PILKINGSTON / ORIENT / KAJARIA / SUNHEART
17.	Ceramic Floor Tiles, Vitrified Tiles	KAJARIA / JOHNSON / NITCO / SUNHEART
18.	Precast Concrete Tiles (Terrazo / plain / chequered), Paver Blocks, PCC Kerbs & Channels.	NTC (PKL) / PAVING STONE / NITCO
19.	Vinyl flooring	TUSKAR / WONDER FLOOR / LG / ARMSTRONG
20.	Wooden flooring	ARMSTRONG / PERGO
21.	Float glass	MODIGUARD / TRIVENI / SAINT GOBIN / ATUL
22.	Paint (Synthetic Enamel / Plastic emulsion / Anti Fungal)	GOODLASS NEROLAC / ASIAN / BERGER / ICI
23.	Oil bound distemper	GOODLASS NEROLAC / ASIAN / BERGER / ICI
24.	Wood & steel primer	GOODLASS NEROLAC / ASIAN / BERGER / ICI
25.	Water proofing compound	CICO / PIDILITE / ROFEE / DR. BECK / DURASEAL
26.	Aluminium sections	INDALCO / HINDALCO / JINDAL
27.	Tile adhesive	PIDILITE / SIKA / FOSROC / BAL ENDURA
28.	Glass mosaic tiles	PIXEL GLASS / CORAL / ITALIA / BISAZZA / PALLADIO
29.	False ceiling: Mineral Fibre  Gypsum  Wooden  Metallic	USG / ARMSTRONG / DAIKEN / DEXUNE GYPSBOARD / SAINT GOBAIN / LAFARGE / ARMGYP KITPLY / ANCHOR / ARMSTRONG WOODWORKS LLYOD / ARMSTRONG / LUXLON / DEXUNE
30.	Silicon paint	PIDILITE / CICO / ROFF / CHOKSI
31.	Wall putty	JK / BIRLA / ASIAN
32.	Dash / anchor fasteners	HILTI / FISCHER
33.	Nuts / bolts & screws	GKW / ATUL

34.	Backer rod	SUPREME OR ANY OTHER BIS APPROVED PRODUCT
35.	Sealant	BASF INDIA / SIKA / FOSROC
36.	RCC pipe & Collars	ISI MARKED OR ANY OTHER BIS APPROVED PRODUCT
37.	G.S. Sheet (Corrugated)	TATA / SAIL / NIPPON

**E. PLUMBING WORKS:-**

7. Plumbing works has to be carried out as per the site requirement.
8. The waste pipes and accessories should be of centrifugally cast iron of ISI make and the connection of existing main hole in the public health shaft should be done.
9. All water pipes should be galvanized iron of Tata / Jindal make and fitting should be of SUW /UF /UNIK make.
10. The grafting should be of brass chrome plated.
11. All C.P fitting shall be of Jaguar or higher makes.
12. Taps above washbasin, soap dispensers should be with provided with sensors.

**LIST OF APPROVED MAKES / BRANDS (PLUMBING WORK):-**

S#	DESCRIPTION	MAKES/BRANDS
1.	Vitreous China Ware (1 <sup>st</sup> Class quality)	PARRYWARE / HINDUSTAN VITREOUS / CERA
2.	Plastic seat cover	PAARYWARE / COMMANDER / HINDWARE
3.	C.P. Fittings / Accessories	ESSCO / EBONY / JAGUAR
4.	PTMT fittings	PRAYAG / POLYTUF OR ANY OTHER BIS APPROVED PRODUCT
5.	Flush valve	JAGUAR / JAL / ESS ESS
6.	Stainless steel sink	COBRA / NEEL KANTH / AMC / NIRALI
7.	Soil waste pipes & fittings Centrifugal cast spun pipe  Sand cast iron pipes  Centrifugal cast spun LA pipe	NECO OR ANY OTHER BIS APPROVED PRODUCT NIF / RIF OR ANY OTHER BIS APPROVED PRODUCT ELECTRO STEEL / KESORAM
8.	GI & MS pipes	TATA / JINDAL / BST
9.	PVC water supply pipes & fittings	NOCIL / CHEMPLAST / WAVIN / SUPREME / DIZAYN / DIPLAST
10.	GI fittings (Malleable cast iron)	UF / SFW / UNIK
11.	Gun metal valve (Full way, check & globe valve)	LEADER / SANT / KILBURN
12.	Butter fly valve	CASTLE / C & R / ADVANCE / IVC / AUDCO
13.	C.I. double flanged sluice valve & check valve	IVC / KIRLOSKAR / LEADER

14.	C.I. double flanged non return valve	GEETA / KIRLOSKAR / C & R / AUDCO / CASTLE / ADVANCE
15.	Foot valve	LEADER / IVC / KIRLOSKAR
16.	C.I. Manhole cover & CI grating	RIF / ADHUNIK / BC
17.	Bib & stop cocks (Brass)	KPR / SANT / VIF
18.	Mirror glass	MODI GUARD / ATUL / GOLDEN FISH
19.	Insulation hot water pipes mineral wool)	LAPINUS OR ANY OTHER BIS APPROVED PRODUCT
20.	Bed pan sink	PAMINI OR ANY OTHER BIS APPROVED PRODUCT
21.	Elbow action surgical mixer. Taps & bed pan sink accessories	VIJAY OR ANY OTHER BIS APPROVED PRODUCT
22.	PVC tanks	DIPLAST / SINTEX / RAUNAQ
23.	Stone ware pipe & G.T.	PERFECT / CHANDIGARH CERAMICS / HIND
24.	PVC plumbing pipes/fittings	NOCIL / CHEMPLAST / WAVIN / SUPREME / DIAZYN / DIPLAST
25.	Ferrules	DHAWAN SANITARY UDYOG (PRIMA) OR ANT OTHER BIS APPROVED PRODUCT

#### **F. ELECTRICAL WORK:**

24. A suitable Mains Power panel to be provided for the entire complex. The main input cable shall be provided by the hospital to the Electrical room.
25. Adequate safety measures will be incorporated in the electrical power supply system.
26. The use of earth leakage circuit breakers will be required. Switches, interlock devices and warning light / existing light is to be taken into the planning.
27. Dedicated isolated Earthing stations (at least 12 Nos.) to be provided for the complex.
28. The entire complex to be lit by reputed make (Philips, GE, Osram, Havells) light fixtures.
29. Dimmer controlled incandescent light fixtures are to be provided in the examination rooms and console rooms.
30. All the electric wiring (copper), switches, sockets, plugs, MCBs etc are to be Havells, Romex, Polycab wire PVC insulated, Finolex, TP-Link AV200 and as per ISI standards.
31. Different parts of the complex to have separate wiring for light and power circuit through MCBs of suitable capacity.
32. EPABX wiring (IP Phone LAN based) to be provided for the Radiology complex.
33. Fiber Optic cabling for data communication to be provided in the Radiology complex; and need to be hooked with hospital network.
34. Fire Safety: A Fire Alarm system of reputed make to be provided in the entire Radiology complex. The system to be hooked with the Hospital Fire Alarm system.
35. Suitable number of hand-held fire extinguishers to be provided.
36. Closed circuit cameras (CCTV system) to be installed in the Radiology.
37. A music system with speakers to be provided in the Radiology complex.
38. Switch & socket (modular type) should be MK/North West/ Mosaic (Legrand).
39. Energy efficient Fluorescent light fittings should be provided of Philip/Wipro/GE/ Bajaj.
40. General lights should be of mirror optic reflector type of Philips/ Wipro / GE/Cromptom make.
41. Exit signboard, Emergency lights to be provided (Legrand/ Philips make).
42. Power cables should be of copper: Havell's / Poly cab/ CCI/RR cables.
43. Main electrical panel make: EMCO / International Switch Gears / Bharat Electrical.
44. Dimmer controlled incandescent light fixtures are to be provided in the examination rooms and console room.

45. All the computers along with peripherals light points, fire alarm system, EPABX and view boxes to be supplied with the UPS power.
46. The following information needs to be provided to the hospital:-
  - f. Electrical load requirement of the equipment.
  - g. Electrical load requirement of air-conditioning plant.
  - h. General electrical loads and complete wiring diagram.
  - i. Two sets of plan drawing and panel drawing.
  
40. In FLUROSCOPY Complex, all required equipments and accessories are to be connected to the supplied UPS. Centralized UPS is available. Firm to give local details. One point supply should be provided.
41. Dimmer controlled incandescent light fixtures are to be provided in the Magnet room and console room.
42. All the electric Wiring (copper), switches, sockets, plugs, MCBs etc are to be reputed make of rated capacity. Separate DB to be provided for light and power.
43. Different parts of the complex will have separate wiring for light and power circuit through MCBs of suitable capacity.
44. Adequate safety measures will be incorporated in the electrical power supply system.
45. Dedicated isolated earthing is to be provided for the equipments.
46. Audio call bell with intercom and remote locking/unlocking facility provided at the main door of the Complex.
47. Fire Safety measure: a fire alarm system of reputed make with smoke detectors, the above and suitable fire extinguishers to be provided.
48. Closed circuit cameras to be installed in the FLUROSCOPY complex and a parallel feed has to be provided in the concerned Doctors room with DVR and storage facility for 15 days.
49. The firms shall be required to specify the total load requirements for the entire equipments the air-conditioning units, room lighting and for the accessories if any. The load will be provided by the institute to the distribution panel. The distribution's panel should have switch gear of Siemens/L &T/ Schneider /Legrand makes and shall be provided by the vendor. (Any specific requirement of any kind if required shall be the responsibility of the tendering firm).
50. The electrical work will include wiring, different lights and main switch fittings. The special ceiling light will be required particularly in the equipments room, which should have long life and should not be affected by frequent on and off.
51. The electrical work shall include the following:
52. Wiring- the wires shall be of copper of different capacity as per the load Switches light and power points should be of modular type General - LED light fixture of suitable wattage to have prescribed illumination as per standards/NBC to be provided. Fittings shall be down lighter and 2"x2" as required.
53. Telephone cables should be of FINOLEX/R.R. cables.
54. Electrical load of the system to be added as per the tender/brand of the equipment
55. FAS: Photoelectric type of detectors to be provided. Small panel to be provided. Provision for integration with main panel to be provided. Make: Notifier/ Johnson/Ansul/ Honeywell.

**G. Air Conditioning:-**

**The FLUROSCOPY complex Area is currently Air-Conditioned with the central Air conditioning plant of the building. However, suitable additional or standby air conditioning VRV/VRF type of 5 star rating and as per the requirement of the equipments for maintaining the 18 – 22 degree Celsius temperature may have to be done by company with the following specifications.**

- ix. He has to provide AC only for FLUROSCOPY machine, rest will be in scope of Hospital.
- x. Cooling arrangement will be given technical details along with catalogue no. and makes and it is to be issued that machine is provided with equal stand by capacity. The chiller units shall be of air cooled type and will have automatic charge over arrangement in case of failure of one unit. Suitable alarm audio/video arrangement shall be provided for operation of AC units.
- xi. All weather AC with cooling, heating and humidity control capabilities is to be provided.
- xii. Air flow in various rooms should be adjustable to have some degree of control over temperature in different rooms of the complex.
- xiii. The AC units(s) should be microprocessor controlled for adequate temperature control.
- xiv. The wall type split air-conditioning to be provided for standalone working in workstation room, console room, doctors room etc.
- xv. Suitable De-humidifiers to be provided in the equipment sections as required.
- xvi. The total A/C capacity being offered for the complete centre to be clearly mentioned.

Make: - Hitachi, Diakin.

**To maintain uniformity for all vendors, a minimum of 20 Tons of AC including standby capacity should be quoted**

**E. Furniture:-**

- 4. The readymade furniture supply items should be of Godrej or Durian make.
- 5. Onsite wooden furniture should be customized to room requirements and made in block board with Korean laminate finishes designed in modular storage pattern.
- 6. The color and shades of the furniture to be approved by the user department.

**H. Schedule of Furniture:-**

<b>Room Wise Furniture List (Radiology Complex).</b>				
<b>S#</b>	<b>Room's Name</b>	<b>Particulars of the Item</b>	<b>Unit</b>	<b>Qty</b>
1	Examination Room	10'x2'6"x1'10" Modular storage Counter with Granite Top	No.	2
2		6'x4'x1'10" Modular Cupboard for Storage	No.	4
3		Drug / Medicine Trolley	Nos.	1
4		4'x2'X1'10" Wall mount Cupboard	Nos.	3
5	Console Room FLUROSCOPY	Workstation Table for Radiology Systems & Controls	No.	4
6		Executive Reclining Chairs with Castors	No.	8
7		4'x2'X1'10" Wall mount Cupboard	No.	2
8		Thin Film LED Viewer (2 Films)	Nos.	2

**F. DEFECT LIABILITY:**

- 2. The works to be executed shall be guaranteed for a period of 2 years from the date of commissioning against any defective material / workmanship.

3. The entire project of commissioning of the equipment & turnkey works should be completed within 6 months. Total project duration should not exceed 6 months (Turnkey and equipment installation) from the date of opening of the LC.

**Sl. No. 33**

**ACT Machine**

1. ACT machine single test well
2. 2-point clot detection facility to get accurate.
3. Result: one button operation – easy to use
4. Test: whole blood activated clotting time(ACT), accepts ACTALYKE. ACT tube with celite, kaoline, glass bead activators; MAX-ACT tube with blended activators; all internationaltechnidynehemochron tubes.
5. Measurement range: 0-1500 seconds
6. Incubation temperature; 36.5-37.5 degree Celsius (97.7-99.5-degree F)
7. Display: 3.2 X 1” (8 X 2.54 cm)
8. Dimensions: 15.5X 12.2 X 16 cm (6.1” W X 4.8” H X 6.3” L)
9. Environment: 15-30 degree Celsius.
10. Data transfer capability: printer option available for hard copy.
11. It should be easy to operate with re-chargeable battery back-up.
12. Should be sensitive to different levels of Heparin in different condition.
13. Should adopt commonly available ACT/Heparin Estimation Machines test tubes and should work at low sample volume.
14. Should be fitted with the heating system and should have alarm facilities.
15. Should be provided with 3000 ACT test tubes.

**Sl. No. 34**

**Cell Saver**

1. Device should be able to process of blood cells continuously passing through a separation chamber with distinct compartment for plasma separation and washing; no leftover blood, no partial filled bowl.
2. Technical sub specifications: spinning centrifuge, build in programming, build in safety features, sound volume control, automatic protocols, setup guide.
3. Device should have fully automatic programs from pediatric to emergency application; with reliable quality of transfusion product.
4. Device should be able to do 100% fat elimination.



5. Device should be able to achieve Hematocrit >60% independent upon processing speed and blood volume processed.
6. Device should be able to achieve Plasma elimination approximately 98% (High Quality Wash Program) to 90%.
7. Semiautomatic separation process with high platelet recovery, independent upon operator interventions and blood volume processed.
8. Device should have more than different wash Program Options for different cases.
9. Power input to be 180-270 VAC, 50 Hz fitted with Indian plug.
10. Suitable UPS of rating with spike protection, voltage regulation and for 60 minutes back up.
11. Device should have 2 Different Transfer Program for Blood Transfer (190-350ml/Min)
12. Device Should have Red Cell Pump flow (0-190ml/min), Shed blood Pump (0- 350ml/min), Washing Solution Pump (0-400ml/min)
13. Device Should be able to work under operating condition of 15-40 Degree Celsius Operating condition and relative humidity of 15-90%.
14. Data Transfer facility.
15. Device Should have cabinet Weight of 65 kg (HX WXL) = 40cm X 40cm X 70cm or more.
16. Should be FDA/CE/UL or BIS approved. Manufacturer/ supplier should have ISO certification for quality standards.
17. 30 disposable accessories should be provided with the equipment. All consumables required for installation and standardization of system to be given free of cost.
18. User/ technical/maintenance manual to be supplied in English. List of important spare parts and accessories with their part number and costing to be supplied. Log book with instructions for daily, weekly, monthly, quarterly maintenance check list. The job description of the hospital technician and company service engineer should be clearly spelt out.
19. Comprehensive training for lab staff and supportive service till familiarity with the system.
20. Five Year warranty with AMC later on to 5 years.

## GENERAL TECHNICAL SPECIFICATIONS

### GENERAL POINTS:

1. Warranty:

- a) Five years Comprehensive Warranty as per Conditions of Contract of the TE document for complete equipment (including Batteries for UPS, other vacuumatic parts wherever applicable) from the date of installation, commissioning and Turnkey Work from the date of satisfactory installation, commissioning, trial run & handing over of equipment to Hospital/Institution/Medical College.
- b) 95% up time Warranty of complete equipment with extension of Warranty period by double the downtime period on 24 (hrs) X 7 (days) X 365 (days) basis.
- c) All software updates should be provided free of cost during Warranty period.

2. After Sales Service:

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

3. Training:

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

4. Annual Comprehensive Maintenance Contract (CMC) of subject equipment with Turnkey:

- a) The cost of Comprehensive Maintenance Contract (CMC) which includes preventive maintenance including testing & calibration as per technical/ service /operational manual of the manufacturer, labour and spares, after satisfactory completion of Warranty period may be quoted for next 5 years on yearly basis for complete equipment (including Batteries for UPS, other vacuumatic parts wherever applicable) and Turnkey (if any). The supplier shall visit each consignee site as recommended in the manufacturer's technical/ service /operational manual, but at least once in six months during the CMC period
- b) The cost of CMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
- c) Cost of CMC will be added for Ranking/Evaluation purpose. The same will be taken at Net Present Value with a 10% discounting factor each year.
- d) The payment of CMC will be made on six monthly basis after satisfactory completion of said period, duly certified by end user on receipt of bank guarantee for 2.5 % of the cost of the equipment as per Section XV valid till 2 months after expiry of entire CMC period.
- e) There will be 95% uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.
- f) During CMC period, the supplier is required to visit at each consignee's site at least once in 6 months commencing from the date of the successful completion of warranty period for preventive maintenance of the goods.
- g) All software updates should be provided free of cost during CMC.
- h) Failure of the above [4. e) to 4. g)] by the supplier, may lead to the forfeiture of the Bank Guarantee for Annual CMC.
- i) The payment of CMC will be made as stipulated in GCC Clause 21.

**Turnkey:**

Turnkey is indicated in the technical specification of the respective items, wherever required. The Tenderer shall examine the existing site where the equipment is to be installed, in consultation with HOD of Hospital/Institution/Medical College concerned. Turnkey details of each Hospital/Institution/Medical College are given at the end of Technical Specification. The Tenderer to quote prices indicating break-up of prices of the Machine and Turnkey Job of each Hospital/Institution/Medical College. The Turnkey costs may be quoted in Indian Rupee will be added for Ranking Purpose.

The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

The Turnkey Work should completely comply with AERB requirement, if any.

- Note 1:** Tenderer's attention is drawn to GIT clause 18 and GIT sub-clause 11.1 A (iii). The tenderer is to provide the required details, information, confirmations, etc. accordingly failing which it's tender is liable to be ignored.
- Note 2:** General: Bidders are requested to make sure that they should attach the list of equipment for carrying out routine and preventive maintenance wherever asked for and should make sure that Electrical Safety Analyzer/ Tester for Medical equipment to periodically check the electrical safety aspects as per BIS Safety Standards IS-13540 which is also equivalent to IEC electrical safety standard IEC-60601 is a part of the equipment. If the Electrical Safety Analyzer/Tester is not available they should provide a commitment to get the equipment checked for electrical safety compliance with Electronic Regional Test Labs / Electronics Test and Development Centres across the country on every preventive maintenance call.
- Note 3:** OPTIONAL ITEMS: Bidders are requested to quote for all the available options as asked in the bidding document with reasonable pricing. However the pricing for optional items will not be considered for price comparison for ranking purpose. If the firm has not quoted for any optional item (except the items of turnkey) their offer will be treated as TECHNICALLY RESPONSIVE if otherwise meeting the specification.
- Note 4:** Supplier should provide adequate training of personnel and supply only non-locked open software and standard interface interoperability conditions for networked equipment in hospital management information system (HMIS)
- Note 5:** Training shall be given to the doctors, nurses, operators with proper training material, adequate operating manual & preliminary troubleshooting.

## **Section – VIII**

### **Quality Control Requirements**

(Proforma for equipment and quality control employed by the manufacturer(s))

Tender Reference No.

Date of opening

Time

Name and address of the Tenderer:

Note: All the following details shall relate to the manufacturer(s) for the goods quoted for.

- 01 Name of the manufacturer
  - a. full postal address
  - b. full address of the premises
  - c. telegraphic address
  - d. telex number
  - e. telephone number
  - f. fax number
  
- 02 Plant and machinery details
- 03 Manufacturing process details
- 04 Monthly (single shift) production capacity of goods quoted for
  - a. normal
  - b. maximum
  
- 05 Total annual turn-over (value in Rupees)
- 06 Quality control arrangement details
  - a. for incoming materials and bought-out components
  - b. for process control
  - c. for final product evaluation
- 07 Test certificate held
  - a. . type test
  - b. . BIS/ISO certification
  - c. . any other
- 08 Details of staff
  - a. technical
  - b. skilled
  - c. unskilled

**Signature and seal of the Tenderer**

## **Section – IX**

### **Qualification Criteria**

1. The tenderer must be a manufacturer. In case the manufacturer does not quote directly, they may authorise their authorized agent as per proforma of Manufacturer authorization form as given in the tender enquiry document to quote and enter into a contractual obligation.
2. (a) The Manufacturer should have supplied and installed in last **Five** years from the date of Tender Opening, **at least 100% of the quoted quantity** of the similar equipment meeting major parameters of technical specification which is functioning satisfactorily anywhere in India. (For equipment which are consumable in nature, as identified in the list of requirement, proof of delivery/acceptance by consignee/purchaser shall also be considered acceptable)
2. (b) The Tenderers quoting as authorized representative of the manufacturer meeting the above criteria 2 (a) should have executed **at least one contract in the last five years** from the date of tender opening of similar equipment meeting major parameters of technical specification which is functioning satisfactorily, anywhere in India **of the same manufacturer.**

#### **Note:**

1. The tenderer shall give an affidavit as per Section XIX of tender enquiry.
2. In support of 2 (a) & 2 (b), the Tenderer shall furnish Performance statement in the enclosed Proforma 'A'.

The manufacturer ( Tenderer) / Indian Agent shall furnish Satisfactory Performance Certificate in respect of above, duly translated in English and duly notarized in the country of origin, alongwith the tender.

3. The Tenderer shall furnish a brief write-up, packed with adequate data explaining and establishing his available capacity/capability (both technical and financial) to perform the Contract (if awarded) within the stipulated time period, after meeting all its current/present commitments. The Tenderer shall also furnish details of Equipment and Quality Control in the enclosed Section VIII.
4. Notwithstanding anything stated above, the Purchaser reserves the right to assess the Tenderer's capability and capacity to perform the contract satisfactorily before deciding on award of Contract, should circumstances warrant such an assessment in the overall interest of the Purchaser.
5. The Purchaser reserves the right to ask for a free demonstration of the quoted equipment at a pre determined place acceptable to the purchaser for technical acceptability as per the tender specifications, before the opening of the Price Tender.

**PROFORMA 'A'**  
**PROFORMA FOR PERFORMANCE STATEMENT**

(For the period of last five years)

Tender Reference No. : \_\_\_\_\_

Date of opening : \_\_\_\_\_

Time : \_\_\_\_\_

Name and address of the Tenderer : \_\_\_\_\_

Name and address of the manufacturer : \_\_\_\_\_

Order placed by (full address of Purchaser/ Consignee)	Order number and date	Description and quantity of ordered goods and services	Value of order (Rs.)	Date of completion of Contract		Remarks indicating reasons for delay if any	Have the goods been functioning Satisfactorily (attach documentary proof)**
				As per contract	Actual		
1	2	3	4	5	6	7	8

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

**Signature and seal of the Tenderer**

**\*\* The documentary proof will be a certificate from the consignee/end user with cross-reference of order no. and date in the certificate along with a notarized certification authenticating the correctness of the information furnished.**

**Section – X**  
**TENDER FORM**

Date \_\_\_\_\_

To

---

**Head (P&CD), HLL Lifecare Limited, Procurement and Consultancy Division, B-14 A, Sector - 62, Noida -201307, Uttar Pradesh**

Ref. Your TE document No. \_\_\_\_\_ dated \_\_\_\_\_

We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. \_\_\_\_\_, dated \_\_\_\_\_ (*if any*), the receipt of which is hereby confirmed. We now offer to supply and deliver \_\_\_\_\_ (*Description of goods and services*) in conformity with your above referred document for the sum mentioned in the price bid uploaded online, made part of this tender.

If our tender is accepted, we undertake to supply the goods and perform the services as mentioned above, in accordance with the delivery schedule specified in the List of Requirements.

We further confirm that, if our tender is accepted, we shall provide you with a performance security of required amount in an acceptable form in terms of GCC clause 5, read with modification, if any, in Section - V – “Special Conditions of Contract”, for due performance of the contract.

We agree to keep our tender valid for acceptance as required in the GIT clause 20, read with modification, if any in Section - III – “Special Instructions to Tenderers” or for subsequently extended period, if any, agreed to by us. We also accordingly confirm to abide by this tender up to the aforesaid period and this tender may be accepted any time before the expiry of the aforesaid period. We further confirm that, until a formal contract is executed, this tender read with your written acceptance thereof within the aforesaid period shall constitute a binding contract between us.

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

We confirm that we do not stand deregistered/banned/blacklisted by any Govt. Authorities.

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

---

**(Signature with date)**

---

**(Name and designation) Duly authorised to sign tender for and on behalf of**

**SECTION – XI PRICE SCHEDULE****A) PRICE SCHEDULE FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN LOCATED WITHIN INDIA**

1	2	3	4	5							6
Sl. No.	Brief Description of Goods	Country of Origin	Quantity (Nos.)	Price per unit (Rs.)							Total Price (at Consignee Site) basis (Rs.)  4 x 5(g)
				Ex - factory/ Ex - warehouse /Ex-showroom /Off - the shelf (a)	Packing and Forwarding charges (b)	Excise Duty (if any) [%age & value] (c)	Sales Tax/ VAT(if any) [%age & value] (d)	Transportation, Insurance for a period including 3 months beyond date of delivery, loading/ unloading and Incidental costs till consignee's site (e)	Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site (f)	Unit Price (at Consignee Site) basis (g) =a+b+c+d+e+f	

Total Tender price in Rupees: \_\_\_\_\_

In words: \_\_\_\_\_

**Note: -**

1. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
2. The charges for Annual CMC after warranty shall be quoted separately as per Section – XI – Price Schedule C

Name \_\_\_\_\_

Business Address \_\_\_\_\_

Place: \_\_\_\_\_

Signature of Tenderer \_\_\_\_\_

Date: \_\_\_\_\_

Seal of the Tenderer \_\_\_\_\_



**B) PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD**

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

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

Total Tender price in foreign currency: \_\_\_\_\_

In words: \_\_\_\_\_

**Note: -**

1. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
2. The charges for Annual CMC after warranty shall be quoted separately as per Section – XI – Price Schedule C
3. The Tenderer will be fully responsible for the safe arrival of the goods at the named port of entry in good condition as per terms of CIP as per INCOTERMS, if applicable
4. Custom duty @ 16.27% and 2% C&F charges will be added to the CIP price to arrive at the DDP price for evaluation purpose.

**Indian Agent:**

**Indian Agency Commission (included in FOB price) - \_\_\_\_% of FOB**

**Signature of Tenderer** \_\_\_\_\_

**Name** \_\_\_\_\_

**Business Address** \_\_\_\_\_

**Signature of Tenderer** \_\_\_\_\_

**Seal of the Tenderer** \_\_\_\_\_

**Place:** \_\_\_\_\_

**Date:** \_\_\_\_\_

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

1	2	3	4					5
Sl. No.	BRIEF DESCRIPTION OF GOODS	Qty. (Nos.)	Annual Comprehensive Maintenance Contract Cost for Each Unit year wise*.					Total Annual Comprehensive Maintenance Contract Cost for 5 Years [3 x (4a+4b+4c+4d+4e)]
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
			a	b	c	d	e	

\* After completion of Warranty period

**NOTE:-**

1. In case of discrepancy between unit price and total prices, THE UNIT PRICE shall prevail.
2. The cost of Comprehensive Maintenance Contract (CMC) which includes preventive maintenance including testing & calibration as per technical/ service /operational manual, labour and spares, after satisfactory completion of Warranty period may be quoted for next 5 years on yearly basis for complete equipment and Turnkey (if any).
3. The cost of CMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
4. Cost of CMC offered will be added (at a discounted rate of 10% per year) for Ranking/Evaluation purpose.
5. The payment of CMC will be made as per clause GCC clause 21.1 (D).
6. The uptime warranty will be 95% on 24 (hrs) X 7 (days) X 365 (days) basis or as stated in Technical Specification of the TE document.
7. All software updates should be provided free of cost during CMC period.
8. The stipulations in Technical Specification will supersede above provisions
9. The supplier shall keep sufficient stock of spares required during Annual Comprehensive Maintenance Contract period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.

Place: \_\_\_\_\_

Date: \_\_\_\_\_

**Name** \_\_\_\_\_  
**Business Address** \_\_\_\_\_  
**Signature of Tenderer** \_\_\_\_\_  
**Seal of the Tenderer** \_\_\_\_\_

**D) PRICE SCHEDULE FOR TURNKEY**

<b>Sl. No.</b>	<b>BRIEF TURNKEY DESCRIPTION OF GOODS</b>	<b>CONSIGNEE CODE</b>	<b>Turnkey price</b>

**Note: -**

1. The cost of Turnkey as per Technical Specification (Section VII) may be quoted on lump sum along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
2. Cost of Turnkey will be added for Ranking/Evaluation purpose.
3. The payment of Turnkey will be made as per clause GCC clause 21.1 (c).
4. The stipulations in Technical Specification will supersede above provisions

Name \_\_\_\_\_

Business Address \_\_\_\_\_

Signature of Tenderer \_\_\_\_\_

Seal of the Tenderer \_\_\_\_\_

Place: \_\_\_\_\_

Date: \_\_\_\_\_

**SECTION – XII  
QUESTIONNAIRE**

**Fill up the Section XX – Check List for Tenderers and enclose with the Tender**

1. The tenderer should furnish specific answers to all the questions/issues mentioned in the Checklist. In case a question/issue does not apply to a tenderer, the same should be answered with the remark “not applicable”.
2. Wherever necessary and applicable, the tenderer shall enclose certified copy as documentary proof/ evidence to substantiate the corresponding statement.
3. In case a tenderer furnishes a wrong or evasive answer against any of the question/issues mentioned in the Checklist, its tender will be liable to be ignored.

**SECTION – XIII**

**BANK GUARANTEE FORM FOR EMD**

Whereas \_\_\_\_\_ (hereinafter called the “Tenderer”) has submitted its quotation dated \_\_\_\_\_ for the supply of \_\_\_\_\_ (hereinafter called the “tender”) against the purchaser’s tender enquiry No. \_\_\_\_\_ Know all persons by these presents that we \_\_\_\_\_ of \_\_\_\_\_ (Hereinafter called the “Bank”) having our registered office at \_\_\_\_\_ are bound unto \_\_\_\_\_ (hereinafter called the “Purchaser) in the sum of \_\_\_\_\_ for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_. The conditions of this obligation are:

- 1) If the Tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- 2) If the Tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
  - fails or refuses to furnish the performance security for the due performance of the contract or
  - fails or refuses to accept/execute the contract or
  - if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged

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

This guarantee will remain in force for a period of at least forty-five days beyond the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

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

.....  
Name and designation of the officer

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

**SECTION – XIV**

**MANUFACTURER’S AUTHORISATION FORM**

Head (P&CD),  
HLL Lifecare Limited, Procurement and Consultancy Division  
B-14 A, Sector -62, Noida -201307, Uttar Pradesh

Dear Sir,

Ref: Your TE document No \_\_\_\_\_ dated \_\_\_\_\_

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

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

We further confirm that no supplier or firm or individual other than Messrs. \_\_\_\_\_ (*name and address of the above agent*) is authorised to submit a tender, process the same further and enter into a contract with you against your requirement as contained in the above referred TE documents for the above goods manufactured by us.

We also hereby extend our full warranty, CMC as applicable as per clause 15 of the General Conditions of Contract, read with modification, if any, in the Special Conditions of Contract for the goods and services offered for supply by the above firm against this TE document.

We also hereby confirm that we would be responsible for the satisfactory execution of contract placed on the authorised agent

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

Yours faithfully,

[*Signature with date, name and designation*]

for and on behalf of Messrs \_\_\_\_\_

[*Name & address of the manufacturers*]

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

2. *Original letter may be sent.*

**SECTION – XV**

**BANK GUARANTEE FORM FOR PERFORMANCE SECURITY/ CMC SECURITY**

The Dean/ Director/ Medical Superintendent  
(in the name of concerned Institution with its address)

WHEREAS \_\_\_\_\_ (Name and address of the supplier) (Hereinafter called “the supplier”) has undertaken, in pursuance of contract no \_\_\_\_\_ dated \_\_\_\_\_ to supply (description of goods and services) (herein after called “the contract”).

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognised by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of. \_\_\_\_\_ (Amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

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

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

This guarantee shall be valid up to 66 (sixty six) months from the date of Notification of Award i.e. up to ----- (indicate date)

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

.....  
Name and designation of the officer

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

**SECTION – XVI**

**CONTRACT FORM - A**

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

(Address of the Purchaser's/Consignee's office issuing the contract)

Contract No \_\_\_\_\_ dated \_\_\_\_\_

**This is in continuation to this office's Notification of Award No \_\_\_\_\_ dated \_\_\_\_\_**

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

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

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

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

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

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



Any other additional services (if applicable) and cost thereof: \_\_\_\_\_

Total value (in figure) \_\_\_\_\_ (In words) \_\_\_\_\_

- (ii) Delivery schedule
- (iii) Details of Performance Security
- (iv) Quality Control
  - (a) Mode(s), stage(s) and place(s) of conducting inspections and tests.
  - (b) Designation and address of purchaser's inspecting officer
- (v) Destination and despatch instructions
- (vi) Consignee, including port consignee, if any

6. Warranty clause

7. Payment terms

8. Paying authority

\_\_\_\_\_  
**(Signature, name and address  
of the Purchaser's/Consignee's authorised official)  
For and on behalf of** \_\_\_\_\_

Received and accepted this contract

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

For and on behalf of \_\_\_\_\_

(Name and address of the supplier)

\_\_\_\_\_  
(Seal of the supplier)

Date: \_\_\_\_\_

Place: \_\_\_\_\_

**CONTRACT FORM – B****CONTRACT FORM FOR ANNUAL COMPREHENSIVE MAINTENANCE CONTRACT**

Annual CM Contract No. \_\_\_\_\_ dated \_\_\_\_\_  
Between \_\_\_\_\_

(Address of Head of Hospital)  
And \_\_\_\_\_

(Name & Address of the Supplier)

**Ref: Contract No \_\_\_\_\_ dated \_\_\_\_\_ (Contract No. & date of Contract for supply, installation, commissioning, handing over, Trial run, Training of operators & warranty of goods)**

In continuation to the above referred contract

2. The Contract of Annual Comprehensive Maintenance is hereby concluded as under:

1	2	3	4					5
Schedule No.	BRIEF DESCRIPTION OF GOODS	QUANTITY. (Nos.)	Annual Comprehensive Maintenance Contract Cost for Each Unit year wise*.					Total Annual Comprehensive Maintenance Contract Cost for 5 Years [3 x (4a+4b+4c+4d+4e)]
			1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	
			a	b	c	d	e	

Total value (in figure) \_\_\_\_\_ (In words) \_\_\_\_\_

- b) The CMC commence from the date of expiry of all obligations under Warranty i.e. from \_\_\_\_\_ (date of expiry of Warranty) and will expire on \_\_\_\_\_ (date of expiry of CMC)
- c) The cost of Annual Comprehensive Maintenance Contract (CMC) which includes preventive maintenance, labour and spares, after satisfactory completion of Warranty period may be quoted for next 5 years as contained in the above referred contract on yearly basis for complete equipment (including X ray tubes, Helium for MRI, Batteries for UPS, other vacuumatic parts, \_\_\_\_\_ & \_\_\_\_\_) and Turnkey (if any).
- d) There will be 95% uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.
- e) During CMC period, the supplier shall visit at each consignee's site for preventive maintenance including testing and calibration as per the manufacturer's service/ technical/ operational manual. The supplier shall visit each consignee site as recommended in the manufacturer's manual, but at least once in 6 months commencing from the date of the successful completion of warranty period for preventive maintenance of the goods.
- f) All software updates should be provided free of cost during CMC.
- g) The bank guarantee valid till \_\_\_\_\_ [(fill the date) 2 months after expiry of entire CMC period] for an amount of Rs. \_\_\_\_\_ [(fill amount) equivalent to 2.5 % of the cost of the equipment as per contract] shall be furnished in the prescribed format given in

Section XV of the TE document, along with the signed copy of Annual CMC within a period of 21 (twenty one) days of issue of Annual CMC failing which the proceeds of Performance Security shall be payable to the Purchaser/Consignee.

- h) If there is any lapse in the performance of the CMC as per contract, the proceeds Annual CMC bank guarantee for an amount of Rs. \_\_\_\_\_ (equivalent to 2.5 % of the cost of the equipment as per contract) shall be payable to the Consignee.
- i) **Payment terms:** The payment of Annual CMC will be made against the bills raised to the consignee by the supplier on six monthly basis after satisfactory completion of said period, duly certified by the HOD concerned. The payment will be made in Indian Rupees.
- j) **Paying authority:** \_\_\_\_\_ (name of the consignee i.e. Hospital authorised official)

\_\_\_\_\_  
(Signature, name and address  
of Hospital authorised official)

For and on behalf of \_\_\_\_\_

Received and accepted this contract

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

For and on behalf of \_\_\_\_\_

(Name and address of the supplier)

\_\_\_\_\_  
(Seal of the supplier)

Date: \_\_\_\_\_

Place: \_\_\_\_\_

**SECTION – XVII**  
**CONSIGNEE RECEIPT CERTIFICATE**  
**(To be given by consignee’s authorized representative)**

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

- 1) Contract No. & date : \_\_\_\_\_
- 2) Supplier’s Name : \_\_\_\_\_
- 3) Consignee’s Name & Address with  
telephone No. & Fax No. : \_\_\_\_\_
- 4) Name of the item supplied : \_\_\_\_\_
- 5) Quantity Supplied : \_\_\_\_\_
- 6) Date of Receipt by the Consignee : \_\_\_\_\_
- 7) Name and designation of Authorized  
Representative of Consignee : \_\_\_\_\_
- 8) Signature of Authorized  
Representative of Consignee with  
date : \_\_\_\_\_
- 9) Counter Signed by Director/MS/Dean  
of the concerned Hospital/Institute : \_\_\_\_\_
- 10) Seal of the Consignee : \_\_\_\_\_

**SECTION – XVIII**  
**Proforma of Final Acceptance Certificate by the Consignee**

**No** \_\_\_\_\_

**Date** \_\_\_\_\_

**To**

M/s \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Subject:** Certificate of commissioning of equipment/plant.

This is to certify that the equipment(s)/plant(s) as detailed below has/have been received in good conditions along with all the standard and special accessories and a set of spares (subject to remarks in Para no.02) in accordance with the contract/technical specifications. The same has been installed and commissioned.

- (a) Contract No \_\_\_\_\_ dated \_\_\_\_\_
- (b) Description of the equipment(s)/plants: \_\_\_\_\_
- (c) Equipment(s)/ plant(s) nos.: \_\_\_\_\_
- (d) Quantity: \_\_\_\_\_
- (e) Bill of Loading/Air Way Bill/Railway Receipt/ Goods Consignment Note no \_\_\_\_\_ dated \_\_\_\_\_
- (f) Name of the vessel/Transporters: \_\_\_\_\_
- (g) Name of the Consignee: \_\_\_\_\_
- (h) Date of commissioning and proving test: \_\_\_\_\_

**Details of accessories/spares not yet supplied and recoveries to be made on that account.**

Sl. No.	Description of Item	Quantity	Amount to be recovered

The proving test has been done to our entire satisfaction and operators have been trained to operate the equipment(s)/plant(s).

The supplier has fulfilled its contractual obligations satisfactorily ## or

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

- a) He has not adhered to the time schedule specified in the contract in dispatching the documents/ drawings pursuant to ‘Technical Specifications’.
- b) He has not supervised the commissioning of the equipment(s)/plant(s) in time, i.e. within the

period specified in the contract from date of intimation by the Purchaser/Consignee in respect of the installation of the equipment(s)/plant(s).

- c) The supplier as specified in the contract has not done training of personnel.

The extent of delay for each of the activities to be performed by the supplier in terms of the contract is

The amount of recovery on account of non-supply of accessories and spares is given under Para no.02.

The amount of recovery on account of failure of the supplier to meet his contractual obligations is \_\_\_\_\_ (here indicate the amount).

(Signature)

(Name)

(Designation with stamp)

*(Counter Signed by Director/MS/Dean of the concerned Hospital/Institute)*

**## Explanatory notes for filling up the certificate:**

- i) He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to 'Technical Specification'.
- ii) He has supervised the commissioning of the equipment(s)/plant(s) in time, i.e. within the time specified in the contract from date of intimation by the Purchaser/Consignee in respect of the installation of the equipment(s)/plant(s).
- iii) Training of personnel has been done by the supplier as specified in the contract.
- iv) In the event of documents/drawings having not been supplied or installation and commissioning of the equipment(s)/plant(s) having been delayed on account of the supplier, the extent of delay should always be mentioned in clear terms.

**SECTION – XIX**

**AFFIDAVIT/UNDERTAKING**

I/ We have read and understood the instructions and the terms and conditions contained in the document. I/We accordingly accept all terms and conditions of the tender enquiry document including the essential conditions specially incorporated in the tender enquiry like terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism applicable law. I/ We confirm that we do not stand deregistered/banned/blacklisted by any Govt. Authorities. I/ We do hereby declare that the information furnished/ uploaded is correct to the best of my/our knowledge and belief.I/ We hereby certify thatthe prices offered by us in this tender is not higher than the prices we had offered to any other Govt. of India Organisation(s)/PSU(s) during the last one year and shall provide the justification for reasonableness of our offered price whenever asked during evaluation of our submitted bid. I/ We also hereby certify that if at any time, information furnished by us is proved to be false or incorrect; I/ We are liable for any action as deemed fit by the purchaser in addition to forfeiture of the earnest money.

**Date:**

**(Signature of the bidder)**

NAME & ADDRESS OF THE BIDDER

NOTE: To be submitted on non-judicial stamp paper of Rs. 10/- duly certified by Public Notary

## **SECTION – XX**

### **CHECKLIST**

<b>Sl No.</b>	<b>Description</b>
1. a.	Have you enclosed EMD of required amount for the quoted schedules?
b.	In case EMD is furnished in the form of Bank Guarantee, has it been furnished as per Section XIII?
c.	In case Bank Guarantee is furnished, have you kept its validity of 165 days from Techno Commercial Tender Opening date as per clause 19 of GIT?
2.	Have you enclosed duly filled Tender Form as per format in Section X?
3.	Are you a SSI unit, if yes have you enclosed certificate of registration issued by Directorate of Industries/NSIC
4. a.	Have you enclosed clause-by-clause technical compliance statement for the quoted goods vis-à-vis the Technical specifications?
b.	In case of Technical deviations in the compliance statement, have you identified and marked the deviations?
5. a.	Have you submitted satisfactory performance certificate as per the Proforma for performance statement in Sec. IX of TE document in respect of all orders?
b.	Have you submitted copy of the order(s) and end user certificate?
6.	Have you submitted manufacturer's authorization as per Section XIV?
7.	Have you submitted prices of goods, turnkey (if any), CMC etc. in the Price Schedule as per Section XI?
8.	Have you kept validity of 120 days from the Techno Commercial Tender Opening date as per the TE document?
9. a.	In case of Indian Tenderer, have you furnished Income Tax Account No. as allotted by the Income Tax Department of Government of India?
b.	In case of Foreign Tenderer, have you furnished Income Tax Account No. of your Indian Agent as allotted by the Income Tax Department of Government of India?
10.	Have you intimated the name and full address of your Banker (s) along with your Account Number
11.	Have you fully accepted payment terms as per TE document?
12.	Have you fully accepted delivery period as per TE document?
13.	Have you submitted the certificate of incorporation?



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<b>Sl No.</b>	<b>Description</b>
14.	Have you accepted the warranty and CMC as per TE document?
15.	Have you accepted terms and conditions of TE document?
16.	Have you furnished documents establishing your eligibility & qualification criteria as per TE documents?
17	Have you furnished Annual Report (Balance Sheet and Profit & Loss Account) for last three years prior to the date of Tender opening?

**N.B.**

- (i) The Tenderer may go through the checklist and ensure that all the documents/confirmations listed above are enclosed in the tender.
- (ii) It is the responsibility of tendered to go through the TE document to ensure furnishing all required documents in addition to above, if any.

**Section – XXI****Consignee**

<b>Consignee Code</b>	<b>Medical Institutions</b>	<b>Contact Address.</b>	<b>AirPort</b>	<b>Sea Port / Dry Port</b>
RGSSH	Rajiv Gandhi Super Speciality Hospital	The Director Rajiv Gandhi Super Speciality Hospital Tahirpur, Near Dilshad Garden Delhi - 110093	NEW DELHI	NEW DELHI

**NB: The consignee will ensure timely issue of NMIC, CDEC, Octroi Exemption Certificates, Road Permits & Entry Tax Exemption Certificates, wherever applicable, to the suppliers.**