GLOBAL TENDER ENQUIRY DOCUMENT

FOR PURCHASE OF
COMMON MEDICAL EQUIPMENT UNDER PMSSY
FOR
GOVT. OF INDIA

MINISTRY OF HEALTH & FAMILY WELFARE

HLL/PCD/PMSSY/32/13-14

BY

HLL LIFECARE LIMITED

(A GOVERNMENT OF INDIA ENTERPRISE)
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SECTION I

NOTICE INVITING TENDERS (NIT)

For Global Tender from

HLL LIFECARE LIMITED

(A GOVT. OF INDIA ENTERPRISE)

Procurement & Consultancy Services Division
B-14 A, Sector-62, Noida-201 307
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FOR

GOVT. OF INDIA

MINISTRY OF HEALTH & FAMILY WELFARE

Tender Enquiry No.: HLL/PCD/PMSSY/32/13-14 **Dated 29.04.2013**

NOTICE INVITING TENDERS (NIT)

1. Procurement & Consultancy Services Division of HLL Lifecare Limited, for and on behalf of Govt. of India, Ministry of Health & Family Welfare, Directorate General of Health Services invites sealed tenders, from eligible and qualified tenderers for supply of following medical equipments for up gradation of different medical colleges under PMSSY Scheme:

Sl. No.	Equipment Name	Total Qty.	EMD
1	Automated Electrophoresis System	3	30,000
2	Refrigerated Centrifuge (Table Top)	3	60,000
3	Refrigerated Centrifuge	2	72,000
4	Lyophiliser	3	30,000
5	Ion Selective Electrolyte Analyzer	1	12,000
6	Elisa Reader Low End	2	12,000
7	ELISA Washer	1	3,000
8	Fully Automatic Chemiluminescence Immunoassay Analyser	5	250,000
9	ELISA READER High End with washer	8	80,000
10	Anaerobic Workstation	1	24,000
11	Automated Mycobacterium Culture System	1	70,000
12	Biological Safety Cabinet Class-II A	11	44,000
13	Electrophoresis Apparatus(Vertical & Horizontal with western Blot)	3	6,000
14	Deep Freezer (-20˚C) High Volume	7	21,000
15	Pre Vacuum High Pressure Jacketed Horizontal Steam Sterilizer	3	12,000
16	Vertical Jacked Autoclave	7	14,000

Sl. No.	Equipment Name	Total Qty.	EMD
17	Water Jacketed CO2 Incubator	3	30,000
18	Automated Slide Stainer	4	56,000
19	Automatic tissue processor	11	55,000
20	Binocular Microscope	65	52,000
21	Five Headed Research Microscope	2	40,000
22	Trinocular Microscope	4	80,000
23	Fully Automatic Motorized Rotary Microtome	3	30,000
24	Semi Automatic Motorized Rotary Microtome	4	28,000
25	Cytocentrifuge	2	4,000
26	Cryostat	1	10,000
27	Dental chairs (Basic)	75	375,000
28	Dental chairs (High End)	77	1,001,000
29	Mobile ICCU Van	1	70,000
30	ECG Machine-12 Channel	6	144,000
31	Color doppler Echocardiography System with advanced 2D Facility	2	240,000
32	Defibrillator with ECG Monitor	63	315,000
33	Color Doppler Echocardiography system with 3-D facility	2	280,000
34	Intra aortic Balloon Pumps-High End	12	432,000
35	Heart lung machine with accessory (Advance Version)	8	1,120,000
36	ICU Beds (Advanced Model)	21	42,000
37	ACT Machine	4	16,000
38	Electro Surgical Unit with Vessel Sealing System	2	72,000
39	Video Thoracoscope	1	30,000
40	Sternal Saw(Electrically operated)	5	30,000
41	Cell saver	2	80,000
42	Low Temperature Hydrogen Peroxide Gas Plasma/Non Plasma Sterilizer	7	560,000
43	Volumetric Infusion pump	32	32,000
44	Ventilator-Non Invasive/BiPaP	9	54,000
45	Ultrasonic cutting and coagulation Device	13	520,000
46	Operation Table Hydraulic	19	133,000
47	Ventilator- Pediatrics/Infant/Neonates	39	468,000
48	Ventilator Portable	4	28,000
49	Fiberoptic Bronchoscope-Paediatric	2	20,000

Sl. No.	Equipment Name	Total Qty.	EMD
50	Ultrasonic Aspirator for Micro Neurosurgery	4	480,000
51	Craniotomy	1	60,000
52	Spine Surgery Set	1	60,000
53	High Speed Drill System for Neurosurgery & Spinal Surgery	1	40,000
54	Pneumatic Drill Machine for Neurosurgery	1	50,000
55	Ultrasound Machine	10	400,000
56	Portable Color Doppler Machine	1	40,000
57	Mobile C-arm Image intensifier	2	120,000
58(a)	Digital Radiographic(DR) X-ray machine 800 mA	2	600,000
58(b)	Digital Radiographic(DR) X-ray machine 800 mA (on buy-back basis)	1	300,000
59(a)	Radiography-Fluoroscopy system- 500 mA	1	58,000
59(b)	Radiography-Fluoroscopy system- 500 mA (on buy-back basis)	1	58,000
60	X-Ray machine with CR system	1	90,000
61	Mobile X- Ray unit High end	1	32,000
62	Mobile C-Arm Image Intensifier with DSA	1	130,000
63	Urodynamic system equipment	1	16,000
64	Flexible Cysto- Nephroscope(High End)	2	16,000
65	Paediatric cystoscope/resectoscopes	3	60,000
66	Laparoscopic Unit	1	50,000
67	Electro Surgical Unit(ESU)with vessel Sealing System	1	36,000
68	Extra corporeal shock wave Lithotriptor (E.S.W.L) High End	3	540,000
69	Open surgical instrument Set (General/Urogynae/vascular)	1	70,000

2. **Tender No.: HLL/PCD/PMSSY/32/13-14**

Sl. No.	Description	Schedule
i.	Dates of sale of tender enquiry documents	**30.04.2013 to 13.06.2013,** 1000 hrs to 1600 hrs IST on all working days
ii.	Place of sale of Tender Enquiry Documents	HLL Lifecare Limited Procurement & Consultancy Services Division B-14 A, Sector-62, Noida-201 307 (U.P.)
iii.	Cost of the Tender Enquiry Document	INR 5,000/-

Sl. No.	Description	Schedule
iv.	Pre Tender Meeting Date & Time	**08.05.2013**, 1100 hrs IST
v.	Pre Tender Meeting Venue	Same as 2 (ii)
vi.	Closing date & time for receipt of Tender	**14.06.2013**, 1400 hrs IST
vii.	Time and date of opening of Techno – Commercial tenders	**14.06.2013**, 1430 hrs IST
viii	Venue of Opening of Techno Commercial Tender	Same as 2 (ii)

3. Interested tenderers may obtain further information about this requirement from the above office selling the documents. Tender Enquiry Documents may be purchased on payment of non-refundable fee of Rs. 5,000/- per set in the form of account payee Demand Draft/Pay Order/Cashier's Cheque/Banker's Cheque, drawn on a scheduled bank in India, in favour of **"HLL Lifecare Limited"** payable at New Delhi**.**

4. If requested, the Tender Enquiry Documents will be mailed by Registered Post/Speed Post to the domestic tenderers and by international airmail to the foreign tenderers, for which extra expenditure per set will be Rs. 100/- for domestic post and Rs. 500/- for international airmail. The tenderer is to add the applicable postage cost in the non-refundable fee mentioned in Para 3 above.

5. Tenderer may also download the tender enquiry documents from the web site http://eprocure.gov.in/cppp or www.lifecarehll.com and submit its tender by utilizing the downloaded document, along with the required non-refundable fee as mentioned in Para 3 above.

6. All prospective tenderers may attend the Pre Tender meeting. The venue, date and time indicated in the Para 2 above.

7. Tenderers shall ensure that their tenders, complete in all respects, are dropped in the Tender Box located at **HLL Lifecare Limited, Procurement and Consultancy Division, B-14 A, Sector-62, Noida-201 307,Uttar Pradesh** on or before the closing date and time indicated in the Para 2 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 tenders will be sold/received/opened on the next working day at the appointed time.

9. The Tender Enquiry Documents are not transferable.

Head (P&CD)
HLL Lifecare Limited,
Procurement and Consultancy Division
B-14 A, Sector-62, Noida-201 307
Uttar Pradesh

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 the organization purchasing goods and services as incorporated in the Tender Enquiry document.
(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) "MOH&FW" means Ministry of Health & Family Welfare, Government of India
(xxxi) "Dte. GHS" means Directorate General and Health Services, MOH&FW.
(xxxii) "CMC" means Comprehensive maintenance Contract (labour, spare and preventive maintenance)
(xxxiii) "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 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

3.1 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

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

6. Eligible Goods and Services

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

7. Tendering Expense

7.1 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
- Section X – Tender Form
- Section XI – Price Schedules
- Section XII – Questionnaire
- 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 – Instructions from Ministry of Shipping/ Surface Transport (Annexure 1 & 2)
- 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 writing by registered/speed post or by fax/telex/e-mail, followed by copy of the same by registered post to all prospective tenderers, which have received the TE documents and will be binding on them.

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. The purchaser will respond in writing to such request provided the same is received by the purchaser not later than fifteen days (unless otherwise specified in the SIT) prior to the prescribed date of submission of tender.

C. PREPARATION OF TENDERS

11. Documents Comprising the Tender

11.1 The **Two Tender System**, i.e. "Techno-Commercial Tender" and "Price Tender" prepared by the tenderer shall comprise of the following:

A) <u>Techno-Commercial Tender (Un priced Tender)</u>

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 (without indicating any prices).
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.
v) Power of Attorney in favour of signatory of TE documents and signatory of Manufacturer's Authorisation Form.
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) Price Schedule(s) as per Section XI filled up with all the details including Make, Model etc. of the goods offered with prices blank (without indicating any prices).
ix) Certificate of Incorporation of the bidder.
x) Checklist as per Section XX.

B) <u>Price Tender:</u>

The information given at clause no. 11.1 A) ii) & viii) above should be reproduced with the prices indicated.

N.B.

1. All pages of the Tender should be page numbered and indexed.
2. 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 The authorized signatory of the tenderer must sign the tender duly stamped at appropriate places and initial all the remaining pages of the tender.

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) Deleted
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.

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.

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.

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.
d) in case the tenderer is an Indian agent/authorized representative quoting on behalf of a foreign manufacturer for the **restricted item**, the Indian agent/authorized representative is already enlisted under the Compulsory Enlistment Scheme of Ministry of Finance, Govt. of India, operated through Directorate General of Supplies & Disposals (DGS&D), New Delhi.

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(d) 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. Vague stipulations in the Registration Certificate such as "to customers' specification" etc. will not be acceptable for exemption from furnishing of earnest money. 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 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.

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, however, may not agree to extend its tender validity without forfeiting its EMD.

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 Unless otherwise mentioned in the SIT, a tenderer shall submit three copies of its tender marking them as "Original" and "Duplicate". Duplicate tenders may contain all pages including Technical Literature/Catalogues as per in Original tenders.

21.3 The original and duplicate copies of the 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. The letter of authorization shall be by a written power of attorney, which shall also be furnished along with the tender.

21.4 All the copies of 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.

21.5 The tenderer is to seal the original and copy of the tender in separate envelopes, duly marking the same as "Original" and "Duplicate", and writing the address of the purchaser and the tender reference number on the envelopes. The sentence "NOT TO BE OPENED" before _____ (The tenderer is to put the date & time of tender opening) are to be written on these envelopes. The inner envelopes are then to be put in a bigger outer envelope, which will also be duly sealed, marked etc. as above. If the outer envelope is not sealed and marked properly as above, the purchaser will not assume any responsibility for its misplacement, premature opening, late opening etc.

21.6 TE document seeks quotation following **two Tender System**, in two parts. First part will be known as **'Techno - Commercial Tender'**, and the second part **'Price Tender'** as specified in clause 11 of GIT. Tenderer shall seal **'Techno-Commercial Tender'** and **'Price Tender'**

separately and covers will be suitably super scribed. Both these sealed covers shall be put in a bigger cover and sealed and procedure prescribed in Paras 21.1 to 21.5 followed.

D. SUBMISSION OF TENDERS

22. Submission of Tenders

22.1 Unless otherwise specified, the tenderers are to deposit the 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**. In case of bulky tender, which cannot be put into tender box, the same shall be submitted by the tenderer by hand to **Head (P&CD)** or his nominee, **HLL Lifecare Limited, Procurement and Consultancy Division, B-14 A, Sector-62, Noida-201 307, Uttar Pradesh**. The officer receiving the tender will give the tenderer an official receipt duly signed with date and time.

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 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 Two - Tender system as mentioned in Para 21.6 above will be as follows. 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. Preliminary 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 Prior to the detailed evaluation of Price Tenders, pursuant to GIT Clause 34, the Purchaser will determine the substantial responsiveness of each Tender to the TE Document. For purposes of these clauses, a substantially responsive Tender is one, which conforms to all the terms and conditions of the TE Documents without material deviations. Deviations from, or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 5), Warranty (GCC Clause 15), EMD (GIT Clause 19), Taxes & Duties (GCC Clause 20), Force Majeure (GCC Clause 26) and Applicable law (GCC Clause 31) will be deemed to be a material deviation. 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 If a Tender is not substantially responsive, it will be rejected by the Purchaser and cannot subsequently be made responsive by the Tenderer by correction of the nonconformity.

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 the meet the basic requirements, are liable to be treated as non – responsive and will be summarily ignored.

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

(i) Tender form as per Section X (signed and stamped) not enclosed
(ii) Tender is unsigned.
(iii) 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.

(vii) Goods offered are not meeting the tender enquiry specification.
(viii) 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.
(ix) Poor/ unsatisfactory past performance.
(x) Tenderers who stand deregistered/banned/blacklisted by any Govt. Authorities.
(xi) Tenderer is not eligible as per GIT Clauses 5.1 & 17.1.
(xii) Tenderer has not quoted for the entire quantity as specified in the List of Requirements in the quoted schedule

28. Minor Infirmity/Irregularity/Non-Conformity

28.1 If during the preliminary examination, the purchaser find any minor informality and/or irregularity and/or non-conformity in a tender, the purchaser may waive the same provided it does not constitute any material deviation and financial impact and, also, does not prejudice or affect the ranking order of the tenderers. Wherever necessary, the purchaser will convey its observation on such 'minor' issues to the tenderer by registered/speed post 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 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

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

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.

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, Customs 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, interalia, 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 of 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 after one year from the Date of Notification of Award.

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 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)

Sl. No.	GIT Clause No.	Topic	SIT Provision	Page No.
A	1 to 7	Preamble	No Change	27
B	8 to 10	TE documents	No Change	27
C	11 to 21	Preparation of Tenders	No Change	27
D	22 to24	Submission of Tenders	No Change	27
E	25	Tender Opening	No Change	27
F	26 to 37	Scrutiny and Evaluation of Tenders	Change	27
G	38 to 45	Award of Contract	No Change	27

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.

A Preamble

No Change

B TE documents

No Change

C Preparation of Tenders

No Change

D Submission of Tenders

No Change

E Tender Opening

No Change

F Scrutiny and Evaluation of Tenders

The equipment as mentioned at Sl. No. 58(b) and 59(b) of Section VII under Technical Specifications have to be quoted on buyback basis in case of the consignee GMC (Grant Govt. Medical College, Mumbai) only. The old equipment will be sold on "as is where is basis". The consignee GMC, Mumbai will not be responsible for any issues like loading, unloading, packing, shifting, payment of tax, if any, or any other liability.

The cost of the old equipment (on buy back offer) should be quoted separately in INR only. The same will be taken into consideration for Evaluation & Ranking purpose with other provisions of the tender. The vendor whose rates happen to be the lowest after adjusting the "buy back" offer will be considered for award of work.

The successful vendor will be required to remove buyback items at his own cost and risk within 2 days from the date of installation & commissioning of new equipment.

The bidder may visit consignee (GMC) site on all working days to inspect the buyback equipment before the tender opening date as mentioned in the NIT.

G Award of Contract

No Change

SECTION - IV

GENERAL CONDITIONS OF CONTRACT (GCC)
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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.

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, trade marks etc. being made against the purchaser, the purchaser shall notify the supplier of the same and the supplier shall, at his own expenses take care of the same for settlement without any liability to the purchaser.

4. Country of Origin

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

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

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

5. Performance Security

5.1 Within thirty (30) days from date of the issue of notification of award by the Purchaser/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 30 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:

a) 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 with out 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 twenty-one (21) 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 transhipment (if any), rough handling, open storage etc. without any damage, deterioration etc. As and if necessary, the size, weights and volumes of the packing cases shall also take into consideration, the remoteness of the final destination of the goods and availability or otherwise of transport and handling facilities at all points during transit up to final destination as per the contract.

7.2 The quality of packing, the manner of marking within & outside the packages and provision of accompanying documentation shall strictly comply with the requirements as provided in Technical Specifications 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 or equivalent (acceptable to the purchaser) 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 specified in 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 transhipment 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. 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.

If the equipment is not commissioned and handed over to the consignee within 3 months, the insurance will be got 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 consumable spares for the goods so that the same are supplied to the Purchaser/Consignee promptly on receipt of order from the Purchaser/Consignee.

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 (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) 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) Certificate of origin;
(vi) Insurance Certificate as per GCC Clause 11.
(vii) 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 or equivalent (acceptable to the purchaser) 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 (*except when the design adopted and / or the material used are as per the Purchaser's/Consignee's specifications*) or workmanship or from any act or omission of the supplier, that may develop under normal use of the supplied goods under the conditions prevailing in India.

15.2 The **warranty** shall remain valid for 24 months from the date of installation & commissioning followed by a CMC for a period of 5 (Five) Years for all the equipments after the goods or any portion thereof as the case may be, have been delivered to the final destination and installed and commissioned at the final destination and accepted by the purchaser/consignee in terms of the contract, unless specified otherwise in the SCC.

a. No conditional warranty like mishandling, manufacturing defects etc. 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:-
   - X-ray and CT tubes and high-tension cables.
   - Helium replacement
   - Any kind of motor.
   - Plastic & Glass Parts.
   - All kind of sensors including oxygen sensors.
   - All kind of coils, probes and transducers including ECG cable, BP transducers, SpO2 Probes, Ultrasound and Colour Doppler Transducers/ probes, BP cuffs, Defibrillator internal and external paddles, chart recorders, ventilator reusable patient circuits, servo humidifier with chamber, electrodes and probes for blood gas analyzer, MRI coils.
   - All kind of flat panel sensors and cassettes for DR & CR systems and patients handling trolleys etc
   - 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

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

17. Sub Contracts

17.1 The Supplier shall notify the Purchaser in writing of all sub contracts awarded under the contract if not already specified in its 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.

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:

a) On delivery:

75% payment of the contract price shall be paid on receipt of goods in good condition and upon the submission of the following documents:

(i) 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 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;
(vi) Certificate of origin.

b) On Acceptance:

Balance 25% 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.

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:

Seventy Five (75)% 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 equipments issued by recognized/ reputed agency like SGS, Lloyd or equivalent (acceptable to the purchaser) prior to despatch.

b) On Acceptance:

Balance payment of 25% 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.

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 100% payment to the Foreign Principal.

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. Payment shall be paid in Indian Rupees to the Indian Agent on proof of 100% payment to the Foreign Principal.

C) Payment of Turnkey, if any:

Turnkey payment will be made to the manufacturer's agent 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. Payment shall be made in Indian Rupees to the Indian Agent on proof of 100% payment to the Foreign Principal.

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. Delay in the supplier's performance

22.1 The supplier shall deliver of 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.

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, interalia 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.

23. Liquidated damages

23.1 Subject to GCC clause 26, if the supplier fails to deliver 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 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, acts of the Purchaser/Consignee either in its sovereign or contractual capacity, 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 interalia, the extent to which the supplier's performance under the contract is terminated, and the date with effect from which such termination will become effective.

27.2 The goods and services which are complete and ready in terms of the contract for delivery and performance within thirty days after the supplier's receipt of the notice of termination shall be

accepted by the Purchaser/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 arbitration of an officer in the Ministry of Law and Justice, appointed to be the arbitrator by the Director General (Health Services). 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 the place from where the contract has been issued, i.e., New Delhi, India.

31. Applicable Law

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

32. General/ Miscellaneous Clauses

32.1 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.

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

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

32.4 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.

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

32.6 The Supplier/its Agent/CMC Provider shall, at all times, indemnify and keep indemnified the Purchaser/Consignee/Government of India 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.

32.7 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.

SECTION – VI

LIST OF REQUIREMENTS

Part I

Sl. No.	Equipment Name	Consignee	Department	Quantity	Total Quantity
1	Automated Electrophoresis System	BJMC	Biochemistry	1	3
		TMC	Biochemistry	1	
		VIMS	Pathology	1	
2	Refrigerated Centrifuge (Table Top)	VIMS	Biochemistry	1	3
		VIMS	Microbiology	1	
		TMC	Microbiology	1	
3	Refrigerated Centrifuge	GMC	Pharmacology	2	2
4	Lyophiliser	VIMS	Biochemistry	1	3
		VIMS	Pathology	1	
		GMC	Microbiology	1	
5	Ion Selective Electrolyte Analyzer	TMC	Biochemistry	1	1
6	Elisa Reader Low End	VIMS	Biochemistry	2	2
7	ELISA Washer	VIMS	Biochemistry	1	1
8	Fully Automatic Chemiluminescence Immunoassay Analyser	BJMC	Biochemistry	1	5
		BJMC	Research Lab	1	
		VIMS	Clinical Investigation	1	
		TMC	Biochemistry	1	
		GMC	Biochemistry	1	
9	ELISA READER High End with washer	BJMC	Stem cell Lab	1	8
		BJMC	Biochemistry	1	
		BJMC	Microbiology	1	
		TMC	Microbiology	1	
		TMC	Biochemistry	1	
		GMC	Biochemistry	1	
		VIMS	Microbiology	1	
		VIMS	Pathology	1	
10	Anaerobic Workstation	TMC	Microbiology	1	1
11	Automated Mycobacterium Culture System	VIMS	Microbiology	1	1
12	Biological Safety Cabinet Class-II A	GMC	Microbiology	2	11
		VIMS	Biochemistry	2	
		VIMS	Microbiology	4	
		BJMC	Microbiology	3	

Sl. No.	Equipment Name	Consignee	Department	Quantity	Total Quantity
13	Electrophoresis Apparatus (Vertical & Horizontal with western Blot)	BJMC	Pathology	1	3
		VIMS	Microbiology	1	
		VIMS	Biochemistry	1	
14	Deep Freezer (-20˚C) High Volume	TMC	Microbiology	1	7
		VIMS	Biochemistry	1	
		VIMS	Microbiology	5	
15	Pre Vacuum High Pressure Jacketed Horizontal Steam Sterilizer	VIMS	Microbiology	1	3
		TMC	Microbiology	2	
16	Vertical Jacked Autoclave	VIMS	Microbiology	6	7
		VIMS	Biochemistry	1	
17	Water Jacketed CO2 Incubator	VIMS	Biochemistry	1	3
		VIMS	Microbiology	2	
18	Automated Slide Stainer	BJMC	Pathology	1	4
		TMC	Pathology	1	
		VIMS	Pathology	1	
		TMC	Forensic Medicine	1	
19	Automatic tissue processor	TMC	Forensic Medicine	1	11
		BJMC	Dental College & Hospital	1	
		BJMC	Pathology	1	
		GMC	Pathology	4	
		TMC	Pathology	1	
		VIMS	Pathology	3	
20	Binocular Microscope	BJMC	Pathology	55	65
		BJMC	Microbiology	4	
		VIMS	Microbiology	6	
21	Five Headed Research Microscope	VIMS	Microbiology	1	2
		VIMS	Pathology	1	
22	Trinocular Microscope	VIMS	Microbiology	1	4
		VIMS	Microbiology	1	
		VIMS	Biochemistry	1	
		VIMS	Pathology	1	
23	Fully Automatic Motorized Rotary Microtome	BJMC	Pathology	2	3
		BJMC	Dental College & Hospital	1	
24	Semi Automatic Motorized Rotary Microtome	VIMS	Pathology	3	4
		TMC	Pathology	1	

Sl. No.	Equipment Name	Consignee	Department	Quantity	Total Quantity
25	Cytocentrifuge	VIMS	Pathology	1	2
		TMC	Pathology	1	
26	Cryostat	VIMS	Pathology	1	1
27	Dental chairs (Basic)	BJMC	Dental College & Hospital	75	75
28	Dental chairs (High End)	BJMC	Dental College & Hospital	75	77
		GMC	Dental JJ	2	
29	Mobile ICCU Van	BJMC	Cardiology	1	1
30	ECG Machine-12 Channel	RIMS	Cardiology & CTVS	4	6
		BMC	Cardiology	2	
31	Color doppler Echocardiography System with advanced 2D Facility	BJMC	Medicine	1	2
		RIMS	Neonatology	1	
32	Defibrillator with ECG Monitor	BJMC	ICU	2	63
		BJMC	M&J Inst. Ophthal	1	
		BJMC	T.B. & Chest	1	
		BJMC	Trauma & Casuality	2	
		BJMC	Neuro Surgery	1	
		BJMC	Anesthesiology	5	
		GMC	Anesthesiology	5	
		GMC	Emerg Tr WD	3	
		GMC	G Surgery	1	
		GMC	Med CCU	2	
		GMC	Medicine	6	
		GMC	Nephrology	2	
		GMC	Ortho	2	
		GMC	Paediatrics	3	
		GMC	Plastic Surgery	2	
		GMC	Psychiatry	1	
		RIMS	Neuro Surgery	1	
		RIMS	Trauma Centre	2	
		RIMS	Surgery COT	2	
		RIMS	Surgery Department SOT	3	
		RIMS	Surgery ICU	2	
		RIMS	Anesthesiology	6	
		RIMS	Burn Unit & Plastic Surgery	1	
		VIMS	Anesthesiology	7	
33	Color Doppler Echocardiography system with 3-D facility	RIMS	Anesthesiology	1	2
		GMC	CTVS	1	

Sl. No.	Equipment Name	Consignee	Department	Quantity	Total Quantity
34	Intra aortic Balloon Pumps-High End	BJMC	Cardiology	2	12
		GMC	CTVS	2	
		BMC	Cardiology	1	
		TMC	CTVS	1	
		RIMS	Cardiology& CTVS	2	
		VIMS	CTVS	3	
		JMC	CTVS	1	
35	Heart lung machine with accessory (Advance Version)	GMC	CTVS	1	8
		JMC	CTVS	1	
		RIMS	Cardiology& CTVS	1	
		BMC	CTVS	1	
		VIMS	Equipments>20 Lacs	1	
		VIMS	CTVS	1	
		TMC	CTVS	1	
		BJMC	Cardiology	1	
36	ICU Beds (Advanced Model)	VIMS	ICU	6	21
		RIMS	Cardiology& CTVS	15	
37	ACT Machine	GMC	CTVS	2	4
		VIMS	CTVS	2	
38	Electro Surgical Unit with Vessel Sealing System	VIMS	CTVS	2	2
39	Video Thoracoscope	BJMC	Surgery	1	1
40	Sternal Saw(Electrically operated)	GMC	CTVS	2	5
		RIMS	Cardiology& CTVS	3	
41	Cell saver	VIMS	General Surgery	1	2
		VIMS	Microbiology	1	
42	Low Temperature Hydrogen Peroxide Gas Plasma/Non Plasma Sterilizer	BJMC	Cardiology	1	7
		BJMC	CSSD	2	
		BJMC	Paraplagia Hospital	1	
		GMC	St.George's	1	
		GMC	CSSD	1	
		VIMS	Central Services	1	

Sl. No.	Equipment Name	Consignee	Department	Quantity	Total Quantity
43	Volumetric Infusion pump	BJMC	ICU	10	32
		GMC	Paediatric Surgery	5	
		GMC	Paediatrics	10	
		VIMS	CTVS	2	
		BJMC	Trauma & Casuailty	5	
44	Ventilator-Non Invasive/BiPaP	BJMC	T.B. & Chest	1	9
		TMC	CTVS	1	
		TMC	Respiratory Medicine	2	
		TMC	Anesthesiology	2	
		TMC	Emergency Medicine and critical care	1	
		TMC	Internal Medicine	2	
45	Ultrasonic cutting and coagulation Device	GMC	CTVS	1	13
		GMC	ENT	1	
		GMC	G Surg OT	1	
		GMC	OBGY	1	
		GMC	St. George's Hosp	1	
		GMC	Urology	1	
		RIMS	Neuro Surgery	1	
		VIMS	General Surgery	1	
		VIMS	Neuro Surgery	1	
		RIMS	Surgery Department SOT	2	
		BJMC	Urology	1	
		JMC	Urology	1	
46	Operation Table Hydraulic	BJMC	Burn Unit & Plastic Surgery	2	19
		BJMC	Urology	2	
		BJMC	ENT	2	
		BJMC	M&J Inst. Ophthal	4	
		RIMS	Burn Unit & Plastic Surgery	1	
		BJMC	Pain Clinic	1	
		BJMC	Trauma & Casuailty	3	
		VIMS	Central Services	4	

Sl. No.	Equipment Name	Consignee	Department	Quantity	Total Quantity
47	Ventilator-Pediatrics/Infant/Neonates	GMC	CTVS	1	39
		BJMC	Paediatrics	2	
		BJMC	Paediatric Surgery	1	
		GMC	Paediatric Surgery	1	
		GMC	Paediatric Surgery	6	
		GMC	Paediatric Surgery	8	
		GMC	Paediatric Surgery	6	
		GMC	Paediatric Surgery	8	
		TMC	Paediatric Surgery	1	
		TMC	Paediatrics	5	
48	Ventilator Portable	VIMS	Anesthesiology	4	4
49	Fiberoptic Bronchoscope-Paediatric	RIMS	Paediatric Surgery	1	2
		BMC	Paediatric Surgery	1	
50	Ultrasonic Aspirator for Micro Neurosurgery	GMC	Neuro Surgery	1	4
		BJMC	Neuro Surgery	1	
		TMC	Neuro Surgery	1	
		VIMS	General Surgery	1	
51	Craniotomy	JMC	Neuro Surgery	1	1
52	Spine Surgery Set	JMC	Neuro Surgery	1	1
53	High Speed Drill System for Neurosurgery & Spinal Surgery	JMC	Neuro Surgery	1	1
54	Pneumatic Drill Machine for Neurosurgery	JMC	Neuro Surgery	1	1
55	Ultrasound Machine	GMC	Anesthesiology	1	10
		GMC	Emerg Tr WD	1	
		GMC	Med CCU	1	
		GMC	OBGY	1	
		GMC	Paediatric Surgery	2	
		GMC	Urology	1	
		BMC	Radiology	1	
		BJMC	Obs & Gynec	1	
		BJMC	Urology	1	
56	Portable Color Doppler Machine	BMC	Radiology	1	1
57	Mobile C-arm Image intensifier	VIMS	Central Services	1	2
		VIMS	Orthopaedics	1	
58(a)	Digital Radiographic(DR) X-ray machine 800 mA	VIMS	Radiology	1	2
		RIMS	Radiology	1	

Sl. No.	Equipment Name	Consignee	Department	Quantity	Total Quantity
58(b)	Digital Radiographic(DR) X-ray machine 800 mA (on buy-back basis)	GMC	Radiology	1	1
59(a)	Radiography-Fluoroscopy system- 500 mA	VIMS	Radiology	1	1
59(b)	Radiography-Fluoroscopy system- 500 mA (on buy-back basis)	GMC	Radiology	1	1
60	X-Ray machine with CR system	GMC	St. George's Hosp	1	1
61	Mobile X- Ray unit High end	BMC	Radiology	1	1
62	Mobile C-Arm Image Intensifier with DSA	JMC	Radiology	1	1
63	Urodynamic system equipment	GMC	Paediatric Surgery	1	1
64	Flexible Cysto-Nephroscope(High End)	BJMC	Urology	2	2
65	Paediatric cystoscope/resectoscopes	BJMC	Urology	1	3
		BJMC	Paediatric Surgery	1	
		RIMS	Paediatric Surgery	1	
66	Laparoscopic Unit	JMC	Urology	1	1
67	Electro Surgical Unit(ESU)with vessel Sealing System	JMC	Urology	1	1
68	Extra corporeal shock wave Lithotriptor (E.S.W.L)High End	GMC	Urology	1	3
		RIMS	Urology	1	
		TMC	Genito Urinary Surgery	1	
69	Open surgical instrument Set (General /Urogynae/ vascular)	JMC	Urology	1	1

Legend:

BJMC – Civil Hospitals / BJ Medical College
BMC - Bangalore Medical College & Research Institute
GMC – Grant Medical College & Sir J.J. Group of Hospitals
JMC – Govt. Medical College, Jammu
RIMS - RIMS, Ranchi;
TMC - Medical College Thiruvananthapuram
VIMS - Institute of Medical Sciences, Varanasi

Part II: Required Delivery Schedule:

a) For Indigenous goods or for imported goods if supplied from India:
90 days from date of Notification of Award except, 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 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).

Note: The Purchaser/Consignee reserves the right to extend the delivery period up to one year from the date of NOA at its discretion.

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:
Comprehensive Maintenance Contract (CMC) as per details in Technical Specification.

Part VI: Required Terms of Delivery and Destination.

a) For Indigenous goods or for imported goods if supplied from India:
At Consignee Site – Specified in the List of Requirements
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

b) For Imported goods directly from abroad:

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

The shipping arrangements shall be made in accordance with the instruction of Ministry of Shipping & Transport, New Delhi, India as detailed in Annexure 1 at Section XIX.
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 Specifications

Item No: 1

AUTOMATED ELECTROPHORESIS SYSTEM

Required to carry out electrophoresis based special assays on patient samples for a super specialty hospital which charges the patients.

I. Automated electrophoresis system for hospital clinical laboratory, Featuring
   - i. Automated electrophoretic run , drying staining and de-staining
   - ii. System machine should use Cellulose Acetate or Agarose strips as Matrix for Electrophoresis and separate strips and kits for Immunofixation.
   - iii. Should have at least two sample applicators.
   - iv. Automated control of voltage, time and current
   - v. Gel temperature control with peltier effect
   - vi. Facility to separate serum proteins, haemoglobin, lipoproteins, enzymes, iso enzymes, tumor markers, nucleic acids etc.
   - vii. Facility for immunofixation
   - viii. Facility to store at least 30 application protocols
   - ix. Facility to run serum, urine & CSF samples without prior dilution or concentration
   - x. Alarm for level sensing, timer and doors
   - xi. Samples for one gel should not exceed 10
   - xii. Equipment must not have any water sources or pumps.
   - xiii. Migration Chamber should be monobloc with carbonium or platinum electrodes and should be able to give uniform distribution of current on the full strip.
   - xiv. Should have multireagent(atleast 7)independent tanks.
   - xv. Process Control System should be guided by electromagnetic heads with optical sensor built in the Head.
   - xvi. Dedicated power pack to provide constant Voltage & Current.

II. Densitometer (or) Gel scanner with the necessary accessories and software Either of these with the following features to be procured along with electrophoresis system
   - i. Scanning & processing all gels including those specified above
   - ii. Facility to store the scanned image of the gel
   - iii. Facility for curve editing and entry of patient demographics
   - iv. Availability of quantification and quality control features
   - v. Storage of patient data and results – upto a minimum of 10000 samples
   - vi. Facility to generate a comprehensive report containing patient demographics, scanned image of the gel, curve and quantification data

III Software up gradation to be provided free of cost upto 5 years

IV All necessary standard accessories like those required for sample application to be provided along with the instrument. Extra set of connecting wires between system & power pack should be provided. (price to be quoted separately)

V Suitable PC with colour laser printer to be provided along with the equipment.
VI Online UPS suitable for the entire system with One Hour back up.
VII Starter kits to be provided.
VIII Mains voltage: 220 Volt
IX Instruction manual in English to be provided.
X Should work at 5 to 40^{o}C
XI US FDA/ European CE certified product.

Item No: 2

REFRIGERATED CENTRIFUGE (TABLE TOP)

SPECIFICATIONS:

1. Compact size of centrifuge. light weight and table top .
2. Have the brushless motor to provide the maintenance free drive.
3. With high max rcf of 21, 000 X g for shorter centrifugation period.
4. Have ECO shut-off function turns compressor off after eight hours idle automatically to reduce energy consumption.
5. The technologically advanced intuitive design provides active cooling to eliminate heat build-up in the rotor chamber
6. The refrigerated centrifuge temperature range: - 10^{0} C to + 40^{0} C.
7. Should have automatic timer & digital display.
8. Brake to protect delicate samples; fully adjustable end –of run-alarm.
9. Rotors: Aerosol tight and PTEF coated rotor (24 X 1.5/2.0ml tubes, 0.5ml with adaptors), 4 X 8 tube PCR strip rotor, Rotor for 15ml tube, 18- place rotor for spin columns and all rotor should be autoclavable.
10. System should include the user/technical/maintenance manual.
11. Suitable UPS for one hour backup.
12. System should be US-FDA or European CE approved product.

Item No: 3
Refrigerated Centrifuge

1. **Description of Function**
   1.1 The Refrigerated Centrifuge is a mechanical device used to separate biological substances of differing densities.
2. **Operational Requirements**
   2.1 Programmable microprocessor control system with self-diagnostic feature

3. **Technical Specifications**
   3.1 Maximum speed: 4000 to 5500 RPM for Swing-out 14000 – 23000 RPM for angle head adjustable in increments of 10 rpm.
   3.2 Maximum RCF: 3000 to 5500 x g for Swing-out / 18000 to 25000 x g for Angle Head
   3.3 Maximum capacity: 4 x 200 to 400 ml Swing-out / 6 X 100ml Fixed Angle
   3.4 Temperature range: -10°C / + 40°C.
   3.5 Digital displays for Programme No, temperature, Speed, RCF, & Time.

3.6 System should have inbuilt program memory
3.7 Timer : 1 - 99 minutes and hold position
3.8 At least 8 acceleration and braking rates
3.9 Maintenance free induction motor
3.10 Totally CFC free refrigerant fluid and insulation
3.11 Angle Rotor: 30 x 1.5 / 2.0ml, with adaptors for 0.2 & 0.5 ml
3.12 Angle Rotor: 6x100ml with adaptors for 50 ml and 15ml Conical tube
3.13 Swing out Rotor: 4x 200 to 400ml with adaptors for 50 ml & 15ml Conical tube

4. **System Configuration Accessories, spares and consumables**
4.1 As specified

5. **Environmental factors**
5.1 The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-80%
5.2 The unit shall be capable of being stored continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-80%

6. **Power Supply**
6.1 230 V Single Phase, should be according to Indian standards

7. **Standards, Safety and Training**
7.1 Should incorporate Safety Features for Imbalance detection, lid interlock, over temperature, rotor over speed etc
7.2 Should be USFDA or CE (European directive) approved product.

Item No: 4

LYOPHILISER

Description – To lyophilise sample including DNA/PCR products/bacterial culture and other products etc. for the purpose of purification & storage. Should be bench top model

- Vacuum manifold for washing procedure and lyophilisation of sample with capacity of 20 -40 holes using spin membranes column for purification and lyophilisation of DNA / PCR products etc.
- Should be able to use tubes 0.5 – 5 ml capacity
- Capacity 1 – 4 litres in 24 hours
- Should have a timer, vacuum pump and dust prevention cover

- No. of compressors –minimum 2no.s
- Temperature -50^{o}C to -80^{o}C
- Bench top model
- Fast turnaround with hot-gas defrost and smooth condenser walls
- System maintenance alarms
- Should be USFDA or CE (European directive) approved product
- All necessary accessories to be supplied for training and testing of the equipment.
- Price of all accessories should be quoted separately.

- Input voltage 220V
- UPS with atleast1 hour back up time
- Two Instruction manual in English with service manual and technical data
- Sealing unit should be provided
- Ten year technical support from manufacturer is mandatory

Item No: 5

Ion Selective Electrolyte (ISE) Analyzer

1. Description of Function
    i. For analysis of Electrolytes in serum, plasma, urine, cerebrospinal fluid (CSF), haemolysate and whole blood.

2. Operational Requirements
    i. System should be able to measure Na, K, Cl and should be upgradable to measure Ca (calcium) or/and Li (lithium).

3. Technical Specifications
    i. System should be able to measure the following parameters: Na, K, Cl and should be upgradable to measure Ca (calcium) or/and Li (lithium).
    ii. The system should be able to handle a throughput of at least 70 samples / hour
    iii. It should be able to analyse blood/plasma/serum, urine, body fluids, dialysate etc.
    iv. Sample can be fed by capillary syringe or sample tube directly
    v. Sample volume should be less than 50 – 200 µL.
    vi. Analysis time should be less than 60 seconds
    vii. Auto Calibration or On-Demand Calibration
    viii. Quality control memory storage, of at least 3 levels
    ix. Facility of flagging abnormal results and user programmable ranges.
    x. Standby mode: user controlled and automatically controlled
    xi. Memory for last 20 samples.
    xii. Built in Thermal Printer/Provision to attached external printer for printing the data.
    xiii. LCD display.
    xiv. Should have smart reagent management system
    xv. Inbuilt wash container which can collect sample/reagent waste
4. System Configuration Accessories, spares and consumables
    i. Extra set of electrodes and reagents
    ii. List of important accessories and their cost to be mentioned
5. Power Supply
    i. Power input to be 220-240VAC, 50Hz
    ii. Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

6. Environmental factors
    i. Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

ii. The unit shall be capable of operating in ambient temperature of 5-40 deg C and relative humidity of less than 70%

7. Standards, Safety and Training
   a. Attach original manufacturer's product catalogue and specification sheet. Photocopy/ computer print will not be accepted. All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well as on technical bid corresponding to technical specifications.
   b. Should have European CE / US-FDA approved product.

8. Documentation
   a. Certificate of calibration and inspection.
   b. User manual in English
   c. Service manual in English

Item No: 6

ELISA READER – LOW END

1 Description of Function

1.1 ELISA Reader is required to Read the Color Density known as OD(Optical Density) in ELISA (Enzyme Linked Immuno-Sorbent Assay.)Plates.

2 Operational Requirements

2.1 Semi automated software driven ELISA Reader.

3 Technical Specifications

3.1 OPTICAL SYSTEM

Digital light control 8 measurement channels including 1 reference.
Single and dual wavelength measurement with facility for kinetic measurement
8 s maximum measurement time for single and dual wavelength and 5 s for kinetic
Measurement Range 400 -700 nm
Indication Range 0-3.5 abs
Accuracy Plus/Minus 1% or 0.010 from 0-3.0 OD at 490nm
Resolution 0.001 abs
Linearity $\leq$1% from 0.0- -2OD, $\leq$2% from 0.0- -3OD
Temp Range – Room Temp to 60 Deg Cent.
Plate type – 96 well microplate
Should measure end point, curves and kinetic.
Printer should be available.

3.2 SOFTWARE:

Storage of immediately preceding measurement At least 15 user programmable tests permanently stored
Time programmable between each measurement. Agitation programmable before each reading
Bidirectional printer interface.
Data memory not less than 100 plates/curves

Built in Windows based software programming software.

3.3 MEASUREMENT MODES

Plate shaking mode for sample mixing selectable speed and time
Flexible blank mode setting
Matrix Modes: Matrix -/x/t, Matrix-/0-0 (Range),
Matrix-/f/(Floating cut off)
Difference Mode: Absorbance of each well in even numbered subtracted from those of odd numbered columns
Curve fit Modes: LIN/LIN.LIN/LOG.LOG/LOG or auto curve transformation with ability to add the standard curve; 8 to 12 way string orientation or kinetic modes
Table of optical densities, Delta DD, Graphic, Reaction rate/V-Max

3.4 Adjustable for different micro plate geometrics
3.5 Tungsten Halogen Lamp.
3.6 16 digit alphanumeric fluorescent display
3.7 Membrane keyboard.

4 System Configuration Accessories, spares and consumables

4.1 System as specified-
4.2 Halogen Lamps : 2
4.3 Print paper : 10 Rolls/Z Fold
4.4 Dust cover.

5 Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%
5.2 The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7 Standards and Safety

7.1 Comprehensive training for lab staff and support services till familiarity with the system.
7.2 Should be FDA or CE approved product

8 Documentation

8.1 User/Technical/Maintenance manuals to be supplied
8.2 Certificate of calibration and inspection from factory.
8.3 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.4 List of important spare parts and accessories with their part number and costing.

8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.
The job description of the hospital technician and company service engineer should be clearly spelt out.

Item No: 7

ELISA WASHER

1. Description of Function
    1.1 ELISA Washer is required to wash excess antigens from ELISA Plates compatible with 96 well Flat/U/V bottom micro plate .

2. Operational Requirements
    2.1 Automatic system is required.

3. Technical Specifications
    3.1 Auto washer for 96 well plates
    3.2 Dispensable wash volume 50 - 300 µl.

    3.3a Residual Volume -<0.3ul
    3.4 Aerosol Shield for user safety.
    3.5 In built shaking facility.
    3.6 Integrated vacuum and dispensing pumps to insure accurate washing.
    3.7 It should have accuracy of 0.1mm for bottom washing, crosswise aspiration and overflow washing.
    3.8The washer should have waste bottle sensor to detect high liquid waste level.

4. System Configuration Accessories, spares and consumables
    4.1 8-12 channel manifold, all tubing sets, wash, rinse and waste bottles
    4.2 Maintenance kit to be provided.

5. Environmental factors
    5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%
    5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6. Power Supply
    6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
    6.2 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7. Standards and Safety
    7.1 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001
    applicable to manufacturers and service providers that perform their own design activities.
    7.2 Should be FDA or CE approved product
    7.3 Comprehensive training for lab staff and support services till familiarity with the system.

8. Documentation
    8.1 User/Technical/Maintenance manuals to be supplied
    8.2 Certificate of calibration and inspection from factory.

8.3 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.4 List of important spare parts and accessories with their part number and costing.
8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Item No: 8

Fully Automatic Chemiluminescence Immunoassay Analyser

1. Fully Automated Random Access System: Immunoassay of more than 90 different parameters: all Hormones, all Tumor Markers, all Cardiac markers.

2. System should be able to perform Routine & ST A T assays
3. The Equipment should have a Throughput of not less than 200 tests per hour
4. Should have atleast two Precision Syringes for accurate delivery of Samples and Reagents.
5. System should have continuous Loading of Samples and Reagents. Must also have 12 or more reagent loading at a time & Triple Marker test capability.
6. Facility to process various body fluids like serum, plasma, urine etc
7. Facility for detection of clot, bubble, viscosity and inadequate sample.
8. Facility for onboard dilution and reflex dilution for high and abnormal samples.
9. Should have disposable tip sampling system / effective wash technique to prevent carry over
10. At least 15- 20 parameter must be done at one time
11. Inbuilt QC system to monitor the quality of result obtained.
12. Should have the self-diagnosis and error recovery system with on board operation guides for efficient trouble shooting purpose
13. Incubation period should not be more than 20 minutes.
14. Onboard reagent refrigeration should be there
15. To minimize evaporation effects incase of reagents, the reagent bottles should be automatically opened and closed onboard the analyzer after use
16. Equipment must have a integrated Water and Probe Wash system. Centrifugal Washing technique and Automatic reagent level indication by Sensors.
17. Audible and Visual Alarms for all error messages.
18. System should include startup kits of fT4, fT3, TSH , PSA, B12, folic acid, cortisol, ferritin, CA125 each of 100 test along with calibrators, control & standard accessories for standardization of instrument.
19. The Equipment should have flexible Windows based software, LIS interface and real time system monitoring. Optional Bar Coding & Color Coding with State of the Art Software.
20. The equipment should be managed by a Computer and have RS232 interface, software for control. Data evaluation & management. Extensive QC graphics including L-J plots, QC management. The Specification of the computer should be having a microprocessor of speed not less than 3.0 GHz, 4 GB RAM, 500 GB HDD, scroll mouse, CD/DVD R/W Drive with 17" TFT/LCD Color Monitor with Windows Operating system and compatible Laser jet

printer for documentation having minimum 600 DPI resolution, not less than 12 pages per minute speed.

21. Compatible on line UPS with at least one hour battery backup along with appropriate Laser printer.
22. The price of all consumables should be quoted separately unit wise and the price should be frozen for the next 5 year along with pack size
23. System Configuration Accessories, spares and consumables
    - List of important accessories and their cost to be mentioned
24. Power Supply
    - Power input to be 220-240VAC, 50Hz
25. Environmental factors
    - The unit shall be capable of operating in ambient temperature of 5-40 ° C and relative humidity of less than 70%

26. Standards, Safety and Training
    - Attach original manufacturer's product catalogue and specification sheet. Photocopy/computer print will not be accepted. All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well as on technical bid corresponding to technical specifications.
    - Should have European CE / USFDA certification

Item No: 9

ELISA READER HIGH END WITH WASHER

Equipment Specifications for Fully Automatic, Walk away ELISA/IMMUNOASSAY Analyzer - High End

1. Description of Function
   1.1 ELISA System is required to Read the Color Change in ELISA Plates/strip, automatic programmable washing & dispensing system high throughput.
2. Operational Requirements
   2.1 Fully Automated ELISA System with 4 Microplates assay modular design for reader, washer & incubators.
   2.2 Integrated Robotic sample processor.
   Should have an open system for different makes kits & manual over ride.

3. Technical Specifications
   3.1 Predilution facility should be present
   3.2 Random access, provision for multiple assays.
   3.3 Parallel sample pipetting should be present
   3.4 Grating based continues measurement of 400-700 nm.
   3.5 Minimum 12 measurements.
   3.6 16 ways manifold washing with minimum 4 wash channels.
   3.7 Volume of wash liquid dispensed variable & adjustable.

3.8 User friendly software with option for manual intervention
3.9 Residual volume/ well should be <3µl
3.10 User friendly software with option for manual intervention
3.11 Temp. range-room temp to 45 deg C +/- 1 C.
3.12 Top & Bottom incubator.
3.13 Liquid & Clot/foam/bubbles detection should be present.
3.14 Color monitoring check should be provided
3.15 There should be no carryover of sample.
3.16 Password protection to prevent unauthorized person's access to software.
3.17 Printer to provide printed reports of tests. Patient name, ID keyboard entry & individual report printouts in preset format.
3.18 Teflon coated metal/Disposable probes.
3.19 Facility to store at least 50 assay protocols
3.20 Facility to program samples, standards and controls in replicates
3.21 Display of assay scheduling, start and finish times
3.22 Automatic Quality Control Equations like Westgard rules, Levy Jennings charts.
3.23 Curve fits like Cubic Spline, Sigmoid, Polygon, LogLog, 4-parameter, point to point, Linear, Quadratic, spline, lin/log.

3.24 Reader Specification

Dynamic Range	0.0-3.0 OD
Precision	<2% CV (2-3.0 OD)
Linearity	+/- 1% (<2.00 OD)
Accuracy	+/- 0.005 OD or 2.5%

3.25 Washer Specifications –
Manifold configuration 8-Way
Wash cycles possible –not less than five
3.26 Incubator Specifications –

Temperature minimum range	25- 40°C
Temperature accuracy	+/- 1°C

Facility for shaking
3.27 Sample pipetting –

Precision at 25ul	<3% CV
Accuracy at 25 ul	+/- 2%
Dispensing volume	minimum 5 µl

3.28 Reagent Pipetting –

Reagent Pipetting precision	<3% CV
Reagent Pipetting Accuracy	+/- 2%

4. System Configuration Accessories, spares and consumables
4.1 System as specified-
4.2 All consumables required for installation and standardization of system to be given free of cost.
4.3 20 nos. uncoated micro well plates to be supplied

5. Environmental factors
    5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
    5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6. Power Supply
    6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
    6.2 Suitable UPS with one hours backup.

7. Standards and Safety
    7.1 Comprehensive training for lab staff and support services till familiarity with the system.
    7.2 Should be US-FDA or European CE approved product

8. Documentation
    8.1 User/Technical/Maintenance manuals to be supplied
    8.2 Certificate of calibration and inspection from factory.
    8.3 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
    8.4 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
    8.5 List of important spare parts and accessories with their part number and costing.

Item No: 10

Anaerobic Workstation

1. Description of Function
    1.1 An anaerobe can be described as bacteria that grow better in the absence rather than the presence of air. The workstation to grow these bacteria for clinical investigation is Anaerobic Workstation.

2. Operational Requirements
    2.1 Temperature and Humidity Controlled Anaerobic Incubator system is required.
    2.2 Oxygen Free System

3. Technical Specifications
    3.1 Construction material of the chamber: should be Durable, Non Corrosive metal pref S.S. Front panel transparent pref Acrylic Sheet /non-breakable glass to ensure better visibility & insulation.
    3.2 Incubation Capacity: 50-60 plates.
    3.3 Options for minimum 3 separate gases or premixed anaerobic gas
    3.4 Atmospheric conditioning system using Catalyst and Anotox.
    3.5 Liquid anaerobic indicator.
    3.6 Incubator Temp. Range: +5° above Ambient to 70 deg C
    3.7 Vacuum Pump should be available.

3.8 Temp. Uniformity: +/- 0.2C
3.9 Digital Display of Temperature, time, pressure and humidity should be available.
3.10 Output for Data Acquisition System; PC and Printer.

4. System Configuration Accessories, spares and consumables
   4.1 System as specified-

5. Environmental factors
   5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
   5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6. Power Supply
   6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
   6.2 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7. Standards and Safety
   7.1 Should be FDA or CE approved product
   7.2 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001applicable to manufacturers and service providers that perform their own design activities.

8. Documentation
   8.1 User/Technical/Maintenance manuals in original and in English (computer generated photocopy format shall not be accepted).
   8.2 Certificate of calibration and inspection from factory.
   8.3 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
   8.4 List of important spare parts and accessories with their part number and costing
   8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
   8.6 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.

Item No: 11

AUTOMATED MYCOBACTERIUM CULTURE SYSTEM

Equipment Specifications for Automated Mycobacterium Culture System

1. Description of Function
   1.1 Mycobacterium, growth, culture & Sensitivity are required to be done on various samples.

2. Operational Requirements
   2.1 Fully automated system capable to culture mycobacteria along with drug susceptibility testing facility.

3. Technical Specifications
   - 3.1 Should be able to characterize the isolate as far as possible.
     Should work on non-radiometric technology
   - 3.2 System should have, inbuilt calibration check, touch screen monitor. Should have LIS compatibility
   - 3.3 Should have modular design which is upgradeable and should be FDA approved
   - 3.4 Should be able to monitor the growth of organisms continuously in each cell
   - 3.5 System should be capable of exporting data to the data management system for long-term storage, and should have the facility to analyze delayed specimens with the routine bottles.
   - 3.6 Should be able to analyze sensitivity data from the inoculated bottles
   - 3.7 Capacity: 300 bottles (minimum),
   - 3.8 Should include data management system and software to analyze and store the data.
   - 3.9 Easy to use software for patient information, entry and storage. Long term data storage facility, tracing patient by name, I.D.Hospital registration number.
   - 3.9 Should have inbuilt incubator with facility for decontamination.

4. System Configuration Accessories, spares and consumables
   - 4.1 System as specified-
   - 4.2 All consumables required for installation and standardization of system to be given free of cost.

5. Environmental factors
   - 5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
   - 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6. Power Supply
   - 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
   - 6.2 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7. Standards and Safety
   - 7.1 Should be US - FDA or European CE approved product

8. Documentation
   - 8.1 Certificate of calibration and inspection from factory.
   - 8.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
   - 8.3 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
   - 8.4 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
   - 8.5 List of important spare parts and accessories with their part number and costing.

Item No: 12

BIOLOGICAL SAFETY CABINET CLASS II-A

1. Description of Function
   1.1 Bio safety cabinets are used to provide primary containment in the laboratory when the investigator is using potentially infectious materials.

2. Operational Requirements
   2.1 Protection for operator, environment and the product, from aerosols and microorganisms
   2.2 Microprocessor/Microcontroller/Microcomputer controlled system.

3. Technical Specifications
   3.1 Outer Body made of MS Steel with epoxy Powder coated (dimensions4x2x3 feet with variation range +/- 3inches
   3.2 HEPA/ULPA filters with 99.999% efficiency for particles ³ 0.3 micron (H14 class according to ENI 822)
   3.3 Automatic speed compensation system against clogged main HEPA/ULPA filter Pre-filtration unit with retention of 10 to 15 micro meter
   3.4 Air Circulation to vertical with 30% exhaust and 70% recirculation
   3.5 Single stainless steel perforated working platform
   3.6 Alarms for power failure and door opening
   3.7 Should be fitted with UV light > 800 lux
   3.8 High-speed centrifugal blower with lifetime lubricated
   3.9 Noise level <58dBA, Elapsed hour counter
   3.10 DOP test outlet
   3.11 Fluorescent lamp to obtain powerful glare-free lighting
   3.11 On-site installation and appropriate certificate to be provided
   3.12 On/Off switch with key lock.
   3.13 Gas connection should be provided in the cabinet
   3.14 Quote for BOP (Blow Out Prevention) tested Hepa filters separately

4. System Configuration Accessories, spares and consumables
   4.1 As specified

5. Environmental factors
   5.1 Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
   5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
   5.3 The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.
   5.4 One filter set replacement should be included in CMC once in a year

6. Power Supply
   6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
   6.2 Reset table over current breaker shall be fitted for protection
   6.3 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7. Standards and Safety
    7.1 Should be FDA or CE or ISI approved product
    7.2 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450

8. Documentation
    8.1 User/Technical/Maintenance manuals to be supplied
    8.2 Certificate of calibration and inspection from factory.
    8.3 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
    8.4 List of important spare parts and accessories with their part number and costing. available in stock with the supplier.
    8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
    8.6 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

Item No: 13

Electrophoresis System (Vertical and Horizontal with western Blot)

1. Description of Function
    1.1 Of the various types of electrophoresis, Other types, protein (or vertical) electrophoresis, utilizes apparatus for analyzing DNA, RNA and Proteins.

2. Operational Requirements
    2.1 Complete system for rapid electrophoresis of proteins & nucleic acids

3. Technical Specifications
3. Vertical Gel apparatus :
    3.1 Should be able to run two slab gels 10x8 cm approx. simultaneously
    3.2 Complete Gel casting system for casting multiple gels
    3.3 Power connector integral with safety lid
    3.4 Silicon rubber gaskets
    3.5 Supply at least 4 sets of 2mm thick notched and plain glass plates
    3.6 Supply at least 4 sets of 1.0 mm spacers
    3.7 Supply at least 4 Nos. of 1.0 mm thick comb for 8-24 samples

4. Horizontal Gel Apparatus
    4.1 Gel tanks sizes 8x11 inches (midi gel apparatus)and 3x 6 inches (mini gel apparatus) with platinum electrodes and dams.
    4.2 Complete Gel casting system for casting multiple gels
    4.3 Power connector integral with safety lid
    4.4 Supply at least 4 sets of gel casting trays
    4.5 Supply at least 6 Nos. of 1.0 mm thick comb for 8-20 samples

5. Compatible DC Power supply

5.1Compatible microprocessor based power supply to run at least 2 units at constant voltage or current with automatic cross over
5.2 Output range programmable,10-500V, 4-500 mA in 1 mA step, 100 W maximum
5.3 Single-unit increments in settings and read-outs for precision and reproducibility
5.4 Easy to read digital display
5.5 Ensure safety features for overload, sudden load change, short circuit protection etc. and personal and environmental protection
5.6 Automatic recovery after power failure
5.7 Electro Blotter for transfer of proteins from acrylamide gel to nitrocellulose

6.1 Vertical Tank with safety lid and connecting leads.
6.2 Blotting pads with holders -2 Nos. compatible with the vertical gel apparatus.

7. System Configuration Accessories, spares and consumables
   7.1 As specified

8. Environmental factors
   8.1 Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
   8.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
   8.3 Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.

9. Power Supply
   9.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
   9.2 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

10. Standards and Safety
   10.1 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements
   10.2 Should be FDA or CE approved product
   10.3 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

11. Documentation
   11.1 User/Technical/Maintenance manuals to be supplied
   11.2 Certificate of calibration and inspection from factory.
   11.3 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
   11.4 List of important spare parts and accessories with their part number and costing.
   11.5 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
   11.6 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.

Item No : 14

Deep freezer(-20 deg C) - High Volume

1. Description of Function
   1.1 Deep Freezers are required to preserve blood and blood products, vaccinations etc at specified temperature.

2. Operational Requirements
   2.1 Vertical Freezer, at least double door with adjustable 6 to 8 shelves (frost free)
   2.2 Separate Chamber racks to be pulled out for easy handling
   2.3 Non-CFC refrigerant

3. Technical Specifications
   3.1 Capacity within 275L to 300L
   3.2 Digital display of set and actual temperature, with audiovisual alarm
   3.3 No condensation on storing material with automatic electric defrost
   3.4 Construction:
   Solid rust free cabinet to prevent corrosion and lockable castor wheels.
   3.5 Refrigeration System
   Heavy Duty refrigeration system, maintenance free, below -20 deg C (± 1 Deg. C) with hermetically sealed refrigeration compressors and reliable refrigeration to minimize noise and vibration, air cooled with security lock to prevent unintentional switch off shall be supplied. It should have maximum cooling time hours at maximum ambient temperature of 33deg C. The equipment should be of continuous duty and frost free.
   3.6 Alarm
   It should also have audio visual Electronic Alarm System independent of power supply.

   3.7 Insulation High density polyurethane or equivalent Gaskets - Double seal silicon.
   3.8 Freezer must be manual defrost
   3.9 Should have a keyed on/off switch. and must have interior lighting with external on/off switch
   3.10 Must have digital temperature control with hi/lo audible and visual temperature alarms and low battery alarm.
   3.11 must use forced-air circulation to maintain internal conditions

4. System Configuration Accessories, spares and consumables
   4.1 As specified

5. Environmental factors
   5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
   5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40° C and relative humidity of 15-90%

6. Power Supply
   6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

7. Standards and Safety

7.1 Should be USFDA or European CE approved product
7.2 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

8. Documentation
8.1 User manual in English
8.2 Service manual in English
8.3 List of Equipment available for providing calibration and routine Preventive Maintenance Support. As per manufacturer documentation in service/technical manual.
8.4 Certificate of calibration and inspection from factory.
8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
8.6 List of important spare parts and accessories with their part number and costing available in stock with the supplier.

Item No: 15

Pre Vacuum High Pressure Jacketed Horizontal Steam Sterilizer

Specifications:

i. Microprocessor controlled steam sterilizer with provision for manual operation facility.

ii. Inner Chamber Size : [1000 -1100 mm (W) x 1100 - 1400 mm (H) x 2000 -2200mm (L)]

iii. Electrical Power : 18 to 36 KW Or Sufficient wattage of industrial immersion type water heater to generate steam within a reasonable period of time on 3 phase 440V 50HZ ac supply.

iv. Working pressure and Temperature : 15-30 Psi up to 135 degree C

v. Material of construction

vi. Inner chamber , Jacket, Door : SS 316.(5mm-10mm)
vii. Outer Chamber : SS 304 (insulated properly)
viii. Steam generator : Non corrosive SS /Chromium plated Brass
ix. Heater Plate : Brass/Stainless steel
x. Pipe Line : Complete with SS
xi. Stand : Stainless Steel/High quality non corrosive
xii. Steel Instrumentation
xiii. Temperature , Pressure and vacuum gauges
xiv. Steam traps , vacuum driers, water level indicator on steam generator Safety devices
xv. Pressure switch and safety valve, self-locking of door when chamber is under pressure: vacuum breaker for jacket
xvi. Steam generator with gauge glass valves and
xvii. Low water protection with audiovisual indicator.

Additional Accessories required: 1. Heating element 2 Set extra with each machine

Requirements at installation:

1. Necessary Pipeline works for water inlet and steam outlet should be done by the provider.
2. Cable for connecting to wall socket should also be provided

Optional Accessories (To be quoted separately):

1. Gaskets
2. Valves
3. Heating element

Item No: 16

VERTICAL JACKETED AUTOCLAVE

Description of Function: Steam Sterilizers or Autoclaves are required to sterilize objects under high temperature and pressured steam.
Operational Requirements: Suitable for hospital dressings, linen, surgical instruments, glassware, culture media and laboratory ware etc.
Technical Specifications:-

- Single door high pressure steam sterilizer with double/triple walled, steam jacket and separate boiler
- Material of construction:
  - **a.** Sterilizer chamber SS 316
  - **b.** Door SS 316
  - **c.** Jacket MS
  - **d.** Loading carriage SS 316
  - **e.** Transfer trolley: MS, painted
  - **f.** Door Gasket: Silicon or better
  - **g.** Insulation: fiber glass resin bonded wool or better
  - **h.** Insulation cover: SS sheets
- Chamber capacity 100Ltrs
- Operating temperature 121^0C - 138^0C pressure 1.1 to 2.2 kg/ cm^2 of steam pressure
- Sterilizer should be provided with steam generator
- Spring loaded safety valves and automatic vacuum breaker for jacket
- Removable plug screen for chamber drain
- SS baffle for even steam distribution in the chamber
- Safety valve protection against poor pressure.
- Safety lock for door :pressure lock safety device
- Low water off

System Configuration Accessories, spares and consumables:

- System as specified-
- Suitable Water softener to be provided.
- All items required for installation & demonstration to be provided like cabling, water connection, drainage etc.

Power Supply: Power input to be 220-240VAC, 50Hz,/440 V 3 Phase as appropriate and fitted with plug compatible with local sockets
Standards and Safety:

- Comprehensive onsite training for lab staff and support services till familiar with the system.
- Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450 (BIS)
- Should be US-FDA/ European CE standard approved product.

Documentation:

- User/Technical/Maintenance manuals to be supplied
- Certificate of calibration and inspection from factory.
- List of important spare parts and accessories with their part number and costing.
- Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
- Should submit a report of quality checks using biological indicator.

Item No : 17

Water Jacketed Co2 Incubator

1. Description of Function
   1.1 CO2 Incubator maintains a fixed concentration of CO2 in a uniform temperature in closed cabinet.

2. Operational Requirements
   2.1 The system required should be able to minimize contamination and compensate for the CO2 Leaks on opening of the container.

3. Technical Specifications
   3.1 Capacity: within 120 -150 L
   3.2 Interior chamber: Stainless steel for easy cleaning and decontamination
   3.3 Unique Six-Sided Direct Heating to ensure stable temperature control, excellent uniformity, and rapid recovery with no overshoot. Fanless convection circulation to provide chamber homogeneity, eliminate vibration & reduces sample evaporation.
   3.4 Hepa Filters (99.98% efficient) at the inlet to minimize contamination should be provided at the inlet.
   3.5 Timer: 1 min. to 100 hours and hold position
   3.6 Temperature range: +5° C to 50°C
   3.7 Temp Accuracy +/-1% of required temp, with inbuilt Temp.Sensor
   3.8 Audiovisual Alarm to Indicate when temperature deviates more than 1°C from set point, and when program or time has finished. Alarm may be muted.
   3.9 There should be a Membrane Keypad with LCD/LED to set and display operating parameters, current status, running time and alarm conditions for time and temperature.
   3.10 Internal glass door for the observation
   3.11 Dual decontamination cycle at 95 deg C (wet decontamination) and at 145 deg C (dry sterilization) should be available.
   3.12 CO2 Range- 0-20%; CO2 Accuracy: +/- 0.5%; CO2 Inlet pressure 1.5 bars (app)
   3.13 Compensation: Temperature compensation @ 0.5 deg C / min and CO2 Compensation up to 5%+/-0.5% in 5 minutes.
   3.14 High Humidity – Chamber to achieve 95% RH, minimizing sample evaporation. Independent door heater to eliminate condensation on inner glass surfaces should be available.
   3.15 72-Hour Data Storage for CO2 concentration, temperature, alarms and door openings should be automatically recorded for on-screen display.

3.17 PC Connectivity through RS232C for data acquisition and printing.
3.18 Communication protocols HL-7 for Networked environments to HIS
3.19 Minimum 4 adjustable shelves should be available.
3.20 Interior lighting facility, insulated door fitted with heavy hinges handles locking, mechanical door lock.
3.21 Should be supplied two CO2 cylinders & regulator.
3.22 CO2 Incubator should be supplied with 4 split doors.
3.23 Should be dedicated with CO2 gas analyzer with kit.

4. System Configuration Accessories, spares and consumables
   4.1 System as specified-

5. Environmental factors
   5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
   5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6. Power Supply
   6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
   6.2 Resettable over current breaker shall be fitted for protection
   6.3 Suitable voltage corrector/stabilizer
   6.4 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7. Standards and Safety
   7.1 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.
   7.2 Should be compliant with IEC 61010-1:covering safety requirements for electrical equipment for measurement control and laboratory use.
   7.3 Should be FDA or CE approved product
   7.4 Attach original manufacturer's product catalogue and specification sheet. Photocopy/ computer print will not be accepted. All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well as on technical bid corresponding to technical specifications.
   7.5 Comprehensive training for lab staff and support services till familiarity with the system.

8. Documentation
   8.1 Certificate of calibration and inspection from factory.
   8.2 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
   8.3 List of important spare parts and accessories with their part number and costing.
   8.4 User/Technical/Maintenance manuals to be supplied
   8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
   8.6 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue.

Item No: 18

Automated Slide Stainer

1. Description of Function
   1.1 Automatic Slide Stainer is used for staining histological and cytological slides.

2. Operational Requirements
   2.1 Should be programmable for routine H & E & other special stains with facility for imuno-histochemical stains & memory of various staining procedures

3. Technical Specifications
   3.1 Should hold atleast 80 slides per basket
   3.2 Basket chemical capacity 750-1000ml
   3.3 2(two) water stations with 24 work stations,(Programmable) with timing in minutes &second.
   3.4 Facility for single & double load.
   3.5 Agitational facility
   3.6 Can be connected with any make automatic cover-slipper

4. System Configuration Accessories, spares and consumables
   4.1 System to be supplied along with the following, free of cost
      a. Biochemical baskets - 6 Nos.
      b. Slides Hangers - 4 Nos.
      c. All consumables required for installation and standardization of system to be given free of cost.
   4.2Equipment should be complete in all aspects along with all accessories
   4.3 Equipment should be working from day one of installation.

5. Environmental factors
   5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
   5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
   5.3 A fume hood completely covering the slide plates to prevent hazardous fumes from entering the lab area and an activated charcoal filter to minimize solvent vapors should be provided.

6. Power Supply
   6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
   6.2 Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)
   6.3 Suitable UPS with maintenance free batteries for minimum four-hour back-up should be supplied with the system.

7. Standards and Safety
   7.1 Should be US FDA or European CE approved product
   7.2 Comprehensive training for lab staff and support services till familiarity with the system.

8. Documentation
   8.1 Certificate of calibration and inspection from factory.
   8.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
   8.3 User/Technical/Maintenance manuals to be supplied
   8.4 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
   8.5 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
   8.6 List of important spare parts and accessories with their part number and cost.
   8.7 List of installations, List of user feedback and performance certificates to be provided.

Item No: 19

Automatic Tissue Processor

1. Description of Function

1.1 Tissues from the body taken for diagnosis of disease processes are processed by the tissue processor in the histology laboratory to produce microscopic slides that are viewed under the microscope by pathologists.

2. Operational Requirements

2.1 Latest Model Fully automatic system with all accessories is required.

2.2 Computer controlled flow through tissue processor to automatically perform fixation, dehydration, cleaning, and paraffin impregnation of tissue. Specimens should remain stationary during processing in a fully enclosed retort while processing reagents and molten paraffin are moved to and from the chamber in a programmed sequence.

3. Technical Specifications

3.1 Capacity (a)200-250 cassettes in organized basket(b) 275-300 random basket

3.2 Reagent stations – Number of vessels: 10 (1.8- 2 litres each)

3.3 Paraffin stations– Number: 3 (1.8- 2 litres each)
– Temperature setting range: 35 - 70°C
– Over temperature release: 75°C >(± 5°C)

3.4 Following programs should be available:
– Number of programs: 10-12 (selectable)
– Programmable time per station: From 1 minute to 100 hours
– Spiral agitation, Vertical agitation, and gentle spinning should be programmable.
– Program can be delayed start or finished upto 5-7 days in advance.
-3 Flush options

3.5 Fume extraction system, with active charcoal filter.

3.6 Should be an open system capable of using all consumables from open markets.

3.7 Display of time, date, cycles, step by step record of processing.

3.8 Automatic in process reagent and wax rotation facility.

3.9 Pre heating facility.

3.10 Remote alarm to signal possible problems and reagent change etc.

3.11Reagent change based on specific gravity of the first alcohol.

3.12 Clear door/lid for viewing specimens during processing.

3.13 Power back up with facility for the basket to remain immersed in solution during power failure.

4. System Configuration Accessories, spares and consumables

4.1 Equipment should be complete in all aspects along with all accessories.
4.2 Equipment should be working from day one of installation.
4.3 Start-up consumables should be provided.
a. 12,000 cassettes with lids.
b. 12,000 wax moulds
c. Extra beakers - 02 nos.
d. Tissue baskets - 02 nos.

5. Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6. Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Suitable UPS with maintenance free batteries for minimum four-hour back-up should be supplied with the system.

7. Standards and Safety

7.1 Should be US FDA or European CE approved product
7.2 Comprehensive training for lab staff and support services till familiarity with the system.

8. Documentation

8.1 Certificate of calibration and inspection from factory.
8.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
8.3 User/Technical/Maintenance manuals to be supplied
8.4 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
8.5 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.6 List of important spare parts and accessories with their part number and costing.
8.7 List of installations, List of user feedback and performance certificates to be provided.

Item No: 20

BINOCULAR MICROSCOPES

1 Description of Function

Binocular Microscope is used for all test in the laboratory requiring microscopic examination.

2 Operational Requirements

2.1 Microscope body- Ergonomic design microscopy body with built in transmitted Kohler illumination for uniform illumination throughout the field of view including periphery

3 Technical specifications

3.1 Optical System:

Infinitely corrected optics par focal, plan achromatic lenses with anti-fungal properties.

3.2 Illumination:

- Built in transmitted Koehler illumination.
- 6 V, 20 to 30 W halogen bulb
- 220-240V 0.85/0.45A 50Hz
- Power operation 100-240 V, 50-60 Hz, universal voltage, SMPS circuit for constant voltage.

3.3 Focusing

Coaxial coarse and fine adjustment

- Stage height movement by roller guide (rock & pinion)
- Upper limit stopper
- Tension adjustable on coarse focus adjustment knob

3.4 Revolving nosepiece

- Quintuple with inward tilt

3.5 Observation tube:

- Tube inclination – 30°C-45°C
- Interpupillary distance adjustment range – minimum 50 to 70 mm
- Mechanical tube length-160mm

3.6 Stage

- Movement range – 76 mm X - direction X 50mm Y - direction
- Rectangular scratch resistant stage with right hand control with double slide holder and vernier calipers on X Y axis.

3.7 Condenser

- Type – Abbe condenser
- N.A. – 1.2 dry type
- Aperture iris diaphragm - built – in
- Filter holder with removable blue filter.

3.8 Objectives, Plan Achromat antifungal treated infinity corrected parfocal (60/45mm) 4x, 10x, 20x, 40x & 100x

3.9 Minimum working distance for 100X should be 0.13 to 0.2 mm

3.10 Eyepiece

- 10X with F.N 20

All the necessary adapters and power cords should be provided along with following accessories free of cost with each microscope for functioning of microscope :-

I) Halogen bulb 6V 20 to 30 watt- one Nos.
II) Oil for oil immersion lens – 1 bottle
III)

4. Environmental factors

4.1 The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%

4.2 The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%

5. Power Supply

5.1 Power operation 100-240 V, 50-60 Hz, universal voltage, SMPS circuit for constant voltage.

6. Standards and Safety

6.1 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001applicable to manufacturers and service providers that perform their own design activities.

6.2 Should be US - FDA or European CE approved product

7. Documentation

7.1 Certificate of calibration and inspection from factory.

7.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.

7.3 User/Technical/Maintenance manuals to be supplied

7.4 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.

7.5 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

7.6 List of important spare parts and accessories with their part number and costing.

7.7 Demonstration of the equipment is mandatory.

Item No: 21

FIVE- HEAD RESEARCH MICROSCOPE

1 Description of Function

Five head research microscope with projection facility is used for all tests in laboratory including research works requiring microscopic examination. The projection facility is required for post graduate students research teaching and conferencing in department.

2. Operational Requirements

2.1 Microscope body- Ergonomic design microscopy body with built in transmitted Kohler illumination for uniform illumination throughout the field of view including periphery

3. Operational Requirements

3.1 The instrument should be sturdy, fitted with **plan** achromatic objectives 2/2.5x, 4x; 10x, 20x ,40x(spring loaded) and 100x(spring loaded) on a reversed sextuple nosepiece with click stops.

3.2 The optical system should be color corrected for infinity with ant fungus property built in transmitted Koehler illumination.

3.3 The microscope stand should have co-axial focusing knobs for coarse and fine adjustment with upper limit stopper

3.4 Preset button for automatic light intensity level for photomicrography.

3.5 Wide field high point eye piece 10x, 22 mm with diopter adjustment (+2 to -8) and rubber eye shield (pair) with interpupillary distance of 48 to 75 mm.

3.6 Trinocular eye piece inclined at 30 – 45° with 360° rotation.

3.7 Rectangular scratch resistant stage with right hand control with double slide holder and vernier calipers on X Y axis.

3.8 Plan achromatic universal type swing-out condenser (Dry Type) with numerical aperture 0.9- 1.2.

3.9 Transmitted light filters for day light, green and neutral light with density filters built-in the basic stand.

3.10 Illumination – 12 V, 100 W quartz halogen lamp with long life.

3.11 Power – 220 ± 10 V, 50 Hz

3.12 Vinyl dust cover for entire unit

3.13 Multihead ergonomic 1 Trinocular set (with three way light path selector, 100:0; 80:20;0:)+ 4 Binocular heads (2 on each side) with complete two color pointer unit (1 pc), ac adapter (1 pc), power cord (1 pc)

3.14 All the necessary adaptor and power cord should be provided for functioning of microscope.

3.15 One additional halogen lamp should be provided.

3.16 Instruction and operational manual should also be provided.

3.17 Built in auto photo preset switch should be provided

3.18 Digital camera system

Digital color camera capable of handling brightfield, fluorescence, DIC, Darkfield images with 2/3" high density CCD chip, approximately 8 million pixel resolution, live display MP Mode: (5M interlace mode- 5.9 frames/sec; 23 frame per/sec with ROI & Binning) Binning modes: 2x2,4x4, digital zoom: upto 16x (8steps): interval shooting: 5 sec, 12hr intervals; software should come alongwith camera: for acquiring & capturing of images should have separate modes for different microscopy techniques i.eBrightfield, Fluorescence, DIC, Darkfield images.

Storage option in TIFF/RAW and JPEG formats optical zoom > 10xupto 20x preferred.

Branded with intel lazer quad processor 2.4 GHZ/320GB level 5 RADHDD stack.

3.19 Data collection and processing unit:

Branded with, 2 GB RAM, DVD Writer, 20" TFT Color Monitor, Multimedia Kit along with UPS. With Graphics accelerator multimedia card with greater than 250 mb on board RAM

3.20 Note: Microscope should be upgradable to fluorescence attachment (130w), phase contrast, darkfield, Polarising, DIC Attachment, Multiviewing attachment (10 persons) etc. in future.

3.21 Software, Printer: Color laser MFD with>600 DPI minimum resolution, with wireless connectivity. Computer: Onboard LAN card, wireless 802: 11W card Printing: Highend: Optical mouse pointing device > 1000 DPI

Software: Photography Editing, storage, filing and retrieval software

Photoshop CS3 professional

Photoshop Album

Antiviral, Antispyware, fire wall security software.

Digital control of camera exposure and image capture.

4 Environmental factors

4.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%

4.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

5 Power Supply

5.1 Power operation 100-240 V, 50-60 Hz, universal voltage, SMPS circuit for constant voltage.

6 Standards and Safety

6.1 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

6.2 Should be US - FDA or European CE approved product

7 Documentation

7.1 Certificate of calibration and inspection from factory.

7.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.

7.3 User/Technical/Maintenance manuals to be supplied

7.4 Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist.

7.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

7.6 List of important spare parts and accessories with their part number and costing.

7.7 Demonstration of the equipment is mandatory.

Item No:22

TRINOCULAR MICROSCOPES

1 Description of Function

Trinocular Microscope is used for all test in the laboratory requiring microscopic examination.

2 Operational Requirements

2.1 Microscope body- Ergonomic design microscopy body with built in transmitted Kohler illumination for uniform illumination throughout the field of view including periphery

3. Technical specifications

3.1 Optical System:

Infinitely corrected optics par focal, plan achromatic lenses with anti-fungal properties.

3.2 Illumination:

- Built in transmitted Koehler illumination.
- LED source.

3.2 Focusing

- Coaxial coarse and fine adjustment
- Stage height movement by roller guide (rock & pinion)
- Upper limit stopper
- Tension adjustable on coarse focus adjustment knob

3.3 Revolving nosepiece

- Quintuple with inward tilt

3.4 Observation tube:

- Tube inclination – 30 -45 ^{0}
- Interpupillary distance adjustment range – minimum 50 to 70 mm
- Mechanical tube length-160mm

3.5 Stage

- Movement range – 76 mm X - direction X 50mm Y - direction
- Rectangular scratch resistant stage with right hand control with double slide holder and vernier calipers on X Y axis.

3.6 Condenser

- Type – Abbe condenser
- N.A. – 1.2 dry type
- Aperture iris diaphragm - built – in
- Filter holder with removable blue filter.

3.7 Objectives, Plan Achromat antifungal treated infinity corrected parfocal (60/45mm) 4x, 10x, 20x, 40x & 100x (Oil Immersion)

3.8 Minimum working distance for 100X should be 0.13 to 0.2 mm

3.9 Eyepiece

- 10X with F.N 20

All the necessary adapters and power cords should be provided free of cost with each microscope for functioning of microscope :-

I) Oil for oil immersion lens – 1 bottle

3.10 Digital camera system (Price to be quoted separately)

Digital color camera capable of handling brightfield, fluorescence, DIC, Darkfield images with 2/3" high density CCD chip, approximately 8 Mega pixel resolution, live display MP Mode: (5M interlace mode- 5.9 frames/sec; 23 frame per/sec with ROI & Binning) Binning modes: 2x2,4x4, digital zoom: upto 16x (8steps): interval shooting: 5 sec, 12hr intervals; software should come alongwith camera: for acquiring & capturing of images should have separate modes for different microscopy techniques i.e Brightfield, Fluorescence, DIC, Darkfield images.

Storage option in TIFF/RAW and JPEG formats. Branded with intel lazer quad processor 2.4 GHZ/320GB level 5 RADHDD stack.

3.11 Data collection and processing unit:

Branded with, 2 GB RAM, DVD Writer, 20" TFT Color Monitor, Multimedia Kit along with UPS. With Graphics accelerator multimedia card with greater than 250 mb on board RAM

3.12 Note:

Microscope should be upgradable to fluorescence attachment (130w), phase, contrast, darkfield, Polarising, DIC Attachment, Multiviewing attachment (5 persons) etc. in future.

3.13 Software

Printer:	Color laser MFD with>600 DPI minimum resolution, with wireless connectivity.
Computer:	Onboard LAN card, wireless 802: 11W card
Printing:	
Highend:	Opitcal mouse pointing device > 1000 DPI
Software:	Photography Editing, storage, filing and retrieval software

Photoshop CS3 professional

Photoshop Album

Antivirus, Antispyware, fire wall security software.

Digital control of camera exposure and image capture.

4 Environmental factors

4.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%

4.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

5 Power Supply

5.1 Power operation 100-240 V, 50-60 Hz, universal voltage, SMPS circuit for constant voltage.

6 Standards and Safety

6.1 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

6.2 Should be US-FDA or European CE approved product

7 Documentation

7.1 Certificate of calibration and inspection from factory.

7.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.

7.3 User/Technical/Maintenance manuals to be supplied

7.4 Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist.

7.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

7.6 List of important spare parts and accessories with their part number and costing.

7.7 Demonstration of the equipment is mandatory.

Item No: 23

FULLY AUTOMATIC MOTORIZED ROTARY MICROTOME

1. Description of Function

Rotary microtomes are precision instruments designed to cut uniformly thin sections of variety of tissue specimens for detailed microscopic examination. The microtome operation is based upon rotary actions of hand wheel activating the advancement of a block towards a rigidly held knife.

2. **Operational Requirements**

2.1 Latest model fully automatic system with all accessories are required

3. Technical specifications

3.1 Fully automated motorized rotary microtome along with manual operation having microprocessor controlled panel with provision for motorized cutting via operating panel or foot pedal control
3.2 Precise Micrometer feed system via stepper motor permits precision sectioning selectable at least from 2.0—4.0/6.0 micron in 0.5 micron increments.
3.3 Trimming section selectable from 2 micron onwards.
3.4 The vertical specimen stroke length of 70mm, larger specimen can be sectioned. 3.5 The specimen holder should be clamp type and hold 60 mm size block.
3.6 Suitable Knife holder for high profile and low profile should be provided.
3.7 The specimen retraction should occur on return stroke.
3.8 Knife angle position locking facility should be provided.
3.9 Cold light source.
3.10 Precise specimen orientation with zero point indication, with an orientation 8 ° X-Y axis helps in making perfect orientation of the sample for sectioning.
3.11 Motorized coarse feed in two speeds 30 micron/sec and 90 micron/sec. Variable sectioning speed adjustable from 0.5 to 420 mm/sec.
3.12 Disposable blade holder with lateral displacement feature that can hold both high and low profile blades and knife holder which can accommodate 16 cm C& D type knives.
3.13 Knife holder should be vibration free.
3.14 Integrated section waste tray.
3.15 ption to use both standard knife holder & disposable blade holder

4. System Configuration, Accessories, Spares & Consumables

4.1 Essential Accessories should be provided free of cost along with the equipment.

a) Microtome disposable blades (high profile coated) – 20 packets (50 blades /pack) [1000 nos.]
b) Microtome disposable blades (Low profile coated) – 20 packets (50 blades /pack)
c) C type Knife 16 cm - 3 Nos.
d) Cold plate (Dry Type).
e) Equipment should be complete in all respects along with all accessories.
f) Equipment should be working from day 1 of installation.

5. Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7 Standards and Safety

7.1 Should be US FDA or European CE approved product
7.2 Comprehensive training for lab staff and support services till familiarity with the system.

8 Documentation

8.1 Certificate of calibration and inspection from factory.
8.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
8.3 User/Technical/Maintenance manuals to be supplied
8.4 Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist.
8.5 The job description of the hospital technician and company service engineer should be clearly spelt out
8.6 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.7 List of important spare parts and accessories with their part number and cost.
8.8 List of installations, List of user feedback and performance certificates to be provided.

Item No: 24

SEMI AUTOMATIC MOTORIZED ROTARY MICROTOME

1 Description of Function

1.1.1 Rotary microtomes are precision instruments designed to cut uniformly thin sections of variety of tissue specimens for detailed microscopic examination. The microtome operation is based upon rotary actions of hand wheel activating the advancement of a block towards a rigidly held knife.

2 Operational Requirements

2.2 Latest model Semi-automatic system with all accessories are required

3. Technical specifications

3.1 Semi automated motorized rotary microtome along with manual operation having microprocessor controlled panel
3.2 Precise Micrometer feed system via stepper motor permits precision sectioning selectable at least from 2.0—6.0 micron in 0.5 micron increments.
3.3 Trimming section selectable from 2 micron onwards.
3.4 The maximum vertical specimen stroke length of at least 70mm, larger specimen can be sectioned. The specimen holder should be clamp type and can hold 60 mm size block.
3.5 Suitable Knife holder for high profile and low profile should be provided.
3.6 The specimen retraction should occur on return stroke.
3.7 Knife angle position locking facility should be provided.
3.7 Cold light source.
3.8 Precise specimen orientation with zero point indication, with an orientation 8 ° X-Y axis helps in making perfect orientation of the sample for sectioning.

3.9 Disposable blade holder with lateral displacement feature that can hold both high and low profile blades and knife holder which can accommodate 16 cm C& D type knives.
3.10 Knife holder should be vibration free.
3.11 Integrated section waste tray.
3.12 Option to use both standard knife holder & disposable blade holder.

4. System Configuration, Accessories, Spares & Consumables

4.1 Essential Accessories should be provided free of cost along with equipment
a) Microtome disposable blades (high profile coated) – 20 packets (50 blades /pack) [1000 nos.]
b) Microtome disposable blades (Low profile coated) – 20 packets (50 blades /pack)
c) C type Knife 16 cm - 3 Nos.
d) Cold plate (Dry Type).
e) Equipment should be complete in all respects along with all accessories.
f) Equipment should be working from day 1 of installation.

5. Environmental factors

The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7 Standards and Safety

7.1 Should be US FDA or European CE approved product
7.2 Comprehensive training for lab staff and support services till familiarity with the system.

8 Documentation

8.1 Certificate of calibration and inspection from factory.
8.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
8.3 User/Technical/Maintenance manuals to be supplied
8.4 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.
8.5 The job description of the hospital technician and company service engineer should be clearly spelt out
8.6 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.7 List of important spare parts and accessories with their part number and cost.
8.8 List of installations, List of user feedback and performance certificates to be provided.

Item No: 25

Cytocentrifuge

1 Description of Function

1.1 A cytocentrifuge, which operates at a speed of between 200 and 2,000 rpms, forces the cells from a suspension onto a microscope slide as a blotter simultaneously absorbs the suspension medium.
Cytoevaluation is evaluation under microscope.

2 Operational Requirements

2.1 Latest Model Centrifuge for separation of cells found in body fluids.
Cells are directly attached in a monolayer to a microscope slide by means of centrifugal force and a slide and funnel device.

2.2 System made for minimum cell loss.

2.3 Fully automatic with digital display and alarm system.

3 Technical Specifications

3.1 Programmable range of speed for different types of fluids. (approx. up to 2000-3000 RPM)

3.2 Running time : 1-99 mts

3.3 Number of specimen- 10-12 in one cycle.

3.4 Memory to store 20 preset procedures.

3.5 There should be a membrane keypad with LCD/LED Display of Time, Speed and program protocols.

3.6 Audiovisual alarm for out of balance, outside speed tolerance or if the lid is not properly locked. The system will not run if the lid is not locked properly.

3.7 Autoclavable rotor.

3.8 Sturdy cytoclips.

4 System Configuration Accessories, spares and consumables

4.1 System as specified along with each case consisting of
(1 case each) consisting of
1 ml fluid chamber – 1
1 ml filter paper –1
1ml base holder – 1
1 ml chamber cap- 1
6 ml fluid chamber-1
6ml gasket –1
6/12 ml base holder –1
6/12 ml chamber cap-1
12 ml fluid chamber –1
12ml gasket –1

4.2 All standard Accessories 5 Set/Cases Extra to be given free of cost.

4.3 All consumables required for installation and standardization of system to be given free of cost.

5 Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%

5.2 The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

6.2 UPS of suitable rating shall be supplied for minimum 1 hour backup for the entire system

7 Standards and Safety

7.1 Should be US FDA or European CE approved product

7.2 Comprehensive training for lab staff and support services till familiarity with the system.

8 Documentation

8.1 Certificate of calibration and inspection from factory.

8.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.

8.3 User/Technical/Maintenance manuals to be supplied

8.4 Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist.The job description of the hospital technician and company service engineer should be clearly spelt out

8.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
List of important spare parts and accessories with their part number and cost.
List of installations, List of user feedback and performance certificates to be provided.

8.6 Certificate of calibration and inspection from factory.

8.7 List of installations, List of user feedback and performance certificates to be provided.

Item No: 26
Cryostat

1 Description of Function

Cryostat is an equipment used for frozen section to give rapid diagnosis of tissue specimens provided at the time of surgery. It is very important diagnostic tool specially in onco-surgery.

2. Operational Requirement

2.1 Open top, heated sliding window, corrosion proof.

2.2 Stainless steel cryo chamber with good Fluorescent illumination.

3. Technical specifications

3.1 Fluorescent illumination

3.2 Cooling via two separate refrigeration system.

3.3 Temp. of cryo chamber should be at least -30° c

3.4 Facility for integrated peltier quick specimen freezing up to -45° C

3.5 Separate cooling should be adjustable up to -50 ° C.

3.6 Temperature of the cryo chamber should be maintained within ± 2° C of set temperature and maintained by hermetically sealed compressor system

3.7 Automatic programmable defrosting and manual defrosting should also be possible

3.8 Fully motorized microtome – movement controlled by manual as well as foot switch.

3.9 Microtome should be encapsulated to support efficient spray disinfection

3.10 Microprocessor / Microcontroller based touch key control panel with LCD display for all functions including microtome
3.11 Space for other specimen rack minimum 6 blocks .
3.12 Removable section waste tray.
3.13 Section thickness setting must be outside the cryo chamber.
3.14 Disposable blade holder for low and high profile blades and Knife holder which can hold minimum 16 cm C type knife.
3.15 Specimen holder can hold specimen size up to 70 x 50 mm.
3.16 Facility for both 360° rotation as well as movement in X Y axis
3.17 Section thickness cutting 1-6.0 micro meter.
3.18 Specimen retraction around 5.0 micron
3.19 Trimming in steps from 0.5 to 1.5 Microns
3.20 Motorised coarse speed 500 micro meter /sec & 1000 micro meter / sec
3.21 Control for number of sections.
3.22 Cryo cabinet should be of appropriate size.

4. System Configuration, Accessories, Spares & Consumables

All essential accessories for installation and initial startup should be provided free of cost - viz

a) Microtome knife 160 mm. – 4 Nos.
b) Block holder.
c) Two bottle of low temperature oil.
d) High and Low profile blades – 5 packets each.
e) Specimen holder of appropriate size – 20 Nos.
f) Freezing compound at least 10 bottles
g) Glass ant- role device for knives and blades

All other essential accessories required for installation for equipment also to be provided free of cost.

4 Environmental factors
4.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
4.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
5 Power Supply
5.1 Power operation 100-240 V, 50-60 Hz, universal voltage, SMPS circuit for constant voltage.
6 Standards and Safety
6.1 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001
applicable to manufacturers and service providers that perform their own design activities.

6.2 Should be US - FDA or European CE approved product
7 Documentation
7.1 Certificate of calibration and inspection from factory.
7.2 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.
7.3 User/Technical/Maintenance manuals to be supplied
7.4 Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist.

7.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
7.6 List of important spare parts and accessories with their part number and costing.
7.7 List of installations, List of user feedback and performance certificates to be provided.

Item No: 27

Dental Chair (Basic)

1 **Description of Function**
1.1 Dental Chair is the dental chair required for dental examination and dental procedures.

2 **Operational Requirements**
2.1 Physiological dental chair operated by electricity.
2.2 Demonstration of Quoted item is must at predetermined place by the purchaser.

3 **Technical Specifications**
3.1. It should have double articulated head rest.
3.2. It should have two 3 way syringes (tip autoclavable, with 6 spare tips) one on unit side and other on the assistant side.
3.3. It should have two high speed Air Rotor terminals with water control on coupling.
3.4. Should have one air motor terminal .
3.5. Arm of unit should be pneumatically locked
3.6. Removable auxillary tray (stainless steel)
3.7. It should have latest foot operated LED light (min 25,000 LUX)
3.8. It should have Rotatable Water System with removable spittoon
3.9. It should have Medium Vacuum Suction
3.10. It should have following programmes –
- Two programmable working positions
- Spitting and last working position with light ON and OFF automatically
- Return to Zero position with light OFF automatically
- It should have option to Lock the movements of chair

3.11 It should have LED based X-ray viewer
3.12 It should be provided with right arm (options for Fixed, Lateral 90 degree swivel available)
3.13 It should be provided with one doctor's stool with adjustable height & backrest tilt including an adjustable ring for foot rest.

4 System Configuration Accessories, spares and consumables
4.1 System as specified
4.2 All consumables required for installation and standardization of system to be given free of cost.

5 Environmental factors
5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2 The unit shall be capable of operating continuously in ambient temperature of 10-40deg C and relative humidity of 15-90%
5.3 Complete installation & Demonstration of the equipment required after supply.

6 Power Supply
6.1 Power input to be 220-240VAC, 50Hz

7 Standards, Safety and Training
7.1 Should be US-FDA/ European CE approved product (copy of certificate should be submitted along with the bid)

8 Documentation
8.1 User/Technical/Maintenance manuals to be supplied in English.
8.2 Certificate of calibration and inspection.
8.3 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Item No: 28

Dental Chair (High End)

1 **Description of Function**
1.1 Dental Chair is the dental chair required for dental and surgical procedures.

2 **Operational Requirements**
2.1 Physiological dental chair operated by electricity
2.2 Demonstration of quoted item is must at predetermined place by the purchaser.

3 **Technical Specifications**
3.1. It should have double articulated head rest.

3.2. It should have two 3 way syringes (tip autoclavable, with 6 spare tips) one on unit side and other on the assistant side.
3.3. It should have one high speed Air Rotor terminal with water control on coupling supplied with handpieces.
3.4. It should have one high speed fiber-optic air-rotor terminal with handpiece
3.5. One fiber optic micro motor with one fiber optic contra angle hand piece with internal spray and one straight hand piece with internal spray.
3.6. It should have LED light cure unit on unit sides (Min. Intensity 1200 mW/cm2)
3.7. It should have one in-built Piezon LED (fiber-optic) Ultrasonic Scaler with 4 scaler tips.
3.8. It should have infection control system with non-retraction valves (Bio System/ equivalent)
3.9. All handpieces/terminals should be kept on Autoclavable pads. 6 spare autoclavable pads should be supplied
3.10. Arm of unit should be pneumatically locked
3.11. All air tubing of the delivery system can be disinfected internally after every dental procedure
3.12. Removable auxillary tray (stainless steel)
3.13. It should have latest foot operated minimum dual intensity LED Light (35,000 LUX)
3.14. It should have Rotatable Water System with removable spittoon
3.15. It should have Medium Vacuum Suction and High suction (Motorised Suction)
3.16. It should have following programmes –

- Two programmable working positions
- Spitting and last working position with light ON and OFF automatically

- Return to Zero position with light OFF automatically
- It should have option to Lock the movements of chair
- It should have emergency stop control
- Programmable Bowl water and Cup filler water

3.17 It should have LED based X-ray viewer
3.18. It should be provided with right arm (options for Fixed, Lateral 90 degree swivel available)
3.19. It should have multifunctional foot control base (fixed or mobile)
3.20. It should be provided with one doctor's stool and one assistant's stool with adjustable height & backrest tilt including an adjustable ring for foot rest.
3.21. Upholstery of the chair has to be removable for cleaning.

4 **System Configuration Accessories, spares and consumables**
4.1 System as specified
4.2 All consumables required for installation and standardization of system to be given free of cost.

5 Environmental factors
5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2 The unit shall be capable of operating continuously in ambient temperature of 10-40deg C and relative humidity of 15-90%.
5.3 Complete installation & Demonstration of the equipment required after supply.

6 Power Supply
6.1 Power input to be 220-240VAC, 50Hz

7 Standards, Safety and Training
7.1 Should be US-FDA/ European CE approved product (copy of certificate should be submitted along with the bid).

8 Documentation
8.1 User/Technical/Maintenance manuals to be supplied in English.
8.2 Certificate of calibration and inspection.
8.3 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Item No: 29

Mobile ICCU Van Equipment List
Advance Life Support

A. AUTHORIZED EQUIPMENT: Anthulan.cc services must carry equipment and medications as per requirement of Treatment Protocols, Ambulance services should not equip ambulances with equipment that is outside of scope of practice of its EMT employees.
B. PERFORMANCE STANDARDS: All equipment must be designed and constructed to meet medical performance objectives and must not endanger patients.
C. MAINTENANCE: All equipment and supplies must be maintained according

to manufacturer's specifications with regard *to* maintenance, storage, expiration, date, replacement etc.

D. International Specifications standard Compliance - must meet any international standard for Ambulance Supplies 5pecifications Like KKK- Al 822 and any amendments thereto.

Sl. No.	Item Name	Description
1	Air Conditioning	• The ambulance vehicle to be air conditioned
2	Ambulance cot (Roll in Roll out type) Must be certified to be meeting safety Specifications as per international standard for Ambulance Supplies specifications like KKK-A-1822 and any aamendments thereto.	• Collapsible chair cum stretcher cum trolley • One 4 - wheeled, multi- level ambulance cot • Standard cot mattress with waterproof cover. • Patient restraining devices at chest (commercial Shoulder harness or equal) hip and knee to prevent lateral or longitudinal displacement of the patient during transport • Dual IN. holder, capable of being cot mounted. Padded wrist and ankle restraints, minimum one complete set.
		• Portable positive pressure resuscitator/ inhalation unit designed to operate in conjunction with external cardiac compressions and deliver nearly 100% oxygen. All components must be stored together. Unit must be equipped with: a) One (1) bag/ valve/mask ventilation unit. The addition of a flow restricted, oxygen powered ventilation device (demand valve)

3		is optional; b) Oxygen cylinder with minimum capacity of 300 liters; c) Oxygen cylinder pressure gauge and regulator capable of delivering a range of zero (0) to fifteen (15) liters per minute; d) Two (2) different sizes of resuscitator face masks; e) Two (2) each child and adult size transparent disposable, high concentration oxygen masks with delivery tubes; f) Two (2) adult nasal cannula with delivery tube; g) Oxygen connecting tubing.; h) Cylinder wrench or wheel secured to unit; One (1) full spare oxygen cylinder, minimum 1500 liters. Storage of the spare cylinders as per ambulance supplies specifications (Like KKK-A-1822 and any amendments thereto)
4	Installed Oxygen System	a) Two (2) Flow meters capable of delivering a range of zero (0) to 15 liters per minute, at minimum; b) Unbreakable oxygen humidifier, disposable, for single use only; c) Sterile water for use with oxygen humidifier; cl) Four (4) each adult and child size, transparent disposable, high concentration oxygen mask with delivery tubes; e) Four (4) each adult and child sizes of disposable nasal cannuIa with delivery tubes.
		One (1) adjustable gas or battery powered portable suction apparatus, capable of delivering a minimum vacuum of 600 millimeters of mercury and equipped

5	Portable Suction Unit	with the following: a) Wide bore, non-kinking tube; b) Pharyngeal suction tip,: c) Non-breakable, transparent collection bottle, minimum capacity 550 cc (disposable container recommended); d) One (1) pair disposable exam type gloves; e) One (1) combination face mask/ eye shield or One (1) each facemask and protective eye wears.
6	ECG Machine	Multi-Channel Portable ECG Machine
7	Multi Parameter ICC U Monitor	• ECG, SpO2, NIBP, Respiration & temperature probes with 10" monitor size • Chargeable from the Inverter/ Ambulance Battery
8	Two way mobile communication system	
9	Stair Chair	One (1) stair chair with patient restraint straps
10	Scoop Stretcher	One Scoop Stretcher made of lightweight, high-impact composite materials,. featuring two hinged., interlocking pieces that can be used to gently scoop us a patient without having to roll them
11	Transfer Sheet	One (1) transfer sheet with a minimum of six (6) handles, or equivalent
12	Advance Life Support and Trauma Kit including First Aid Kit (Should be systematically arranged and packed in a bag with following m i n i m u m features: 1. Four removable	Bandages & **Dressings:** • 2 Triangular Bandages • 1 Multi-Trauma Dressing., 12" x 30" • 2 ABD Pads, 5'' x 9" • 50 Adhesive Bandages, 1" x 3" • 2 Bloodstoppers • 2 Kerlix, 4 1/2" • 1 Petroleum Gauze, 3" X 9'' • 2 Gauze Bandages, 3" • 2 Gauze Bandages, 6" • 25 Gauze Pads, 4''**X** 4" • 1 Elastic Bandage, 3" • 1 Elastic Bandage, 4"

	padded dividers
	2. Large mesh pocket lid
	3. Four full-size exterior pockets
	4. Two zippered pockets
	5. App dimensions should be 55 x 35 x 25 cm) *There* should be a provision of a getting refill packs of all the items listed in the description column
		• 4 Eye Pads
		• 2 Roll Waterproof Tape, 1"
		• 1 Roll Waterproof Tape, 1/2"
		
		• Life support Equipment & Supplies:
		• 1 Berman Oral Airway Kit
		• 1 BP/Sthethoscope Set
		• Eye Wash,4 oz.
		• 1 SAM Splint, 36"
		• 5 Pairs of Nitrile, Powder- Free
		• Gloves
		• 1 Paramedic Shears
		• 1 Bandage Scissors
		• 1 Kelley Forceps
		• 1 Splinter Tweezers
		• 1 Space Blanket or One (1) roll of aluminum foil, minimum 12 inches by 25 feet
		• 1 Ferno CPR Mask
		• 1 Bum Sheet
		• 10 Alcohol Prep Pads
		• 10 Antibiotic Ointments
		• 1 Bee Sting Kit
		• 10 PVP Iodine Wipes
		• 1 No-Rinse Hand Gel
		• Cold packs- 4 nos,
		• Two (2) motion sickness bags, or equivalent, capable of being sealed.
		
		Advanced Life Support and airway Management :
		
		• 1 Disposable Bag Valve Mask Resuscitator (Adult)
		• OB Kit One(1) sterile commercial obstetrical kit; OR
		One(1) sterile obstetrical kit containing the following:
		a) One (1) large towel;
		b) One(1) receiving blanket, or equivalent;
		c) One(1) pair sterile disposable plastic or rubber gloves;
		d) Six (6) sterile gauze pads, minimum 3" x 3".
		e) Two (2) Kelly clamps or sterile ties;
		f) Six(6) sanitary napkins.;
		g) One(1) infant bulb syringe;
		h) One(1) container with lid for carrving placenta;

		i) One (1) newborn swaddler system, i.e. space blanket, foils swadler or equivalent to retain both, temperature. **Airways** Six(6) wrapped Oropharyngeal airways(2) Each infant, child and adult [in addition to those listed in the first aid kit]; a) Eight(8) adult size nasal airways, one(I) each 20F, 22F, 24F, 26F, 28F, 30F, 32F, 34F; b) Four pediatric nasal airways. One(1) each 12F,14F,16F,18F; c) One disposable package water soluble lubricant per nasal airway1 Ipecac Syrup, 30 ml Poision antidote kit consisting of Activated Charcoal and measuring devices. 1 Insta-Glucose 10 Ammonia Inhalants 1 Wizloc Universal Cervical Collar 1 Mecliwrap High Protection Blanket Aspirin 30 tablets of chewable. Pediatric-strength (81 mg/ tablet) aspirin, or 30 tablets of Adult- strength (165-325 mg/ tablet) aspirin. Effective June 30, 2002
13	Irrigation fluid	Three (3) liters of sterile water or saline solution, in unbreakable containers, in a minimum **of** three (3) containers.
14	Polyethylene Film	One(1) roll of polyethylene film
15	Bed Plan	One(1) adult bed plan
16	Pillows	Two (2) pillows with waterproof plastic covers, and four (4) pillow cases, One (1) pillow with waterproof plastic cover, and two (2) pillow cases.
17	Sheets	Eight(8) sheets, disposable or linen; Two (2) blankets disposable or linen.
18	Blankets	Four (4) blankets adult size

		Two (2) blankets Pediatric size.
19	Towels	Four(4) towels
20	Tissues	Two(2) packages of disposable paper tissue.
21	Drinking Cups	Two (2) or more disposable drinking cups.
22	Ring Cutter	One(1) ring cutter
23	Adult Sphvgmomanometer	One(1) adult, sphygmomanometer dial type
24	Large Adult sphvgmomanometer	One (1) large adult or thigh size sphygmomanometer dial type
25	Child size Thygmomanometer	One (1) child size sphygmoma.nometer. Dial type
26	Infant sphygmomanometer	One(1) infant size sphygmomanometer dial type
27	Stethoscope	One (1) stethoscope to be a component of patient component of patient compartment stock (other than what ***is*** in first aid kits)
28	Contaminated trash Container	Two (2) disposable "Bio-/hazard" bags, with ties.
29	CPR Board — – –	CPR board or functionally equivalent (i.e. short board) hard surface for patient torso accessible to patient compartment
30	Defibrillator cum Monitor with Recorder.	One Biphasic defibrillator with Automatic external cardiac (AED) with cardiac monitor and non - invasive external pace maker with ECG recorder and $5p0_2$ facility. Defibrillator should be suitable for ambulance operation, with adult and pediatric external fixed paddles and Patient cable. Should be supplied with 10 multi-functional disposable pads each for pediatric and adult. Should be US FDA/ CE Approved product. Should be chargeable from the Inverter/Ambulance Battery
31	Transport Ventilator and Bi PAP	• Should have Frequency control 0 to 40-60 b/ min • Tidal Volume Control 20m1-1200 ml • Pressure Monitor 0 - 100cm H_2O • 2 point blender 100% or 50% O_2 • Adjustable relief pressure with audible alarm

		• Add on PEEP option • Rugged structural packing • Anti-shock mounting for gauge arid internal Pneumatics • Disconnection alarm
32	Infusion Pumps	• Five(5) syringe infusion pumps and one volumetric infusion pump meeting ambulatory requirements and should be FDA/CE approved product
33	Small Refrigerator	• To carry Blood and drugs
34	Equipment to Gain Access	a) One (1) screwdriver, minimum 8" regular blade. b) One(1) hacksaw with six(6) wire(carbide) blades c) One(1) pair of pliers, 10'' vice grip d) One(1) short handled sledge hammer, minimum 3 pound e) One(1) rope, synthetic, minimum 50 feet by ½ inch diameter or functional equivalent f) Two(2) pairs of gloves(leather gauntlets) g) Two(2) pairs of goggles (clear eye protective)

Vehicle Equipment

Item Name	Description and Quantity
Warning Lights	Emergency warning beacon, visible 360 degrees, as permitted by M.G.L c.90, s7, or as required under KKK-A-1822 and any amendments thereto
Audible Warning Devices	A siren, audible 500 feet to the front.
Maps	Street directories and road maps for primary and backup areas served. GPS Enabled.
Fire Extinguishers	Two (2) adequately charged fire extinguisher, five (5) pound CO2 or dry powder, Underwriter's Laboratory approved, One of which shall be mounted in the patient compartment. One (1) adequately charged fire extinguisher, five (5) pound CO2 or dry powder, Underwriter's Laboratory approved
Hand lights	Two (2) 6-volt hand lights, bulb type, or two bulb type hand Lights with rechargeable battery of 4.5 volts minimum.
Chock Blocks	Two(2) vehicle chock block

Road Reflectors	Six (6) DOTS approved triangular reflectors, or equivalent
Hazardous Material Guidebooks	• One (1) U.S Department of Transportation Emergency Response Guidebook, current edition; • One (1) National Institute of Occupational Health and safety (NIOSH) Pocket Guide to Chemical Hazards, current edition.
Binoculars	One(1) pair of binoculars minimum 7 x 35 mm
Triage Tags	Twenty (25) triage tags
Protective Equipment	Personal protective equipment adequate to safeguard crew from anticipated exposures as defined by the licensee.
Reflective Garment	One (1) set reflective vest or reflective garment, or equivalent, per crew member
Protective Masks	Two(2) respirators, conforming to OSHA Blood bore Pathogens Standard 29 CFR 1910.1030(HEPA)

Rear Axle: Four Wheel
Front Axle: Two Wheel

Item No: 30

ECG Machine-12 Channels

1 Description of Function			
1.1	ECG Machine is primary equipment to record ECG Signal in various configurations. 12 channels with interpretation are required for recording and analyzing the waveforms with a special software.		
2 Operational Requirements			
2.1	The ECG Machine should be able to acquire all 12 Leads simultaneously and interpret them		
3 Technical Specifications			
3.1	Should acquire simultaneous 12 lead ECG for both adult and pediatric patients		
3.2	Should have Real time display of ECG waveforms with signal quality indication for		

	each lead		
3.3	Should have Artifact, AC, and low and high pass frequency filters.		
3.4	Should have a storage memory of at least 40 ECGs with easy transfer by optional modem and data card.		
3.5	Should have full screen preview of ECG report for quality assessment checks prior to print.		
3.6	Should have interpretation facility of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and pediatric patients		
3.7	Should have alphanumeric Keyboard for patient data Entry. (virtual or hard keys)		
3.8	Should have High resolution digital array A4 size printer		
3.9	Should have report formats of 3 x4; 6 x2, Rhythm for up to 12 selected leads; 12 Lead Extended measurements, 1 minute of continuous waveform data for 1 selected lead.		
3.10	Should have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge		
3.11	Should be able to be connected to HIS /LAN/Wireless LAN		
3.12	Should display ECG on LCD/TFT Display		
3.13	USB Support for Storage on external portable memories.		
3.14	Minimum 150 ECG Storage in external Flash Memory. The 2 Nos. memory stick has to be supply with the system.		

4 System Configuration Accessories, spares and consumables

4.1	ECG Machine 12 Leads with Interpretation - 01		
4.2	Patient Cable -02		
4.3	Chest Electrodes Adult-(set of six) -02 sets.		
4.4	Chest Electrodes Paediatric-(set of six) -02 sets		
4.5	Limb Electrodes(set of 4)- 02 sets		
4.6	Thermal Paper A4 Size for 500 patients		

5 Environmental factors

5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply	
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
7 Standards, Safety and Training	
7.1	Should be USFDA/CE approved product
8 Documentation	
8.1	User Manual in English
8.2	Service manual in English
8.3	List of important spare parts and accessories with their part number and costing
8.4	Certificate of calibration and inspection.
8.5	Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
8.6	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.

Item No: 31

Colour Doppler Echocardiography System with Advanced 2D Facility

1. Description of Function

1.1 Colour Doppler Echocardiography System is required to study the anatomical abnormalities and blood flow in the heart and associated vessels.

2. Operational Requirements

2.1 Latest generation Electronic Phased array Colour Doppler system with Minimum 512 Electronic independent channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/ PACS.

2.2 Should be field up gradable to next generation system on site. All new software should be upgraded free of cost for at least 5 years

2.3 Frequency compounding or better technology for better resolution and penetration.

3. Technical Specifications

3.1 Latest generation Electronic Phased array Colour Doppler system with Minimum 512 Electronic independent channels.

3.2 256 grey shades for sharp contrast resolutions

3.3 Adult & Paediatric Trans thoracic Cardiac, TEE (Adult & Paediatric — 01 each) and Vascular Probes to be supplied which should be latest generation wide band transducers. Neonatal Probe (Trans thoracic)

3.4 Harmonic Imaging- System should have following modes in harmonic with separate setting for:

a. Tissue Harmonic
b. Contrast Harmonic
c. Harmonic Angio
d. Quantification of harmonics imaging
e. Strain rate imaging facility

3.5 Harmonic imaging capability in Adult Cardiac, Paediatric Cardiac and linear Probe.

3.6 Gain control in two dimensions for additional level of flexibility to image quality control.

3.7 Real time high frequency 2D for higher resolution and low frequency Doppler for higher sensitivity in all probes

3.8 Frame rate should be 300 FPS or more

3.9 Steerable PW/CW in all Phased Array probes.

3.10 High-definition acoustic zoom for enlarging sections of 2D and Colour flow images with more acoustic information for greater clarity and detail while maintaining an optimal frame rate.

3.11 Modes —2D, M-Mode, Steerable PW/CW Doppler, Colour Doppler, and High Definition Colour flow Anatomical M Mode.

3.12 Monitor should be 15" or more, high-resolution colour Monitor.
Tilt and Swivel monitor should be able to view in all angles and all light conditions.

3.13 Colour Flow Imaging for

a) Increased lateral & spatial resolution.
b) Detection of even subtle areas of turbulence, displaying a more physiological blood flow appearance without loss of frame rate.
c) Colour flow with capability of automatically picking up colour flow as a function of focal depth

3.14 Tissue Colorization (B-Colour) for improved contrast resolution

3.15 Application software for Adult, Paediatric, Foetal and Peripheral Vascular and Trans oesophageal applications. (All application package should be built into the system)

3.16 Cine loop memory- more than 120MB of memory.

a. High Frame rate review for better clarity of playback images study in slow motion.
b. Quad loop with memory for pre and post image comparison of any procedure.
c. Memory- 256 frames or more in quad loop. M Mode & Doppler Scroll Memory-40 seconds or more.
d. Frame grabber facility for post analysis.

3.17 Various maps for pre and post processing.

3.18 ECG and respiration trigger facility.

3.19 User defined system and application presets for multi-user department.
3.20 Minimum 4.8 GB optical disc drive for image storage and retrieval. (Standard with system)
3.21 Dedicated integrated dynamic stress echo package for flexible user defined protocols with stacked sub loops facility and contrast stress protocol usable for stress echocardiography.
3.22 Tissue movement colorization with quantification possibility for IHD/CAD/Heart Failure patients.
3.23 Three or more transducer ports.
3.24 Colour Map resolution up to 128 levels.
3.25 Facility for high definition digital acquisition, review and editing of complete patient studies.
3.26 Facility of Real time perfusion studies
3.27 PC based Peripheral system comprising of dedicated computer at least 500 GB storage space (Hard disc) with 4 GB RAM or more with a Microprocessor speed of more than 3.00 GHz, frame grabber incorporated (All Software Inclusive) interfaced with the echocardiography machine with DVD writer and a high quality Colour Laser printer. CD/DVD produced should be playable on any system.
3.28 Colour M-Mode

4. System Configuration Accessories, spares and consumables

4.1 Colour Doppler System with all application packages Quad loop for serial studies with High frame rate review. Harmonic imaging capability in all modes. (Tissue, Contrast, Anglo) Integrated Stress Echo Package
Digital Storage and Retrieval device - 01
4.2 Adult Cardiac probe Electronics Phased Array probe, - 01
4.3 Paediatric Cardiac probe Electronics Phased Array probe. -01
4.4 Electronics Phased Array Probe for Vascular applications- 01
4.5 Multi plane TEE Probe for Adult and Paediatric echocardiography - 01 each
4.5 (a) Neonatal Probe (Trans thoracic) -01No.
4.6 DVD/CD Recorder with 100 CDs and 100 DVDs
4.7 Colour Print Paper- 500 sheets
4.8 ECG Cable - 05
4.9 Laser Colour Printer – 01

5. Environmental factors

5.1 The unit shall be capable of operating continuously in ambient temperature of 30 deg C and relative humidity of 80%.
5.2 Pre Requisites should be clearly spelt out in terms of room requirements.

6. Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Resettable over current breaker shall be fitted for protection
6.3 Online UPS of suitable rating with voltage regulation and spike protection for 30 min back up.

7. Standards, Safety and Training

7.1 Should be US - FDA or European CE approved product

7.2 Manufacturer/Supplier should have ISO certification for quality standards.

8. Documentation

8.1 User manual in English.

8.2 Service manual in English.

8.3 List of important spare parts and accessories with their part number and costing available in stock with the supplier.

Item No: 32

DEFIBRILLATOR WITH ECG MONITOR

1. Description of Function

1.1 Defibrillator is required for reviving the heart functions by providing selected quantum of electrical shocks with facility for monitoring vital parameters.

2. Operational Requirements

2.1 Defibrillator should be Bi-Phasic, **Portable** and latest model

2.2 Should monitor vital parameters (**ECG, Heart Rate, SPO2, NIBP & CO2**) and display them

2.3 Should print the ECG on thermal recorders.

2.4 Should work on Manual and Automated external defibrillation (AED) in Bi-phasic mode. The maximum energy delivered by the device should be at least 200J or more. In AED mode biphasic shocks should be delivered in escalating strengths with inbuilt trans-thoracic impedance compensation as mentioned below.

2.5 Should be capable of doing synchronized & asynchronized cardioversion

2.6 Can be operated from mains as well as battery

2.7 Should have defibrillator self test facility.

2.8 Demonstration of the equipment quoted is a must

3 Technical Specifications

3.1 Should be a low energy biphasic defibrillator monitor with recorder, having capability to arrest all arrhythmia.

3.2 Should monitor ECG through external paddles and monitoring electrodes and defibrillate through external paddles. Should have automatic lead switching to see patient ECG through paddles or leads.

3.3 Should have factory integrated compensation for chest impedance for a range of 25 to 150 ohms

3.4 Should have a built in printer/thermal recorder

3.5 Should have charging time of less than **10** seconds for maximum energy. Charging indicator should be there

3.6 Should have bright TFT colour display for viewing messages and ECG waveform of 4 seconds

3.7 Should have external paddles with paddles contact indicator- for good paddle contact. Single adult and paediatric paddles should be available.

3.8 Should have event summary facility for recording and printing at least **50** events and 50 waveforms

3.9 Should have a battery capable of usage for at least 90 minutes of 20 discharges.

3.10 Should be capable of printing reports on event summary, configuration, self test, battery capacity etc.
3.11 should have facility for self test/check before usage and set up function
3.12 Should have inbuilt facility to monitor ECG, SPO2, NIBP and CO2.
3.13. Should be capable of delivering energy in increments of 1-2 joules up to 10J and increments of 5-20 joules upto 50J.
3.14 Should have user friendly 1,2,3 colour-coded operations
3.15 External Pacing Capability

4 System Configuration Accessories, spares and consumables
4.1 Defibrillator -01
4.2 Paddles Adult/Paediatric (pair) -01
4.3 Deleted
4.4 Complete set of ECG Leads alongwith mother cable-05
4.5 ECG Rolls- 50
4.6 NIBP Cuff Adult- 05 No.
NIBP Cuff Paediatric- 05 No.
NIBP Cuff Infant- 05 No.
4.7 Reusable SPO2 **Soft** finger probe- Adult -05
Reusable SPO2 **Soft** Paed finger probe- 05

5 Environmental factors
5.1 The unit shall be capable of operating continuously in ambient temperature of 10-40˚C and relative humidity of 15-90%
5.2 The unit shall be capable of being stored continuously in ambient temperature of 0-50˚C and relative humidity of 15-90%

6 Power Supply
6.1 Power input to be 220-240VAC, 50Hz

7 Standards, Safety and Training
7.1 Should be US-FDA and CE approved product
7.2 Should have local service facility. The service provider should have necessary equipments recommended by the manufacturer to carry out preventive maintenance tests as per guidelines provide in the service/maintenance manual.

8 Documentation
8.1 User Manual in English
8.2 Service manual in English
8.3 List of important spare parts and accessories with their part number and costing
8.4 Certificate of calibration and inspection from factory.
8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist . The job description of the hospital technician and company service engineer should be clearly spelt out.
8.6 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service/ technical manual.
8.7 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item No: 33

COLOR DOPPLER ECHOCARDIOGRAPHY SYSTEM WITH 3D FACILITY

1. Description of Function

1.1. Colour Doppler Echocardiography System is required to study the anatomical abnormalities and blood flow in the heart and associated vessels.

2. Operational Requirements

2.1 Latest generation Electronic Phased array Colour Doppler system with Minimum 512 Electronic independent channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS.

2.2 Should be field up gradable to next generation system on site. All new software should be upgraded free of cost for at least 5 years

2.3 Frequency compounding or better technology for better resolution and penetration.

3. Technical Specifications

3.1 Latest generation Electronic Phased array Colour Doppler system with Minimum 512 Electronic independent channels.

3.2 256 grey shades for sharp contrast resolutions

3.3 Adult & Paediatric Trans thoracic Cardiac, TEE (Adult & Paediatric) and Vascular Probes to be supplied which should be latest generation wide band transducers.

3.4 Harmonic Imaging- System should have following modes in harmonic with separate setting for:

a. Tissue Harmonic.
b. Contrast Harmonic
c. Harmonic Angio.
d. Quantification of harmonics imaging

3.5 Harmonic imaging capability in Adult Cardiac, Paediatric Cardiac and linear Probe

3.6 Gain control in two dimensions for additional level of flexibility to image quality control.

3.7 Real time high frequency 2D for higher resolution and low frequency Doppler for higher sensitivity in all probes.

3.8 Frame rate should be 300 FPS or more

3.9 Steerable PW/CW in all Phased Array probes.

3.10 High-definition acoustic zoom for enlarging sections of 2D and Colour flow images with more acoustic information for greater clarity and detail while maintaining an

optimal frame rate.

3.11 Modes - 3D, 2D, M-Mode, Steerable PW/CW Doppler, Colour Doppler, and High Definition Colour flow.

3.12 Monitor should be 15" or more, high-resolution colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.

3.13 Colour Flow Imaging for

a) Increased lateral & spatial resolution.
b) Detection of even subtle areas of turbulence, displaying a more physiological blood flow appearance without loss of frame rate.
c) Colour flow with capability of automatically picking up colour flow as a function of focal depth

3.14 Tissue Colorization (B-Colour) for improved contrast resolution

3.15 Application software for Adult, Paediatric, Foetal and Peripheral Vascular and Trans oesophagal applications. (All application packages should be built into the system)

3.16 Cine loop memory- more than 120MB of memory.

a. High Frame rate review for better clarity of playback images study in slow motion.
b. Quad loop with memory for pre and post image comparison of any procedure.
c. Memory- 256 frames or more in quad loop. M Mode & Doppler Scroll Memory-40 seconds or more.
d. Frame grabber facility for post analysis.

3.17 Various maps for pre and post processing.

3.18 ECG and respiration trigger facility.

3.19 User defined system and application presets for multi-user department.

3.20 DVD/CD writer or flash memory

3.21 Dedicated integrated dynamic stress echo package for flexible user defined protocols with stacked sub loops facility and contrast stress protocol usable for stress echocardiography.

3.22 Tissue movement colorization with quantification possibility for IHD/CAD/Heart Failure patients.

3.23 Three or more transducer ports.

3.24 Colour Map resolution up to 128 levels.

3.25 Facility for high definition digital acquisition, review and editing of complete patient studies.

3.26 Facility of Real time perfusion studies

3.27 PC based Peripheral system comprising of dedicated computer at least 250 GB storage space (Hard disc) with 4 GB RAM or more with a Microprocessor speed of more than 3.00 GHz, frame grabber incorporated (All Software Inclusive) interfaced with the echocardiography machine with DVD writer and a high quality Colour Laser printer. CD/DVD produced should be playable on any system.

3.28 Colour M-Mode

3.29 System should be capable of generating real time live 3-Dimages

4. System Configuration Accessories, spares and consumables

4.1 Colour Doppler System with all application packages Quad loop for serial studies with High frame rate review.

Harmonic imaging capability in all modes. (Tissue, Contrast, Anglo) Integrated Stress Echo Package Digital Storage and Retrieval — 01

4.2 Adult Cardiac probe Electronics Phased Array probe. —01

4.3 Paediatric Cardiac probe Electronics Phased Array probe. — 01

4.4 Electronics Phased Array Probe for Vascular applications- 01

4.5 Multi plane TEE Probe for Adult and Paediatric echocardiography —01 each.

4.5 (a) — 3D Probe has to be offered — 01No.

4.6 DVD/C17 Recorder with 1000 CDs and 1000 DVDs

4.7 Colour Print Paper- 500 sheets

4.8 ECG Cable — 02

4.9 Laser Colour Printer — 01

5. Environmental factors

5.1 The unit shall be capable of operating continuously in ambient temperature of 30° C and relative humidity of 80%.

5.2 Pre Requisites should be clearly spelt out in terms of room requirements.

6. Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

6.2 Resettable over current breaker shall be fitted for protection

6.3 Online UPS of suitable rating with voltage regulation and spike protection for 30 minutes back up.

7. Standards, Safety and Training

7.1 Should be US -FDA or European CE approved product. Copy to be enclosed

7.2 Manufacturer/Supplier should have ISO certification for quality standards.

8. Documentation

8.1 User manual in English

8.2 Service manual in English

8.3 List of important spare parts and accessories with their part number and costing available in stock with the supplier.

8.4 Certificate of Calibration and inspection from the factory

8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

8.6 List of Equipment available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual.

Item No: 34

IABP (Intra Aortic Balloon Pump) - High End.

1 Description of Function

1.1 Intra-aortic balloon pump (IABP) is a mechanical device that is used to decrease myocardial oxygen demand while at the same time increasing cardiac output. By increasing cardiac output it also increases coronary blood flow and therefore myocardial oxygen delivery.

2 Operational Requirements

2.1 Microprocessor / microcontroller based system. System should be complete with Display Control system and pneumatic drive unit.

3 Technical Specifications

3.1 Pneumatics:

Drive system: Stepper motor driven bellows

Drive gas- Helium (Available with disposable canister or refillable cylinder.

Pumping Volume: 0.5 cc-50 cc Counter pulsation rate: 40-200 pulsations per minute

3.2 In Automatic Mode: System should be capable of automatically selecting appropriate trigger i.e. ECG or Pressure and also accurately select the inflation and deflation points, in automatic mode. In automatic mode of operation user should be in control of the deflation point. In Automatic mode Advance software should automatically adapt the timings for various rhythms and rate variations, without any user intervention. In Automatic mode it should automatically identify Arrhythmias and adopt R wave deflation mode for better patient support, without any user intervention In Manual mode the system allows user control of most of the pump functions.

3.3 Should be able to trigger on 7 mm Hg of Pulse pressure when used in Pressure Trigger mode

3.4 Single key start-up to make it fast, user friendly and easy to use

3.5 Should be able to display at least 3 wave forms as ECG, Invasive Pressure and Balloon Pressure wave forms

3.6 Large display for brighter and very good visibility from a distance in lighting conditions

3.7 On screen indication for Helium level in the cylinder and battery level for timely intervention and correction.

3.8 ECG inflation marker to indicate inflation period on ECG which can be useful when arterial pressure form is not available.

3.9 On screen indication of standby time and should give alarm after 15-30 minutes, to draw user's attention on the system being on standby

3.10 System should be approved for use on Paediatric patients and Paediatric balloons should be supplied with the system.

3.11 Optical Blood leak detect for early indication of blood coming into the balloon lumen due to IABC leak

3.12 Should have extensive Help Text available during start-up to make the system easy to use even for new users.

3.13 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.

3.14 Should be capable of removing condensation automatically without user intervention and should be maintenance free.

3.15 Should have Peripheral Vascular Doppler for detecting limb ischemia, which is attached to the main equipment

3.16 Should have automatic Altitude correction to make it safer for the use during Air Transport

3.17 Should have software which allows the user to monitor the IABP from any remote location via a modem

3.18 In-built Comprehensive Service Diagnostics to help the technician to locate the fault immediately

3.19 Should have capability to connect on the Hospital network

3.20 Integrated Printer OR Chart recorder to print the reports.

4 System Configuration Accessories, spares and consumables

4.1 System as specified-

4.2 System should be supplied with the following:

ECG cable with Refillable Helium cylinder compatible with the IABP system Qty: 3 Nos.

4.3 Intra Aortic Balloon Catheter for Adults, Size: 40 cc Qty: 2 Nos.

Intra Aortic Balloon Catheter for Adults, Size: 30 cc Qty: 2 Nos.

Intra Aortic Balloon Catheter for Paediatrics, Size: 12 cc Qty: 1 No

Intra Aortic Balloon Catheter for Paediatrics, Size: 10 cc Qty : 1 No

Reusable Invasive Blood pressure transducer system with pressure flush device system. Qty: 2 Nos.

5 Environmental factors

5.1 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. Or should comply with 89/366/EEC; EMC directive.

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity

5.3 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 170-270 V AC, 50Hz fitted with Indian plug

6.2 On line UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.

7 Standards, Safety and Training

7.1 Should be US-FDA/ European CE approved product (Copy has to be enclosed)

7.2 Manufacturer/Supplier should have ISO certification for quality standards.

8 Documentation

8.1 User/Technical/Maintenance manuals to be supplied in English.

8.2 Certificate of calibration and inspection.

8.3 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

8.4 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

8.5 List of important spare parts and accessories with their part number and costing.

Item No: 35

Heart lung machine with accessories (Advance Version)

1. Description of function

1.1 Heart Lung Machine is an apparatus through which blood is temporarily diverted, during heart surgery, to oxygenate it and pump it throughout the body, thus maintaining circulation until the heart and lungs are able to return to normal functioning

2. Operational requirements

2.1 BASIC EQUIPMENT will consist of the following unit

1) 5- Pump Console
2) Temperature Control Module (Hypo-Hyper thermia unit)
3) Monitors:
   a) Pressure monitor – arterial and cardioplegia with transducers
   b) Time – at least three timers
   c) Temperature Monitor with at least two probes
   d) Display of total volume of each infusion along with delivery time
4) a). Air- Oxygen Blender with hoses and Flow meter
   b). CO2 Blender Optional
5) Safety Devices –
   a) Level Sensor
   b) Ultrasonic air sensor (optional)

2.2 ACCESSORIES will include

1. Stainless steel line clamps
2. Stainless steel intra cardiac suckers
3. Remote Control module for Temperature Control Monitor Instrument tray with mounting arm S.N. Technical Specifications

3.1 5- Pump Console

1. The unit should have 5-pump console compactly arranged with separate power supply and control modules. Should have easy access connectors for interchanging the pump.
2. Each individual roller pump should be capable of running independently on 180-270 V/50- 60 Hz supply.
3. Should have a spill proof base.
4. The unit should be supplied with a Battery backup for at least two pumps, all safety systems and accessories for a minimum of 60 minutes. Switch over from main power to battery backup should be automatic and immediate. The battery unit should be built in to the pump base and it should be recharged automatically when the system is operating with main power supply.
5. Individual pump heads should have Harvey Roller pumps with facility for tubing to be used adjustable from ¼" to 5/8" through 3/8" and ½" by easily changeable mechanism.

6. Individual pump heads should have display in digital –The total infusion volume in litres and delivery time, the flow rates in LPM and in RPM
7. Each Pump should have easy mechanism for occlusion setting for different thickness of tubes available in the market, 1/32" to 3/32".
8. Should have unidirectional hand crank facility as a critical safety feature hand crank loading should be from top for faster access.
9. The Console should have a compact base mount for the entire pump heads together, with pole and handles.
10. Should have variable, changeable tubing holders in each pump head:1/4", 3/8", ½", 5/8" and double ¼".
11. Should have movable oxygenator holder.
12. Roller pump should have a self diagnostic circuit with provision to detect and display critical alarm conditions. Optional Pulsatile module which can be mounted on any of the blood pump.

3.2 Should have a venous control module with single pole mast with electronic venous line occluder.

3.3 Should have a monitor mount with adjustable monitoring arm

3.4 Instrument tray positionable with long monitoring arm

3.5 Lightweight surface table; writing surface

3.6 TEMPERATURE CONTROL MODULE:

TEMPERATURE CONTROL AND MONITOR SYSTEM WITH CARDIOPLEGIA SUPPLY AND REMOTE TEMPERATURE DISPLAY:

with the following features:

1. Simultaneous delivery of water for arterial and cardioplegia heat exchangers and to thermal blankets to be available from suitable ports.
2. To work with power supply of 220± 20 V 50 Hz.
3. Pressure regulated blanket ports maintaining the temperature of the arterial port.
4. Temperature display range of 0- 50 ° Celsius; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with 3-temperature display.
5. Microprocessor based unit to control, cool, rewarm and maintain temperature.
6. Water outlet temperature of heat exchanger and blanket range 0-42° C.
7. Maximum flow performance of oxygenator heat exchanger supply port 15 – 22 LPM for fast cooling; 480mmHg maximum pressure; Blanket 1.5 to 2.5 LPM at zero head.
8. Built in lce Maker to provide 50 lbs of ice in about 8 hours from 25º C water.

9. Should be capable of providing ice water for cardioplegia independently with variable cooling rate
10. Rewarming facility with venous difference mode settable at 6 to 10 ° C gradients to hold the water bath temperature at higher than the venous blood temperature.
11. Temperature probe module for the operating ranges of 0-50° C.
12. Temperature probes to fit in standard oxygenators (bubble / membrane)
13 Optional remote control unit should be capable of taking 9 Temp. Probes and display temperature in digital readouts. Alarm limits setting for at least three probes at crucial sites.

3.7 MONITORS:

PRESSURE MONITOR: Facility to monitor one arterial line pressure and one cardioplegia line pressures (total 2); along with necessary pressure transducers, cables six (2 x 3 = 6) and domes reusable, with accurate digital display and alarm facilities audio and visual.

TIME MONITOR: Facility for 4 time displays -- 2 for arterial and 2 for cardioplegia delivery. With stop, reset and start function.

TEMPERATURE: 6 temperature displays for patient monitoring and for cardioplegia monitoring with digital display in Celsius with 6 necessary compatible temperature 6 probes and 6 additional probes (6x2=12 probes) with 3x2 = 6 of them for nasal, rectal and oesophageal use

3.8 AIR- OXYGEN BLENDER:

To work at 50-60 PSI for membrane oxygenator with water trap attached with necessary hoses and connections of minimum of 5 meters length and with triple flow glass flow meters.

3.9 SAFETY DEVICES: Safety monitor should have optional capability for computer interface to retrieve perfusion data

ULTRASONIC AIR SENSOR: Ultra sonic air sensor to detect bubbles to work equally well with crystalloid and blood; should be possible to fit anywhere in the circuit easily.

LEVEL SENSOR SYSTEM: Ultrasonic transducers to work well with crystalloid and blood with adhesive pads, with alarm settings.

3.10 ACCESSORIES

1. STAINLESS STEEL LINE CLAMPS for cardio pulmonary bypass 12 Nos.
2. REMOTE CONTROL MODULE FOR THE TEMPERATURE CONTROL MONITOR

Optional remote control unit should be capable of taking 9 Temp. Probes and display temperature in digital readouts. Alarm limits setting for at least three probes at crucial sites.

3. INSTRUMENT TRAY WITH MOUNTING ARM
4. AT LEAST ONE THERMAL BLANKET.
5. ON LINE MEASUREMENT OF PH, PCO2*& HB FOR NEONATAL CARDIAC SURGERY

4. System Configuration Accessories, spares and consumables

4.1 12 Stainless steel line clamps

4.2 Remote Control module for Temperature Control Monitor

4.3 Instrument tray with mounting arm

4.4 Machine cover

4.5 System should be provided with appropriate furniture like adjustable revolving chair for the perfusionist to operate the system. The system should contain all the above accessories in Integrated or as separate accessories.

5. Environmental factors

5.1 The unit shall be capable of operating continuously in ambient temperature of 10 -40^0 C and relative humidity of 15-90%

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50^0 C and relative humidity of 15-90%

5.3 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

6. Power supply

6.1 Power input to be 180-270VAC, 50-60 Hz,/440 V 3 Phase as appropriate fitted with special imported plug dedicated to the unit.

6.2 Resettable over current breaker shall be fitted for protection

6.3 Suitable UPS of with voltage regulation and spike protection for 60 minutes back up.

7. Standards, safety and training

7.1 Should be US-FDA/ European CE approved product (Copy has to be enclosed)

7.2 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450

7.3 One engineer should be posted for a week to impart training

7.4 Manufacturer should have ISO certification for quality standards.

8. Documentation

8.1 User manual in English

8.2 Service manual in English

8.3 List of important spare parts and accessories with their part number and costing available in stock with the supplier.

8.4 Certificate of calibration and inspection from factory.

8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out

8.6 List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual

Item No: 36

ICU Beds - Advanced Model

1 Description of Function

1.1 ICU Beds are required in the Intensive Care for comfort & safety of the patient and to facilitate comfortable transfer to and fro emergency/OT/Wards etc. It is also required to carry out point of care procedures including radiological procedures at the bedside.

2 Operational Requirements

2.1 The system should be electrically operatable and adjustable for heights, trendelenburg etc. It should also be having radiotranslucent top for carrying out X-Ray at the bedside

2.2 Demonstration of the system is a must

3 Technical Specifications

3.1 Should have four section mattress base

3.2 Should have X-Ray translucent back section made up of high pressure laminate.

3.3 Should have X-Ray cassette holder underneath the back section & should allow insertion of X-Ray cassette from either side of the bed.

3.4 Base frame & support frame should be made up of Stainless steel for long life & prevention from rusting.

3.5 Should have stepless electrical adjustment for the following:-
Height : 450-840 mm
Back section : 0- 50 degrees
Leg Section : 0-30 degrees

3.6 Should have stepless pneumatic adjustment for Trendlenburg (25° approx), anti-trendlenburg (15° approx)

3.7 Should have a manual quick release mechanism for back section adjustment during emergency situation

3.8 Should be equipped with four articulated half length tuck away side rails

3.9 Should be equipped with large castors (diameter 150 mm) with central braking and steering facility.

3.10 Mattress of the Bed should be made up of high density foam with Anti Microbial agent incorporated into all components that assists in Prohibiting growth of bacteria & fungi and easy to clean.

3.11 Mattress should be fully Radiolucent for ease in performing portable X-Rays.

3.12 Should have bumpers at all four corners and place for fixing accessories

3.13 Dimensions of bed :
Length : 2200 -2290 mm
Width : 850 -1020mm
Mattress Size : appropriate as per bed size

4 System Configuration Accessories, spares and consumables

4.1 I.C.U Bed Mainframe perforated heavy gauge sheet

4.2 Heavy Gauge & total weight of Bed

4.3 Bed Ends, detachable : 01 pair

4.4 Articulated half length tuck away side rails: 04 Nos.

4.5 IV Rods: 04 No.s

4.6 Mattress 12 cm Thick: 01 No.

5 Environmental factors

5.1 Shall meet IEC-60601-1-2:2001 (Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%

5.3 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 180-270VAC, 50-60Hz as appropriate fitted with Indian plug

6.2 Resettable over current breaker shall be fitted for protection

7 Standards, Safety and Training

7.1 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450

7.2 Should be US-FDA/European CE approved product (Copy has to be enclosed)

7.3 Manufacturer should have ISO certification for quality standards.

7.4 Electric Shock Protection level-Class-B

7.5 Electric current Protection- Class -1

7.6 Certified to be compliant with IEC 60601-2-38 Medical Electrical Equipments part 2-38 Particular requirements for safety of Electrically Operated Hospital Beds

7.7 Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.

7.8 Comprehensive warranty for 2 years and provision of CAMC for next 5 years.

8 Documentation

8.1 Certificate of Calibration and inspection from the factory

8.2 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

8.3 List of important spare parts and accessories with their part number and costing

8.4 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out

8.5 Service manual in English

8.6 User manual in English

8.7 Must submit user list and performance report within last 5 years from major hospitals.

Item No: 37

ACT Machine

1. Description of Function

1.1 Activated Clotting Time (ACT) is a measure of the anticoagulation effects of heparin. The main use of this diagnostic test is in cardiac catheterization labs and open heart and vascular surgery, where they need to keep track and have specific measures of clotting times.

2. Operational Requirements

2.1 One button operation, easy to use

2.2 Portable system

3. Technical Specifications

3.1 ACT machine having at least one test well

3.2 2 point clot detection facility to get accurate results (Optional).

3.3 Parameters- ACT (Mandatory) APTT & PT (Optional).

3.4 Shall use fresh blood at the bedside.

3.5 Shall require less than 3 cc of blood per sample

3.6 Digital Display on Screen of any size.

4. System Configuration Accessories, spares and consumables

4.1 System as specified-

4.2 ACT Tubes - 200 nos

5. Environmental factors

5.1 Shall meet 1EC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. Or should comply with 89/366/EEC; EMC directive.

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50° C and relative humidity of 15-90%

5.3 The unit shall be capable of operating in ambient temperature of 20-30° C and relative humidity of less than 70%

6. Power Supply

6.1 Should work on 180-270V AC as well as batteries. Mains adaptor to be supplied

7. Standards. Safety and Training

7.1 Should be US - FDA or European CE approved product

7.2 Manufacturer/Supplier should have ISO certification

8. Documentation

8.1 User/Technical/Maintenance manuals to be supplied in English.

8.2 Certificate of calibration and inspection.

8.3 Log book with instructions for daily, weekly. monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Item No: 38

Specifications for Electro Surgical Unit (ESU) with Vessel Sealing System

1 Description of Function

Sl	Name
1.1	ESUs are used for surgical cutting and for controlling bleeding by causing coagulation (hemostasis) at the surgical site. They deliver high-frequency electrical current through an active electrode tip, causing desiccation, vaporization, or charring by resistive heating in the target tissue.

2 Operational Requirements

Sl	Name
2.1	Microprocessor/Microcontroller technology

3 Technical Specifications

Sl	Name
3.1	Integrated touch screen system with 350W output generator for monopolar cut, 120Watt for monopolar coagulation, bipolar cut 150Watt and Bipolar coagulation 120Watt and vessel sealing system for open and laparoscopic surgery
3.2	Compatible with Argon Plasma Coagulator
3.3	Should provide monopolar output for cut, coagulation (fulguration & spray) & blend in multiple levels
3.4	Should have bipolar cut and coagulation in multiple levels with automatic bipolar coagulation.
3.5	Activation by foot switch and hand switch for all the modes.
3.6	Activation of bipolar by foot switch and automatic start/stop system
3.7	Capable of sealing vessels up to 7 mm diameter
3.8	Auto diagnosis on switching on and during working to continuously monitor all parameters
3.9	Automatic stoppage of output in case of malfunction with acoustic and visual signal with display of error code.
3.10	Output powers adjustable automatically or manually from the control panel.
3.11	Programmable memory for output settings
3.12	Simultaneous access to mono and bipolar by 2 or more users
3.13	Should be usable with laparoscopic monopolar and bipolar instruments, for which programmes and

	accessories must be available
3.14	System for neutral plate safety by continuous monitoring of contact quality and connection
3.15	System for monitoring and control of leakage current
3.16	Frequency Ieakage on the patient should be less than 10 micro Amp.

4 System Configuration Accessories, spares and consumables

Sl	Name
4.1	System as specified
4.2	The accessories should include (a) trolley, (b) mains cable with power plug for standard Indian sockets, (c) foot switches for different outputs, (d) reusable and single use neutral electrode for adults and children along with cable for neutral electrode and fixation device wherever required, (e) sterilisable and disposable electrode handle with and without finger switch with cable for electrode handle, (f) set of electrodes (long and short) with electrode container with holder, (g) tip cleaner, (h) bipolar forceps with cable, (i) cable for connecting to standard mono polar and bipolar laparoscopic instruments, (j) Reusable dedicated instruments for open and laparoscopic monopolar, bipolar and vessel sealing use.
4.3	Complete System and all accessories should be from same manufacturer.
4.4	The codes and rates of all possible individual accessories should be quoted separately with clear mention of period of validity of rates

5 Environmental Factors

Sl	Name
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Power Supply

Sl	Name
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian power-plug
6.2	Suitable UPS

7 Standards & Safety

Sl	Name
7.1	Should be USFDA/ European CE approved product. Copy has to be enclosed
7.2	Manufacturer and Supplier should have ISO certification for quality standards.
7.3	Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standard)
7.4	Shall meet internationally recognised standard for Electro Magnetic Compatibility (EMC) for

	electromedical equipment: IEC-60601-1-2 :latest edition Or Equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended
7.5	Certified to be compliant with IEC 60601-2-2 Medical Electrical Equipment Part 2-2: Particular requirements for the safety of High Frequency Surgical Equipments: latest edition

8 Training

Sl	Name
8.1	Comprehensive training for staff of user department and support services till familiarity with the system.

9 Warranty & Service

Sl	Name
9.1	Comprehensive warranty for 2 years and 5 years Comprehensive Maintenance Service after warranty. The cost of CMC must be quoted in the price bid.
9.2	Percentage of uptime guarantee of the equipment during warranty and CMC period for which commitment is to be given must be specified with acceptance of applicable penalty clauses in case of failure to do so.
9.3	After sales service must be provided in the city of installation. In situations requiring service/repair of the unit outside the city of installation, the expenditure on account of this will have to be borne by the supplier

10 Documentation

Sl	Name
10.1	Product Literature in original along with that of accessories and indigenous components if any. Photocopies/computer generated copies are not acceptable
10.2	Statement of compliance with tender specifications with clear and unambiguous links to relevant portions of product literature/authentic document, which should be highlighted. Alternatives provided for noncompliant specifications with justification must be described in detail with supporting literature.
10.3	Certificate of compliance with standards and approvals stated above
10.4	Certificate of manufacturer/principal regarding authorisation of service facility provided by the supplier
10.5	List of Equipment available in the Service Centre for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
10.6	List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing.
10.7	Terms and conditions of warranty and CMC including schedules of visit by service personnel with check list of services to be carried out
10.8	Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book.

Item No: 39

Video Thoracoscope

1 Description of Function

1.1 A Thoracoscope is a thin, tube-like rigid endoscope instrument with a light and a lens for viewing.

2 Operational Requirements

2.1 Thoracoscope with video processing and monitoring is required

3 Technical Specifications

3.1 SPECS OF SCOPE:

1. Direction of view should be zero degree.
2. Minimum of 100 degree (app) of field of view.
3. Range of observation from 5 mm to 90 mm. (app)
4. Angulations of tip not less than 200 deg (Up) and 90 deg (down) with right to left movement of minimum 100 deg. (app)
5. Insertion tube outer diameter of less than 8 mm with a working length of not less than 250 mms.
6. Distal end of less than 8 mm.
7. Instrument channel of more than 2.5 mm
8. Compatible with the video system specified.

3.2 Video processor with light source & Monitor

1. Power supply 200-240 V A/C
2. PAL type video signal. The camera should be 3 chips CCD with high definition (HD) Output with provision of recording on hard disk, mini DVD: disk or tape.
3. Controls for colour adjustment, to enhancement and balance settings.
4. Controls to freeze images enhance a portion of frozen image (zoom &post-processing).
5. Patient and physician data input keyboard.
6. Operates on Xenon lamp.
7. Emergency lamp.
8. Compatibility with the gastro scope and colonoscope duodenoscope and Enteroscope
9. 19" LCD colour monitor with XGA resolution.

4 System Configuration Accessories, spares and consumables

4.1 System as specified

4.2

1. Rod lens Telescope 0 degree 10mm, Length 31 cm
2. Rod Lens Telescope 30 degree 10mm, Length 31 cm
3. Trocar 6mm with blunt tip flexible cannula and silicone leaflet valve
4. Trocar 9mm with blunt tip flexible cannula and silicone leaflet valve
5. Trocar size 11mm with blunt tip flexible cannula and silicone leaflet valve
6. Trocar size 11mm with blunt tip cannula with thread
7. Manhes dissecting and grasping forceps size 5mm
8. Kelly dissecting and grasping forceps size 5mm
9. Babcock grasping forceps size 5mm
10. Bowel grasper rotating 5mm

11. Scissors rotating with connector pin, spoon blades, double action jaw, size 5mm
12. Scissors rotating serrated, curved, conical and double action jaw size 5mm
13. Micro hook scissors and single action jaw, size 5mm
14. Scissors dismantling rotating serrated, single action jaws bayonet shaped size 5mm
15. Needle driver Parrat-Jaw straight handle with ratchet length 33 cm
16. Assistant Needle driver Flamingo Jaw straight handle length 33 cm
17. Manhaes grasping forceps rotating size 5mm atraumatic single action jaws
18. Suction & irrigation with two way stop cock
19. Bipolar & Monopolar high frequency cord with 5mm plug
20. 3 Chips Camera PAL having Digital Imaging Processor
21. Cold Light fountain Xenon 175 power supply 100-125 / 220-240V AC, 50/60 Hz complete
22. TFT Monitor PAL 19" (inch) maximum resolution 1280x1024
23. Video Cart
24. Fibre Optic cable
25. 0 degree, 30 degree & 60 degree upward & downward angulated Rongeur forceps 33 cm shaft.
26. 90 degree & 45 degree punch with 30 cm shaft.
27. Clip Applicator 5 mm & 10 mm.
28. Fan Retractor.
29. Endo GI stapler for stapling Bronchi & Vessels.
30. Needle Holder 5 mm & 33 cm long.

5 Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%

5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug

The system should be US-FDA/European CE approved. Copy to be enclosed

Item No: 40

Sternal saw (Electrically Operated)

The system should contain the following features:

1. Electrically operated motor control unit with forward and reverse speed motor.
2. Power cable with motor working with the power supply 220-240 VAC 50Hz

3. Should contain a foot control paddles with waterproof and anaesthetic agent proof. 130x200x60 mm
4. Sternal saw with primary and redo (Oscillating) blades, Light weight with blade protector, saw cable connector for both blades
5. Overheating cut off of motor with reset facility.
6. Additional blades 10each of normal and redo (Oscillating)
7. Saw should be in all respects complete and ready to use
8. Flexible cable with minimum 180 cm in length.
9. Should provide minimum1 Nos. of sterile micro oil 300 ml

Should have minimum 2 years warranty and service back up as per Tender

Item No:41

Cell Saver

1. Description of Function

1.1 The Cell Saver system reprocesses blood for the patient and separates it into blood cells and plasma. Used in Surgical procedures in which there is rapid bleeding or high volume blood loss. It can also separate and remove clotting agents for the plasma. In this manner, blood may be prepared for long term storage or may be re-infused back into the patient during surgery. This reduces the need for blood from donors.

2. Operational Requirements

2.1 Manual & Automatic operation

2.2 Compact, portable design

3. Technical Specifications

3.1 Spinning centrifuge

3.2 Built-in programming

3.3 Built-in safety features

3.4 Sound volume control

3.5 Automatic protocols

3.6 Set up guide

4.System Configuration Accessories, spares and consumables

4.1 System as specified-

4.2 30 disposables should be provided with equipment

4.3 All consumables required for installation and standardization of system to be given free of cost.

5.Environmental factors

5 .1The unit shall be capable of being stored continuously in ambient temperature of 0 - 50 deg C and relative humidity of 15-90%

5 1 The unit shall be capable of operating continuously in ambient temperature of 10 - 40 deg C and relative humidity of 15-90%

6.Power Supply

6.1Power input to be 180-270VAC, 50 Hz Fitted with Indian plug

6.2Suitable UPS of rating with spike protection, voltage regulation and for 60 minutes back up.

7. Standards, Safety and Training

7.1 Should be FDA/CE/UL or BIS approved product

7.2 Manufacturer/Supplier should have ISO Certification for quality standards.

7.3 Comprehensive training for lab staff and support services till familiarity with the system.

8 Documentation

8.1 User/Technical/maintenance manuals to be supplied in English,

8 . 2 Certificate of calibration and inspection.

8.3 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service/ technical manual.

8.4 List of important spare parts and accessories with their part number and costing.

8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Item No: 42

LOW TEMPERATURE HYDROGEN PEROXIDE GAS PLASMA/NON PLASMA STERILIZER

	LOW TEMPERATURE HYDROGEN PEROXIDE GAS PLASMA/NON PLASMA STERILIZER
1	**Description of Function**
1.1	Hydrogen peroxide sterilization system may include exposing an article to be sterilized to a plasma generated from a gas mixture. The exposure of the article to the plasma is carried out at a pressure of from 0.1 to 10 torr and a chamber temperature of less than 63.degree. C. for a time period sufficient to effect sterilization. The apparatus for plasma sterilization of articles includes a plasma generator and a sterilizing chamber or it may be through Vaporized Hydrogen peroxide gas
2	**Operational Requirements**
2.1	Sterilization of Operation Theatre instruments using state -of-art Hydrogen peroxide Gas Plasma Technology and cost effective
3	**Technical Specifications**
3.1	The temperature of sterilization must be in the range of 40-60 deg C and of low-moisture sterilization process
3.2	The process should be rapid enough to provide high throughput with the cycle time of 50-75 minutes
3.3	The cycle time to processing should be programmable to best match the Operation Theatre instruments and load configuration
3.4	The sterilizer should have usable volume at least 100 liters.
3.5	There should be no toxic residuals with primary by-products being water vapour and oxygen & it should be safe for patient, staff and environment.
3.6	The technology should be such that it requires no costly engineering requirements for installation and functioning. The equipment should not require connection other than an electrical power cord.
3.7	Supplier should connect the system to the standby power of the hospital which does not allow power interruption beyond 10 seconds by the supplier.
3.8	The chamber shape should be Rectangular or Square in shape
3.9	The system should be capable of sterilization of hollow catheters/rigid instruments . All required accessories (such as connectors, boosters) should be supplied with the unit.
3.10	Should have touch screen display for controlling & monitoring the sterilization process.
3.11	Should be able to sterilize rigid S.S.Lumened instruments with inside dia 1 mm or above and 50-60 cm length. Platic Lumen upto 200 cm length without use of any additional accessories/consumables like booster adapter etc.
3.12	
4	**System Configuration Accessories, spares and consumables**

4.1	Instrument Tray / appliance box - 02 nos - Sealing Machine - 01 No. Should be supplied with following accessories sufficient for atleast 100 sterilization cycles. Sterilant bottle/Cups/Cassette * Chemical Indicator Strips * Chemical Indicator Roll * Packing Paper for wrapping instruments (with chemical indicator) different sizes. * Biological Indicator * Biological Indicator Incubator * Wrap Cloth Printer paper Rolls
5	**Environmental factors**
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%
6	**Power Supply**
6.1	Power input to be 220-240VAC, 50Hz or 400VAC 3 phase 50 Hz fitted with Indian plug
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz or 400VAC 3 phase 50 Hz)
7	**Standards, Safety and Training**
7.1	Certified to be in compliance with ISO/EN 14937.-Standards for sterilization equipments.
7.2	Should be USFDA or European CE approved product including critical consumables such as Sterilant Cartridge/Chemical Indicators/ Biological Indicators etc.
7.3	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements
7.4	Manufacturer/Supplier should have ISO certification for quality standards.
7.5	Guaranty/warranty for 2 years with five years CMC rates after expiry of Guaranty/warranty.
7.6	Assurance not to close down the production of spare parts of this equipment at-least for ten years
8	**Documentation**
8.1	User Manual in English (original)
8.2	Service manual in English (original)

8.3	Certificate of calibration and inspection. (original)
8.4	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual. (original)
8.5	List of important spare parts and accessories with their part number and costing. (original)
8.6	Price of all consumable (Including Gas cartridge, labels, indicators, packing material, tray, adaptor etc) required for 1000 cycles of full load should be offered by the bidder. This pricing shall be frozen for Five Year.
8.7	Compliance certificate to be provided.
8.8	Specifications should be marked /highlighted in the Technical/Detailed catalogue as per compliance for the main equipment, each accessories and consumables conforming to certification of quality.
8.9	On site operational & demonstration should be provided, for satisfactory functioning of equipments.
8.10	List of the installation especially in Govt.Hospital should be submitted along with satisfactory performance certificate from those Hospitals.
8.11	Should have service centre in the state,with ready availability of spare within 48 hrs.
8.12	In case the equipment is not repaired as per the terms of tender the penalty shall be imposed on vendor beside other administrative action as deemed fit by the Head of institution.
8.13	Assurance not to close down the production of the spares at least for ten years.

Item No: 43

Volumetric Infusion Pump

1 Description of Function	
1.1	Volumetric Infusion Pump is a medical device that delivers intravenous fluids and medicine to patients in hospitals, outpatient surgical centres, hospices, nursing homes, and in ambulances
2 Operational Requirements	
2.1	Programmable volumetric infusion pump is required.
3 Technical Specifications	
3.1	Battery back-up operating time 5 hours.
3.2	LCD programming display

3.3	Data entry calculator style alpha numeric programming keyboard		
3.4	Pole clamp Multi-function mounting clamp		
3.5	Nurse call output alarm, time and date settings		
3.6	Quick titration of rate or dose with volume-time programming		
3.7	Flow rate range (primary) 0.1 to 99.9 ml/hr. (0.1 ml increments) and 1 to 1200 ml/hr. (1ml increments.)		
3.8	Flow rate range (piggy back)-0.1 to 99.9 ml/hr,(0.1 ml increments) and 1 to 500 ml/hr (1ml increments)		
3.9	Volume to be infused 0.1 to 99.9 ml (o.1ml increments) and 1 to 9999 ml(1 ml increments).		
3.11	Both flow rates and volume to be infused should be configured to limit the maximum allowable range		
3.12	RS232C/USB/RS485 output for Printer, PC connectivity and Data acquisition with selectable baud rate options should be there		
3.13	Accuracy ±3%.		
3.14	Pump Database: events of 24 hours with real time.		

4 System Configuration Accessories, spares and consumables

4.1	Compatible with any standard infusion sets available in local Indian market		
4.2	1000 numbers of required infusion sets should be supplied with the single unit		

5 Environmental factors

5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

7.1	Should be US – FDA/European CE approved product		

7.2	Manufacturer/Supplier should have ISO certification for quality standards.		

8 Documentation

8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual.		

Item No: 44

Ventilator-Non Invasive

1 Description of Function

1.1 Non Invasive Ventilator provides artificial respiratory support with mask without intubations.

2 Operational Requirements

2.1 Should be microprocessor controlled, portable, light weight. Should operate with main electric supply as well as with battery. Should be able to work both with cylinders and pipeline, connectors and high-pressure tubing of appropriate length to be supplied.

2.2 Demonstration of the equipment is a must.

3 Technical Specifications

3.1 Operation mode: Bi-Level (2 pressure levels) S/T/ST

3.2 Pressure range IPAP: 5-20hPa (mbar)
EPAP: 5-20hPa (mbar)

3.3 Constant display: Pressure value, bar graph, date, time,

3.4 Additional function

- Start-stop-automatic-control
- Fall asleep-ramp 0-60 min
- Leakage test 0-90s
- Date, time and wake-up-function
- Power failure alarm
- Leakage alarm

- Automatic turbine start after power failure
- Time counters: stand-by, turbine running, filter age, therapy
- Adjustable time delay.

3.5 ST-operation -- S: Spontaneous: triggered by respiration
(Trigger sensitivity should be adjustable over a range)
T: Timed: safety frequency (adjustable)
ST: Spontaneous + Timed

3.6 Safety frequency - 5/min-35/min in 1/min-steps, modes:
T and ST

3.7 Inspiration phase: 20% - 80% of respiration phase

3.8 Filter system: 3-layers

3.9 Should be leak compensated.

3.10 Should have facility to supplement oxygen

3.11 Technical Specifications for reusable face mask & nasal mask.
Reusable face & nasal mask with textured dual flap silicone cushion flap for easy fit.
Removable forehead support and pad to match the angle of patient's forehead
Stability Selector for easy fit and angle.
Ball & Socket headgear attachments.
Should be autoclavable.

4 System Configuration Accessories, spares and consumables

4.1 Non Invasive Ventilator-01

4.2 Humidifier (Optional) - 01

4.3 Adult and Paediatric autoclavable silicone breathing circuits -02 each

4.4 Oxygen enrichment arrangements-01

4.5 Complete set of face mask (all sizes) – 02 each

4.6 Complete set of nasal mask (all sizes) – 02 each

5 Environmental factors

5.1 The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%

6 Power Supply

6.1 Operating power supply- AC 180V-270V

6.2 Reset table over current breaker shall be fitted for protection

7 Standards, Safety and Training

7.1 Should be US - FDA/ European CE approved product

7.2 Manufacturer should have ISO certification for quality standards.

8 Documentation

8.1 Certificate of calibration and inspection from factory.

8.2 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

8.3 User Manual in English

8.4 Service manual in English

8.5 List of important spare parts and accessories with their part number and costing

8.6 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

8.7 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item No: 45

Ultrasonic cutting and Coagulation device

1 Description of Function	
1.1	Ultrasound is the basis for an efficient surgical instrument: the cuts and coagulates by using lower temperatures than those used by electrosurgery or lasers. Controls bleeding by coaptive coagulation at low temperatures ranging from 50ºC to 100ºC: vessels are coapted (tamponaded) and sealed by a protein coagulum. It should not be combined with any other energy source.
2 Operational Requirements	
2.1	The system is should be used for Laparoscopic & open Procedures which should operate at the same frequency.
3 Technical Specifications	
3.1	1. Ultrasonic generator generating ultrasound frequency in between 35-70 KHz

	2. Hand-piece with transducer & silicon cable 3. Capability of being operated by hand control or foot switch. 4. Single/Dual foot-switch attachment 5. Stand-by mode for better safety 6. System diagnostics and trouble shooting guide 7. Warning system for malfunctioning cable, probe etc (Audible/ Visual) 8. It should not interfere with other electromagnetic devices. 9. It should have a horizontal/torsional vibration 10. Should be capable of sealing vessels 5-7mm in diameter 11. Should have different audible tone settings for different modes		

4 System Configuration Accessories, spares and consumables

4.1	***Accessories:***1. Foot-switch with cable. 2. Cart to house the generator and accessories 3. Sterlization Box with pad for transducer and instruments 4.***Open surgery Instruments***: a. Coagulation shears- 5mm dia, 20cm long or more b. Dissecting grasper 5mm dia for Coagulation 20 cms. or more 5. ***Endoscopic surgery Instruments:*** a. Dissector Grasper 5mm diameter 30cm-45cm long b. Curved Shear,5mm diameter,30cm- 45cms long 6. Any Other compatible Accessories has to be offered if any.		

5 Environmental factors

5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.or should comply with 89/366/EEC; EMC-directive.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

7.1	The generator must be CF isolated applied device and defibrillator protection must be available.
7.2	Should be USFDA/ European CE approved Model.
7.3	Manufacturer should have ISO certification for quality standards.
7.4	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.5	Two years Warranty and 5 years AMC/CMC after expiry of Warranty . Instrument should be upgradeable in case of any technology advancement free of cost. Hand piece with transducer should be covered with warranty.

8 Documentation

8.1	User/Technical/Maintenance manuals to be supplied in English.
8.2	Certificate of calibration and inspection.
8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
8.4	List of important spare parts and accessories with their part number and costing.
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.
8.6	The equipment should be available for demonstration in case required
8.7	The equipment should have 95% uptime. If downtime exceeds 5 % in a calendar Year, Warranty will exceed for double the number of days.

Item No: 46

OPERATION TABLE HYDRAULIC

1. Description of Function

1.1 Hydraulic operating Tables are simple tables for performing surgical procedures and it works without electrical power.It should have basic functions of height, tilting and Trendlenberg positions.

2. Operational Requirements

2.1 OT Table is required for general surgery and should have X-Ray translucent tops.

3. Technical Specifications

1. Four section table top (head section, back section, seat section with perineal cut, divided/foldable/detachable leg section with integrated kidney bridge.

2. Table top should be constructed from a high-pressure laminate/carbon fibre permitting x-ray penetration and fluoroscopy

3. All table positioning, i.e., height, back section, lateral tilt, trendelenburg, and anti-trendelenburg, except foot and head section
should be operated hydraulically

4. Should have a manual position selector

5. The casings on the frame and centre supporting column should be
made of chromium, nickel steel (CrNi Steel min SS 304) with central locking facility and four anti static double castors.

6. Mattress should be radio lucent and suitable for fluoroscopy

7. Measurements :(all dimensions are approximate)

a. Height without padding: 700-1050 mm
b. Side tilt: 15 degrees to 20 degrees
c. Back section adjustment: 40 degrees to 70 degrees
d. Foot section adjustment: - 90 to 0 degree/detachable
e. Trendelenburg: 25 to 30 degree
f. Anti trendelenburg: 25 to 30 degree
g. Head section adjustment: -40 to -30 degree/detachable
h. Maximum width: 500-540 mm(without side rails)
i. Length: 1950 – 2200 mm
j.Weight bearing capacity 125-150 Kg.

4. System Configuration Accessories, spares and consumables

4.1 System as specified

4.2 Accessories should include

a. Padded arm rest with straps - pair with damps
b. Anaesthesia screen with clamps
c. Side supports: pair with clamps
d. Shoulder supports: pair with clamps
e. Knee crutches: pair with damps
f. X-ray cassette tray
g. Infusion rod with clamp

5. Standards, Safety and Training

5.1 Should be US – FDA/European CE approved product

5.2 Manufacturer should be ISO certified for quality standards.

6. Documentation

6.1 User/Technical/Maintenance manuals to be supplied in English.

6.2 Certificate of calibration and inspection.

6.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.

6.4 List of important spare parts and accessories with their part number and costing

6.5 List of installations preferably govt. Institutions/medical colleges with performance certifications (min. Three Nos)

6.6 Demonstration of quoted model before the appropriate committee is necessary. Should provide in house training to all users.

7. Warranty:

1. 5 Years Comprehensive Warranty. Vendor should quote the rate for spares parts from 6^{th} to 10^{th} year. Spares should be available for 10 years.

2. The table should have 95% uptime. If the downtime exceeds 5% in a calendar year comprehensive warranty will extend for double the downtime period. Same clause will apply for each year of CMC from the 6^{th} to 10^{th} year.

Item No: 47

Ventilator-Paediatric/ Infant/Neonates

1 Description of Function	
1.1	Paediatric/Infant Ventilator provide artificial respiration support to Neonates, infants & Children in ICU/Wards/NICU.
2 Operational Requirements	
2.1	The Infant Paediatric ventilator should be easy to operate and should incorporate safety alarms and backup ventilation.
2.2	Microprocessor Controlled integrated suitable for child ventilation.
2.3	Demonstration of the equipment is a must.
3 Technical Specifications	
3.1	Should have not less than 10 inch colored TFT screen for monitoring of the ventilation parameters, curves and loops

3.2	Automatic compliance & Leakage compensation for circuit and ET tube	
3.3	Should have the facilities for following setting and display for child & Neonates a) Tidal Volume (10 – 2000ml) b) Flow Pattern – display of curve (P-T, F-T, V-T) and Loop (P, Vol., flow) c) Inspiration Plateau d) Pressure ramp e) SIMV Rate f) CPAP/PEEP g) Pressure Support h) FiO_2 i) Pause Time j) Inspiration trigger sensitivity to flow & pressure k) Base Flow l) Sensitivity for cycling to expiration m) Digital display of monitored parameter (see para 3.4) n) Display of battery charge status o) Insp time/I:E ratio p) Alarm setting for apnea, PIP, T.V. q) Alarm for power off.	
3.4	Should have the capability of monitoring of the following parameters, a) Airway Pressure b) Expired tidal Volume c) Minute Volume d) Spontaneous Minute Volume e) Total Frequency f) FiO_2 (by paramagnetic cell) g) Auto PEEP h) Rapid Shallow Breathing Index i) Plateau Pressure j) Inspiratory & Expiratory Resistance k) Static Compliance l) Imposed Work of Breathing m) Peak, Plateau and mean airway pressure n) leak	
3.5	Should have the Audio & video Alarms (User Selector) for all the measured and monitored parameters.	
3.6	Should have the following Modes of ventilations, a) Volume controlled b) Pressure Controlled c) Pressure Support d) SIMV (Pressure Control and volume control) with pressure support. e) CPAP/PEEP (0 – 50 CM H20) f) Auto mode /Auto flow or equivalent. g) PRVC or equivalent. h) Biphasic or equivalent	
3.7	Reusable and autoclavable sensors should be automatically calibrated every time it is switched on	

3.8	Should have the ability to calculate a) Intrinsic PEEP b) Occlusion Pressure c) Negative Inspiratory force		
3.9	Driving Gas Mechanism a) Good quality compressor compatible with ventilator. b) compressor & ventilator should be mounted on same trolley and provide an oil free Medical air. c) Peak output flow should be minimum 100 LPM. d) Air quality should comply with ISO compressed air purity class. e) Medical Air Compressor should automatically/manually activate in the event of wall air supply loss. f) Replacement of filters should be performed without removing the compressor g) Should have washable air filter. h) Compressor should be US – FDA/European CE approved. i) ventitator should work on atmospheric air(21, O2) as well as 100 % 02		
3.10	Nebuliser with capability to deliver particle size of < 3 micron & to be used in both Off and On line		

4 System Configuration Accessories, spares and consumables

4.1	(a) Infant, neonatal, Paediatric Ventilator circuit (autoclavable) – 1 (b) Exhalation Valve (autoclavable) – 2 with each Ventilator
4.2	Humidifier -Servo controlled with digital monitoring of inspired gas temperature complete with heating wire atleast in inspiratory limb with servo control-01
4.3	Nebulizer compatible with ventilator-01
4.4	compressor -01
4.5	Air Hose-01
4.6	Oxygen Hose-01
4.7	Paediatric autoclavable/reusable silicone breathing circuit-02
4.8	Infant autoclavable/reusable silicone breathing circuit-02
4..9	Non corrosive trolley of same manufacturer and hinged arm: 01
4.10	High Pressure Tubings should be compatible with the existing system of gas outlets

5 Environmental factors

5.1	The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%		

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Suitable UPS and Internal Battery backup for minimum one hour for ventilator		

7 Standards, Safety and Training

7.1	Should be US – FDA / European CE approved product		
7.2	Manufacturer should have ISO certification for quality standards.		

8 Documentation

8.1	Certificate of calibration and inspection from factory.		
8.2	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Service manual in English		
8.5	User manual in English		
8.6	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out. **<u>Optional item:</u>** 1 copnograph 2 pulse oximeter		

<u>Item No: 48</u>

Ventilator-Portable

1 Description of Function

1.1	The portable ventilator is used to transport a patient with artificial respiration support or home care of a patient after discharge from a hospital.		

2 Operational Requirements

2.1	The portable ventilator should be light weight(< 7.5 kg)		
2.2	Should be microprocessor controlled, portable, light weight. Should operate with main electric supply as well as with chargeable battery with backup		

	time of 4hrs with full charge. Should be able to work both with cylinders and pipeline, connectors and high-pressure tubing of appropriate length to be supplied.
2.3	Demostration of the equipment is a must.

3 Technical Specifications

3.1	Should have turbine/venturi/jet mixing- technology for supplying air- oxygen mixture
3.2	Should have following modes of ventilation: CMV, Assist-contol,SIMV, PS-PEEP
3.3	Audio-visual alarms for a. Low supply pressure b. High/low airway pressure c. Leakage/disconnection d. Power failure e. Apnea f. Low battery
3.4	Should have following settings a. TV 10 – 1500ml b. PEEP/CPAP & PS c. RR up to 40bpm d. I: E ratio 1:3 to 2:1 e. FiO2 : 21 – 100%
3.5	Battery back up for minimum 4 hours
3.6	Should fix, on rails of transport trolley and on stand with wheels.

4 System Configuration Accessories, spares and consumables

4.1	Portable Ventilator-01
4.2	Adult Reusable /Autoclavable Silicon Patient Circuit-02
4.3	Paediatric Reusable/Autoclavable Silicone Patient Circuit-02
4.4	Neonatal Reusable/Autoclavable Silicone Patient Circuit - 02
4.5	Oxygen Hose-01
4.6	Air Hose-01
4.7	Rechargeable Batteries- 01 set

5 Environmental factors

5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50° C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
5.3	Shall meet IEC-60601-1-2 :200(Or Equivalent BIS) General Requirements of Safety for

	Electromagnetic Compatibility.
6 Power Supply	
6.1	Power input to be 220-240VAC, 50Hz
7 Standards, Safety and Training	
7.1	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.2	Product should be US-FDA/ European CE approved product
7.3	Manufacturer should have ISO certification for quality standards.
8 Documentation	
8.1	User Manual in English
8.2	Service manual in English
8.3	Certificate of calibration and inspection from factory.
8.4	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.5	List of important spare parts and accessories with their part number and costing
8.6	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
8.7	Must submit user list and performance report within last 5 years from major hospitals.

Item No: 49

Fiberoptic Bronchoscope-Paediatric

1 Description of Function	
1.1	The flexible fiberoptic bronchoscope is used for diagnostic and therapeutic procedures in critically ill patients for difficult intubation.
2 Operational Requirements	
2.1	The Paediatric fiberoptic bronchoscope should be lightweight,high resolution and flexible to be used with paediatric patients.
2.2	Demonstration of the system is a must
3 Technical Specifications	
3.1	Operating Suction should be submersible

3.2	Bending mechanism without lock
3.3	Leak testing facility with automatic air feeding system preferable
3.4	Video adaptor eyepiece to be provided
3.5	Field of view 100° at least
3.6	outer diameter 3.5± 0.3mm with channel diameter 1.2 mm or more
3.7	Depth of field 2 to 50 mm or better
3.8	Bending range Up 180° approx., Down 120° -130° approx
3.9	Working length – 500mm or more
3.10	Video processing system compatible with bronchoscope with software & hardware for recording imaging.
3.11	Halogen light with 150 watt. Bulb with white light output with standby lamp option. Extra bulbs 4 in no.
3.12	Autoclavable suction valve to avoid risk of cross contamination
3.14	Standard set should include reusable and autoclavable biopsy forceps (1no.)
3.15	Cleaning/maintenance kit including container for disinfectant solution
3.16	Should be supplied with 3 shelf plastic cart having base with scope holder and power strip

4 System Configuration Accessories, spares and consumables

4.1	Flexible Fiberoptic Bronchoscope-Paediatric-01
4.2	Brush biopsy (protected) – 50 pcs
4.3	Foreign body forceps basket type-02.
4.4	Trolley -01
4.5	Standard accessories-01 set
4.6	Light Source, Halogen -01
4.7	Spare Halogen Bulbs- 04
4.8	Cleaning and Maintenance Kit – 01 set

5 Environmental factors

5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -500 deg.C and relative humidity of 15-90%
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug
6.2	Suitable On-Line UPS with One hour backup
6.3	Type of Protection Against Electric Shock Class I (3-core cord)to be supplied for the Light Source

7 Standards, Safety and Training

7.1	Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment.
7.2	Certified to meet the current leakage requirement of IEC 60601-2-18 or equivalent standard for Medical Equipment particular requirement for safety of endoscopy equipments.
7.3	Certification to meeting Biocompatibility as per ISO 10993-1, “Biological evaluation of medical devices-Part 1: Guidance on selection of tests”
7.4	Manufacturer should have ISO certification for quality standards.
7.5	Product should be US - FDA/European CE approved product
7.6	Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
7.7	Degree of Protection Against Electric Shock Type BF -Should incorporate insulated patient attachment for light source.
7.8	Comprehensive warranty for 5 years and provision of AMC for next 5 years.

8 Documentation

8.1	Certificate of calibration and inspection from factory.
8.2	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.3	User Manual in English
8.4	List of important spare parts and accessories with their part number and costing.
8.5	Service manual in English
8.6	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
8.7	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.
8.8	Must submit user list and performance report within last 5 years from major hospitals.

Item No: 50

ULTRASONIC ASPIRATOR FOR MICRONEUROSURGERY

1 Description of Function	
1.1	Ultrasonic aspirators use mechanical ultrasonic vibration and an irrigation/suction system to fragment and remove soft tissue and high-water-content growths from various parts of the body.
2 Operational Requirements	
2.1	The system should be quoted with different sizes of hand pieces.
3 Technical Specifications	
3.1	Surgical aspirator should be based on magneto-restriction or piezoelectric technology.
3.2	The hand piece must be cooled if required to prevent overheating by flow of water.
3.3	The hand pieces should be autoclavable and without need to dismantle for autoclaving.
3.4	The vacuum pump should provide preferable the suction of > 600mm of Hg.
3.5	It should have safety features like optical signal for failed hand pieces and signal for failed unit.
3.6	It should have on and off button.
3.7	It should have integral suction with vacuum pressure of-20 to -90 Kpa. in continuous low noise and digital display.
3.8	It should preferably have 1.5 -2.5 liter capacity container of unbreakable material with level sensor and anti-overflow system.
3.9	Compatible Hand piece should be light, preferable 20-55 KHz
3.10	The hand piece should be available in the following sizes:- 1. Standard Size Hand Pieces- Angled & Straight (1 each) 2. Micro tipped- Angled hand piece. (1 each) 3. Long- Angled hand piece.(1 each). 4. Hand piece angled for bone cutting.
3.11	The irrigation pump should be inbuilt in the unit, the irrigation output 0-65ml/min.
3.12	All hand pieces/ instruments should be detachable.
4 System Configuration Accessories, spares and consumables	
4.1	ACCESSORIES: 1. Trolley. 2. Assembly kit for aspirator- 1 3. Infusion bottle holder-1 4. Double foot switch-1

	5. Cleaning brush for instrument lumen-2 6. Instrument connection cables- 2 7. Suction / irrigation tubing (5meter each), silicon twin tube-20 8. Autoclavable compatible instrument tray. 9. Protective cover-4 pieces.

5 Environmental factors	
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%
5.3	Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. or should comply with 89/366/EEC; EMC-directive.

6 Power Supply	
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug
6.2	Suitable UPS with maintenance free batteries for minimum two-hour back-up should be supplied with the system

7 Standards, Safety and Training	
7.1	Manufactures/Supplier should have ISO or equivalent certificate to Quality Standard.
7.2	Should be compliant with IEC 61010-1:(or any international equivalent e.g. EN/UL 61010) covering safety requirements for electrical equipment for measurement control and laboratory use
7.3	Should be US – FDA/ European CE approved product
7.4	Comprehensive training for 2 surgeon and 2 assistant services till familiarity with the supplied system.

8 Documentation	
8.1	User/Technical/Maintenance manuals to be supplied in English.
8.2	Certificate of calibration and inspection.
8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.4	List of important spare parts and accessories with their part number and costing.
8.5	Comprehensive Warranty 5 Years and CMC 5 Years
8.6	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

Item No: 51

CRANIOTOMY (Neurosurgery)

S/N Name of the equipment

SCAPLE HDL No 3 STAND -2Nos
SCAPLE HDL No 7 LONG -2Nos
SCAPLE HDL No 4 STND -2Nos
DEAVER SCRS SIR 14CM -4Nos
MAYO SCRS STR 17CM -4Nos
MAYO SCS CVD 17CM -4Nos
METZENBAUM SCRS STR 18CM -4Nos
ADSON DRESS FCPS 12CM SERR -4Nos
ADSON TISSUE FCPS 12CM 1X2T -8Nos
CUSHING DRESS FCPS 18CM SERR -8Nos
CUSHING TISSUE FCPS 18CM 1X2T-8Nos
CUSHING BAYONET FCPS 18.5CM SERR -4Nos
CUSHING BAYONET FCPS 18.5CM 1X2T -4Nos
FRAZIER SUCT TUBE 10FR ANG 12.5CM-8Nos
HALSTED MOSQ FCPS 12.5CM STR-8Nos
HALSTED MOSQ FCPS 12.5CM CVD-8Nos
DANDY HEMOST FCPS 14CM CVD SIDEWAYS-48Nos
BACKHAUS TOWEL CLAMP 13CM-12Nos
FOERSTER SPONGE FCPS 24 CM STR-4Nos
CUSHING VEIN HOOK 10X10 MM BLADE-4Nos
FRAZIER DURA &SKIN HOOK 12.5CM-4Nos
JANSEN RETR 3X3 PRG BL 10CM-4Nos
WEITLANER RETR SH PRG 20CM-4Nos
LUER BONE RONG CVD 17CM-4Nos
LEMPERT RONG 16CM CVD-4Nos
STILLE LUER BONE RONG STR 23CM-4Nos
STILLE LUER BONE RONG CVD 23CM-4Nos
DEVILBISS CRANIAL RONG 21CM-4Nos
SPURLING RONG 15CM/4X10MMSTR-4Nos
SPURLING RONG 15CM/4X10MM UP-4Nos
OLDBERG IVD RONG 20CM/6MM-4Nos
SCHMIEDEN SCRS 16CM-4Nos
DAVIS SPATULA MALLE 16MM 19CM-4Nos
CUSHING SPOON SPATULA 17CM-4Nos
OLIVECRONA SPATULA 11& 13MM STR-4Nos
OLIVECRONA SPATULA 15 & 18MM STR-4Nos
FRAZIER SEPARATOR 15CM-4Nos
FRAZIER VENTRICULAR NEEDLE 2MMX10CM-4Nos
DANDY NERVE HOOK STR-4Nos
CUSHING DECOMPRESSION PETR-4Nos
HUDSON CEREBELLA EXTENSION ONLY-4Nos
HUDSON BURR 16MM-8Nos
MCKENZIE HELICOID DRILL 13MM-4Nos
ADSON DRILL GUIDE

1. GIGLI WIRE SAW HDLS LOOP PAIR-4Nos
2. DE MARTEL WIRE SAW GUIDE-8Nos
3. RANEY SCALP CLIP P/10-4 Dozen
4. RANEY SCALP CLIP FCPS4 Dozen
5. PENIELD DISSECTOR 1D/E-4Nos
6. PENIELD DISSECTOR 2D/E-4Nos
7. PENIELD DISSECTOR 3D/E-4Nos
8. PENIELD DISSECTOR 4D/E-4Nos
9. Raney scalp clip applicator -2 Nos.
10. Trephine with adjustable dura guard (1.5cm x 3cm x 3.5cm) 5.25 cm diameter

MICRO-NEUROSURGICAL SET

1. JACOBSON MICRO FCPS 18CM- 2Nos.
2. MICRO FCPS CVD 19.5CM DULL- 2Nos.
3. MICRO FCPS SERR 1.0MM 19CM- 2Nos.
4. MICRO FCPS SERR 1.0MM- 2Nos.
5. MICRO FCPS BAYONET BROAD STR 18.5CM- 2Nos.
6. MICRO FCPS BAYONETBROAD ANG 18.5CM- 2Nos.
7. SUCT & IRRIG TUBE 1- 2Nos.
8. SUCT & IRRIG TUBE 2- 2Nos.
9. SUCT & IRRIG TUBE 3- 2Nos.
10. YASARGIL MICRO SCRS 19CM STR - 2Nos.
11. YASARGIL MICRO SCRS 19CM CVD - 2Nos.
12. YASARGIL MICRO SCRS 19CM STR- 2Nos.
13. YASARGIL MICRO SCRS 19CM CVD- 2Nos.
14. YASARGIL NH 18.5CM- 2Nos.
15. YASARGIL NH 18.5CM- 2Nos.
16. YASARGIL BASPATORYIMM ANG- 2Nos.
17. YASARGIL DISSECTOR2.5MM ANG- 2Nos.
18. YASARGIL DISSECTOR 4MM ANG- 2Nos.
19. YASARGIL ELEVATOR LIGHT CVD- 2Nos.
20. YASARGIL ELEVATOR STRONG CVD- 2Nos.
21. JACOBSON BALL TIP PROBE ANG- 2Nos.
22. JACOBSON DOUBLE PROBE- 2Nos.
23. KRAYENBUEHL NERVE HOOK LARG- 2Nos.E
24. KRAYENBUEHL NERVE HOOK SMALL- 2Nos.
25. YASARIL TISSUE LIFTER 1MM- 2Nos.
26. YASARIL TISSUE LIFTER 1.5MM- 2Nos.
27. JACOBSON SUT PUSHER- 2Nos.
28. YASARGIL LIG GUIDE SHORT CVD- 2Nos.
29. YASARGILLIG GUIDE LONG CVD- 2Nos.
30. YASARGIL LIG GUIDEANG 90*- 2Nos.
31. YASARGIL KNIFE FWD- 2Nos.
32. YASARGIL KNIFE BWD- 2Nos.
33. YASARGIL CURETTEE OVAL CUP- 2Nos.
34. YASARGIL RASPATORY CVD- 2Nos.
35. YASARGIL RASPATORY CVD FWD- 2Nos.
36. YASARIL RASPATORY CVD BWD- 2Nos.

37. MICRO GRASP FCPS STR SHORT JAWS- 2Nos.
38. MICRO GRASP FCPS STR LONG JAWS- 2Nos.
39. MICRO GRASP FCPS STR- 2Nos.
40. MICRO FCPS CUP JAWS- 2Nos.
41. MICRO SCRS RT ANG BLADES -2Nos.
42. MICRO SCRS STR- 2Nos.
43. YASARGIL MICRO FCPS BAYONET 18CM DULL- 2Nos.
44. YASARGIL MICRO FCPS BAYONET 1X2D 18CM- 2Nos.
45. YASARGIL MICRO FCPS BAYONET DW CVD 20CM- 2Nos.

Aneurysm set

1. SUPPL SET FOR ANEURYSM (YASARGIL TITAN) - 2Nos.
2. YASARGIL CLIP APPLYING FORCEPS, MINI- 2Nos.
3. APPLICATOR TITAN MINICLIPS 15" CUR 90MM- 2Nos.
4. YASARGIL CLIP APPLYING FORCEPS STANDARD- 2Nos.
5. APPLICATOR TITAN STD CLIP 15" CUR 90MM- 2Nos.
6. WITHDR FORC.F.YASARGIL MINI CLIPS 205MM- 2Nos.
7. WITHDR FORC.F.YASIRGIL STD CLIPS 205MM- 2Nos.
8. YASIRGIL CLIP TEMP 7.0265MM BLADE LG(Titanium)- 6Nos.
9. YASIRGIL CLIP TEMP 11.0MM BLADE LG (Titanium)- 6Nos.
10. YASIRGIL CLIP TEMP 6.5MM BLADE LG (Titanium)- 6Nos.
11. YASIRGIL CLIP TEMP 10.2MM BLADE LG (Titanium)- 6Nos.
12. YASIRGIL CLIP TEMP 6.4MM BLADE LG (Titanium)- 6Nos.
13. YASIRGIL CLIP TEMP 8.0MM BLADE LG (Titanium)- 6Nos.
14. YASIRGIL CLIP TEMP 8.4MM BLADE LG (Titanium)- 6Nos.
15. YASIRGIL CLIP TEMP 13.7MM BLADE LG (Titanium)- 6Nos.
16. YASIRGIL CLIP TEMP 9.0MM BLADE LG (Titanium)- 6Nos.
17. YASARGIL CLIP STANDARD TEMPORARY 6.1MM (Titanium)- 6Nos.
18. YASARGIL CLIP STANDARD TEMPORARY 7.0MM (Titanium)- 6Nos.
19. YASARGIL CLIP STANDARD TEMPORARY 7.0 MM (Titanium)- 6Nos.
20. YASARGIL CLIP STD TEMPORARY 11.4MM (Titanium)- 6Nos.
21. YASARGIL CLIP MINI TEMPORARY 3.0MM (Titanium)- 6Nos.
22. YASARGIL CLIP MINI TEMPORARY 5.0MM (Titanium)- 6Nos.
23. YASARGIL CLIP MINI TEMPORARY 5.0MM (Titanium)- 6Nos.
24. YASARGIL CLIP MINI TEMPORARY 7.0MM (Titanium)- 6Nos.
25. YASARGIL CLIP MINI TEMPORARY 2.8MM(Titanium)- 6Nos.
26. YASARGIL CLIP MINI TEMPORARY 4.7MM(Titanium)- 6Nos.
27. YASARGIL CLIP MINI TEMPORARY 4.0MM(Titanium)- 6Nos.
28. YASARGIL CLIP MINI TEMPORARY 5.2MM(Titanium)- 6Nos.
29. YASARGIL CLIP MINI TEMPORARY 4.0MM(Titanium)- 6Nos.
30. YASARGIL CLIP MINI TEMPORARY 3.9MM(Titanium)- 6Nos.
31. YASARGIL CLIP MINI TEMPORARY 5.0MM(Titanium)- 6Nos.
32. YASARGIL CLIP MINI TEMPORARY 4.0MM(Titanium)- 6Nos.
33. YASARGIL CLIPS STD PERMANENT 7MM(Titanium)- 6Nos.
34. YASARGIL CLIPS STD PERMANENT 11MM(Titanium)- 6Nos.
35. YASARGIL CLIPS STD PERMANENT 6.5MM(Titanium)- 6Nos.
36. YASARGIL CLIPS STD PERMANENT 10.2MM(Titanium)- 6Nos.

37. YASARGIL CLIPS STD PERMANENT 6.4MM(Titanium)- 6Nos.
38. YASARGIL CLIPS STD PERMANENT 8.0MM(Titanium)- 6Nos.
39. YASARGIL CLIPS STD PERMANENT 8.4MM(Titanium)- 6Nos.
40. YASARGIL CLIPS STD PERMANENT 13.7MM(Titanium)- 6Nos.
41. YASARGIL CLIPS STD PERMANENT 9MM(Titanium)- 6Nos.
42. YASARGIL CLIPS STD PERMANENT 6.1MM(Titanium)- 6Nos.
43. YASARGIL CLIPS STD PERMANENT 7MM(Titanium)- 6Nos.
44. YASARGIL CLIPS STD PERMANENT 7MM(Titanium)- 6Nos.
45. YASARGIL CLIPS STD PERMANENT 11.4MM(Titanium)- 6Nos.
46. YASARGIL MINI CLIPS PERMANENT 3MM(Titanium)- 6Nos.
47. YASARGIL MINI CLIPS PERMANENT 5MM(Titanium)- 6Nos.
48. YASARGIL MINI CLIPS PERMANENT 5MM(Titanium)- 6Nos.
49. YASARGIL MINI CLIPS PERMANENT 7MM(Titanium)- 6Nos.
50. YASARGIL MINI CLIPS PERMANENT 2.8MM(Titanium)- 6Nos.
51. YASARGIL MINI CLIPS PERMANENT 4.7MM(Titanium)- 6Nos.
52. YASARGIL MINI CLIPS PERMANENT 4MM(Titanium)- 6Nos.
53. YASARGIL MINI CLIPS PERMANENT 5.2MM(Titanium)- 6Nos.
54. YASARGIL MINI CLIPS PERMANENT 4MM(Titanium)- 6Nos.
55. YASARGIL MINI CLIPS PERMANENT 3.9MM(Titanium)- 6Nos.
56. YASARGIL MINI CLIPS PERMANENT 5MM(Titanium)- 6Nos.
57. YASARGIL MINI CLIPS PERMANENT 4MM(Titanium)- 6Nos.
58. STORAGE FOR 65 TRIAL CLIPS -2 Nos.
59. POLYVAC STORAGE F TITANCLIP APPLY FORC-2 Nos.

TRANSPHENOIDAL INSTRUMENTS

1. CUSHING LANDOLT SPECULUM FOR TRANS-SPHENOIDAL HYPOTHYSECTOMY BLACK
FINISH SIZE 70MMX15MM SS-2 Nos.
2. CUSHING LANDOLT SPECULUM FOR TRANS-SPHENOIDAL HYPOTHYSECTOMY BLACK
FINISH SIZE 90MM X 15MMMM SS-2 Nos.
3. CUSHING LANDOLT SPECULUM FOR TRANS-SPHENOIDAL HYPOTHYSECTOMY BLACK
FINISH SIZE 110MM SS-2 Nos.
4. HARDY IMPLANT FORK 9 ¾” LONG,BAYONET SHAFT,SHARP RIGHT SS-2 Nos.
5. HARDY IMPLANT FORK 9 ¾” LONG,BAYONET SHAFT,BLUNT RIGHT SS-2 Nos.
6. HARDY ENUCLEARTOR FORK 9 ¾” LONG,BAYONET SHAFT,BLUNT LEFT SS-2 Nos.
7. LANDOLT RASPATORY BAYONET SHAFT 10 ¼” LONG, SHARP ROUND TIP 2.2 MM DIA ,SS-2 Nos.
8. LANDOLT RASPATORY BAYONET SHAFT 10 ¼” LONG, SHARP ROUND TIP 3.2 MM DIA ,SS-2 Nos.
9. LANDOT MICRO BLUNT HOOK, BAYONET SHAFT,10 ¼” LONG,SHARP ROUND TIP 2.2MM DIA SS-2 Nos.
10. LANDOT MICRO BLUNT HOOK, BAYONET SHAFT,10 ¼” LONG,SHARP ROUND TIP 3.2MM DIA SS-2 Nos.
11. LANDOT MICRO BLUNT HOOK,BAYONET SHAFT,10 ¼” LONG SHARP ROUND TIP 2.2MM DIA ,SS-2 Nos.

12. LANDOLT DISSECTOR ,BAYONET SHARPED 10 ¼ " LONG TIP CURVED DOWN 2 MM WIDE ,SS-2 Nos.
13. LANDOLT DISSECTOR ,BAYONET SHARPED 10 ¼ " LONG TIP CURBED 2 MM WIDE ,SS-2 Nos.
14. LANDOLT DISSECTOR ,BAYONET SHARPED 10 ¼ " LONG TIP CURVED DOWN 2 MM WIDE,SS-2 Nos.
15. LAND DISSECTOR BAYONET SHARPED 10 ¼"LONG TIP CURBED 2MM WIDE, SS-2 Nos.
16. LAND DISSECTOR BAYONET SHARPED 10 ¼"LONG TIP CURVED 2MM WIDE, SS-2 Nos.
17. FAHLBUSCH MINICRO CURETTE,BAYONET SHAFT 10 ¼" LONG SS-2 Nos.
18. FAHLBUSCH MINICRO CURETTE,BAYONET SHAFT 10 ¼" LONG 2.5MM,90DEG ANGLES SS-2 Nos.
19. FAHLBUSCH MINICRO CURETTE,BAYONET SHAFT 10 ¼" LONG 2.5MM,45DEG ANGLES SS-2 Nos.
20. HARDY RING CURETTE,BAYONET SHAFT,10 ¼" LONG 90 DEG 3MM DIA SS-2 Nos.
21. HARDY RING CURETTE,BAYONET SHAFT,10 ¼" LONG 90 DEG 4MM DIA SS-2 Nos.
22. HARDY RING CURETTE,BAYONET SHAFT,10 ¼" LONG 90 DEG 5MM DIA SS-2 Nos.
23. HARDY PITUITAY SPOON BAYONET SHARPED 9 ½" LONG 4 ¾" WORKING LENGTH,SS-2 Nos.
24. UNIVERSAL BAYONET HANDLE WITH LOOKING NUT 12CM LONG SS WITH-2 Nos.
25. DISSECTOR ROUND ,2.5MM,LENGTH 14.5CM,SS-2 Nos.
26. DISSECTOR ROUND ,3.5MM,LENGTH 14.5CM,SS-2 Nos.
27. DISSECTOR ROUND ,5.0MM,LENGTH 14.5CM,SS-2 Nos.
28. TUMOR KNIFE LENGTH 14.5CM STAINLESS STEEL-2 Nos.
29. RING CURETTE,45 DEG ANGLE 3MM LENGTH 14.5CM SS-2 Nos.
30. RING CURETTE,45 DEG ANGLE 5MM LENGTH 14.5CM SS-2 Nos.

CLOWARD INSTRUMENTATION FOR GRAFT

1. CLOWARD CERVICAL RETRACTOR WITH SINGLE HINGED ARMS 10" LONG,TOTAL OPENING 4 ½",SS WITH SET OF 5 SHARP & 5 BLUNT BLADES-1 Nos.
2. CLAWARD CERVICAL RETRACTOR WITH DOUBLE HINGED ARMS 10" LONG TOTAL OPENING 4 ½" SS WITH 5 SHARP AND 5 BLUNT BLADES COMPLETE SET-1 Nos.
3. CLAWARD CERVICAL RETRACTOR SMALL 6" TOTAL OPENING 3 ¾" SS WITH 5 SHARP AND
   5 BLUNT BLADES COMPLETE SET-1 Nos.
4. CLAWARD VERTEBRAL SPREADER WITH RATECHET 5" LONG TOTAL OPENING ¾"-1 Nos.
5. CLAWARD CROSS BARR HANDLE INSIDE DIAMETER 7/8" SS -1 Nos.
6. CLWARDS DOWEL CUTTER 12MM STAINLESS STEEL-2 Nos.
7. CLWARDS DOWEL CUTTER 14MM STAINLESS STEEL-2 Nos.
8. CLWARDS DOWEL CUTTER 16MM STAINLESS STEEL-2 Nos.
9. CLWARDS DOWEL CUTTER 18MM STAINLESS STEEL-2 Nos.
10. CLOWARDS CENTER PIN FOR USE WITH 12MM DOWEL CUTTER SS-2 Nos.
11. CLOWARDS CENTER PIN FOR USE WITH 14MM DOWEL CUTTER SS-2 Nos.
12. CLOWARDS CENTER PIN FOR USE WITH 16MM DOWEL CUTTER SS-2 Nos.
13. CLOWARDS CENTER PIN FOR USE WITH 18MM DOWEL CUTTER SS-2 Nos.
14. CLOWARDS DOWEL CUTTER SHAFT DT 6 ½" LONG SS-2 Nos.

15. CLOWARDS DOWEL EJECTOR 4 ½" LONG SS-2 Nos.
16. CLOWARDS DOWEL HANDLE AND IMPACTOR 7" LONG SS-2 Nos.
17. CLOWARDS DOWEL HOLDER 14MM SS-2 Nos.
18. CLOWARDS DOWEL HOLDER 16MM SS-2 Nos.
19. CLOWARDS DOWEL HOLDER 18MM SS-2 Nos.
20. CLOWARDS DOWEL HOLDER 20MM SS-2 Nos.
21. CLOWARDS CERVICALDRILL TIP 10MM SS-2 Nos.
22. CLOWARDS CERVICALDRILL TIP 12MM SS-2 Nos.
23. CLOWARDS CERVICALDRILL TIP 14MM SS-2 Nos.
24. CLOWARDS CERVICALDRILL TIP 16MM SS-2 Nos.
25. CLOWARDS CERVICALDRILL GUARD WITH GBONE RELIEF,4 1/16" LONG SMALL SIZE,13MM DIA SS-2 Nos.
26. CLOWARDS CERVICALDRILL GUARD WITH GBONE RELIEF,4 1/16" LONG SMALL SIZE,16MM DIA SS-2 Nos.
27. CLOWARDS CERVICALDRILL GUARD CAP 1 1/14" LONG 1" DIA SS
28. CLOWARDS DRILL SHAFT WITH DEPTH STOP 5 9/16" LONG,SMALL SIZE 13MM DIA SS-2 Nos.
29. CLOWARDS DRILL SHAFT WITH DEPTH STOP 5 9/16" LONG,SMALL SIZE 16MM DIA SS-2 Nos.
30. CLOWARDS OSTEOPHYTE ELEVATOR 8" LONG SS-2 Nos.
31. CLOWARDS DEPTH GAUGE 8 3/8" LONG SS-2 Nos.
32. CLOWARDS GUARD GAUIDES DOUBLE ENDED 7 ½" LONG 3/8" & ½" SS-2 Nos.

Note – 1) Should be US-FDA/ European CE Approved Product.
2) Should be of stainless steel (surgical grade)

Item No: 52

Spine Surgery Set

Spinal Instruments
SCAPEL HDL NO 3 STAND -2Nos.
SCAPEL HDL NO 7 LONG -2 Nos.
SCAPEL HDL NO 4 STAND-2 Nos.
DEAVER SCRS STR 17CM-2 Nos.
MAYO SCRS STR 14CM-4 Nos.
MAYO SCRS CVD 17CM-4 Nos.
METZENBAUM SCRS STR 18CM-4 Nos.
DRESS FCPS 14.5CM STAND-4 Nos.
DRESS FCPS 20CM STAND-4 Nos.
TISSUE FCPS 14.5CM 1X2T STAND-8 Nos.
TISSUE FCPS 20CM 1X2T STAND-8 Nos.
CUSHING TISSUE FCPS 18CM 1X2T-8 Nos.
CUSHING DRESS FCPS 18CM SERR-8 Nos.
CUSHING BAYONET FCPS 18.5CM SERR-8 Nos.
CUSHING BAYONET FCPS 18.5CM 1X2T-8 Nos.
FRAZIER SUCT TUBE 10FR ANG 12.5CM-4 Nos.
FRAZIER SUCT TUBE 12FR ANG 12.5CM-4 Nos.

Spinal Instruments
MAYO HEGAR NH 15CM-4 Nos.
HALSTED MOSQ FCPS 12.5CM STR-8 Nos.
HALSTED MOSQ FCPS 12.5CM CVD-8 Nos.
CRILE RANKIN HEMOST FCPS 1X2T 16CM CVD-4 Nos.
BACKHAUS TOWEL CLAMP 13CM-12 Nos.
FOERSTER SPONGE FCPS 24CM STR-6 Nos.
CUSHING VEIN HOCK 10X10MM BLADE-4 Nos.
VOLKMANN RETR 4 PRG BL-4 Nos.
HIBBS PETR TOOTHED EDGE SET/2-2 Nos.
WEITLANERPETR SH PRG 20CM-4 Nos.
BACKMANN ADSON PETR 4X4PR/25MM SH-8 Nos.
LANGENBECK ELEVATOR NARROW 7MM-4 Nos.
LANGERBECK ELEVATOR WIDE 10MM-4 Nos.
CUSHING ELEVATOR 15MM ROUNDED EDGE-4 Nos.
BERGMANN MALLET SOLID METAL 57DG-4 Nos.
VOLKMANN BONE CURETTEE 3/D STR 23CM-4 Nos.
VOLKMANN BONE CURETTEE 00 STR 23CM-4 Nos.
VOLKMANN BONE CURETTEE 0 STR 23CM-4 Nos.
VOLKMANN BONE CURETTEE 1 STR 23CM-4 Nos.
VOLKMANN BONE CURETTEE 2 STR 23CM-4 Nos.
VOLKMANN BONE CURETTEE 3 STR 23CM-4 Nos.
VOLKMANN BONE CURETTEE 4 STR 23CM-4 Nos.
VOLKMANN BONE CURETTEE 5 STR 23CM-4 Nos.
VOLKM PENIELD DISSECTOR 1D/E ANN BONE CURETTEE 6 STR 23CM-8 Nos.
LUER BONE RONG STR 17CM-4 Nos.
STILLE LUER BONE RONG CVD 23CM-4 Nos.
STILLE LUER BONE RONG CVD 23CM-4 Nos.
LEKSELL RONG 8MM JAWS-4 Nos.
LISTON STILLE BONE FCPS 27CM STR-4 Nos.
LISTON KEY BONE FCPS 27CM ANG-4 Nos.
ALLIS TISSUE FCPS 15CM 5X6T-12 Nos.
KERRISON SP RONG 15CM/5MM 90* UP-4 Nos.
KERRISON SP RONG 15CM/5MM 90* DW-4 Nos.
KERRISON(SCHLES) RONG 15CM/5MM 90* UP-4 Nos.
LOVE GRUENWALD RONG 18CM/3X10MM DW-4 Nos.
SACHS NERVE SEPARATOR 20CM-4 Nos.
DANDY NERVE HOOK STR-4 Nos.
SCOVILLE NERVE ROOT PETR ANG-4 Nos.
SCOVILLE HEMILAMINECTOMY PETR CPL-2 Nos.
HAVERFIELD SCOVILLE HEMILAM PETR CPL-2 Nos.
SCOVILLER BLADE TOOTHED 25X 65MM-4 Nos.
SHUNT SET
SCALPEL HDL NO3 STAND-2 Nos.
SCALPEL HDL NO 7 LONG-2 Nos.
MAYO SCRS STR 14CM-4 Nos.
METZENBAUM SLIM SCRS STR 14CM-8 Nos.

Spinal Instruments
MICRO ADSO TISS FCPS 12CM 1X2T-8 Nos.
ADSON BROWN TISSUE FCPS STR 7X7-8 Nos.
CUSHING DRESS FCPS 18CM SERR-8 Nos.
CUSHING TISSUE FCPS 18CMX2T-8 Nos.
GERALD DRESS FCPS 18CM SERR-8 Nos.
FRAZIER SUCT TUBE 10FR STR 12.5CM-4 Nos.
MAYO HEGAR NH 15CM-4 Nos.
DIETHRICH BUKKDOG CLAMP CVDJAW 8MM-4 Nos.
HALSTED MOSQ FCPS 12.5CM STR-8 Nos.
HALSTED MOSQ FCPS 12.5CM CVD-8 Nos.
CRILE HEMOST FCPS 14CM STR-8 Nos.
CRILE HEMOST FCPS 14CM CVD-8 Nos.
KOCHER FCPS 1X2T 14CM STR-8 Nos.
BACKHAUS TOWEL CLAMP 8.5CM-8 Nos.
BALENGER SPONGE FCPS18CM STR-4 Nos.
SENN MILLER PETR SH-4 Nos.
ALM PETR 4X4 PRG SH 7CM-8 Nos.
JANSEN PETR 3X3 PRG BL 10CM-4 Nos.
WEITL BECKMAN PETR SH 20CM-4 Nos.
VOLKMANN BONE CURETTE 4STR 23CM-4 Nos.
JANSEN BONE RONGEUR 4MM WIDE 17.5CM-7” -4 Nos.
ALLIS TISSUE FCPS 15CM 5X6T-8 Nos.
PENFIELD DISSECTOR 3D/E-4 Nos.
PENFIELD DISSECTOR 4-4 Nos.
CUSHING DECOMPRESSION PETR-4 Nos.
RANEY SCALP CLIP FCPS-4 Nos. Dozen
RANEY SCALP CLIP FCPS-4 Nos. Dozen
BUNELL HAND DRILL-4 Nos.

Note – 1) Should be US-FDA/ European CE Approved Product.
2) Should be of stainless steel (surgical grade).

Item No: 53

High Speed Drill System for Neurosurgery & Spinal Surgery

a. Electrically Controlled High Speed Drill System.
b. Motor speed should be adjustable.
c. Speed selection up to 100,000 rpm for selected handpieces.
d. Motor should be in hand piece.
e. Console should have a digital display of speed, direction of rotation, irrigation and switch.
f. Built in Irrigation system with irrigation speed controlled by foot switch.
g. Single Motor System with variety of handpieces.
h. Forward & Reverse Speed control via foot switch.
i. The system must comprise of 1 Qty. of each of the following
Short straight hand piece

Extra long curved hand piece
Long straight hand piece
Short curved hand piece
Craniotomy handpiece with duraguard
Perforator handpiece (with low speed motor if needed)
Separate craniotomy motor if needed with drill machine.

j. Accessories to be supplied with drill:

2 adult and 2 paediatric size perforators
10 drill bits of different sizes to be supplied with drill machine
10 craniotomy blades should be supplied
4 saws to be supplied which fit in hand piece motor
2 autoclavable cords to be supplied

k. Should be US - FDA/European CE approved product
l. Suitable UPS with 30Min battery backup.

Item No: 54

Pneumatic Drill Machine for Neurosurgery

1 Description of Function

1.1 The drill system is required to saw, cut dissect, curette, abrade, carve and shape the skull bones and the vertebral bodies, bio-metal, bio-plastics, methacrylate, ceramics and the like.

2 Operational Requirements

2.1 Should run on N2 /gas/ compressed air.

3 Technical Specifications

3.1 Motor speed should be atleast 80,000 rpm, operating pressure upto 100-200 psi (variable)
3.2 Motor should be light weight, sleek for micro neurosurgery work under operating microscope (<200 gms).
3.3 Main motor unit should be detachable from air supply hose.
3.4 Straight and angled attachments of various lengths should be available for Cranial and Spinal surgery.
3.5 Keyless Change of hand piece with mounted tool should be possible with safety lock.
3.6 Motor should be converted to an angulated position with or without an adaptor.
3.7 Sound level should be very low less than 85db close to the operating field.
3.8 Quick coupling attachment should be available.
3.9 Sterilization through Flash or Regular steam autoclave.
3.10 Perforator driver with cutter should be available.
3.11 Should have Saw hand piece (reciprocating, oscillating and sagittal with saw blades) with same system. Foot control for variable speed.
3.12 Compatible low noise medical grade air compressor to run the machine optimally at the required psi.
3.13 Irrigation pump should be available.

4 System Configuration Accessories, spares and consumables

4.1 Quote all Accessories including:

HANDPIECES (for micro Neuro surgical):

1. Straight hand piece short—1 no
2. Straight handpiece Medium—1 no
3 Straight handpiece long –1 no

4.2 CRANIOTOMY ATTACHMENT:

1. Craniotome handpiece 01
2. fixed duraguard adult 01
3. Fixed duraguard pediatrics 01

4.3 CRANIOTOME CUTTER (Bits):

1. Craniotome cutter (bits) pediatrics 20
2. Craniotome cutter (bits) adult 20

4.4 PERFORATOR:

1. Perforator driver 01
2. Cranial perforator, 9X12mm, Hudson type 02
3. Cranial perforator, 6/9mm, Hudson type 02
4. Hudson chuck 01

4.5 BURRS:

1. Rosen burr for medium hand piece 10
2. Diamond burr for medium hand piece 10
3. Diamond burr for large hand piece 5
4. Barrel burr for medium hand piece 10
5. Barrel burr for large hand piece 5
6. Acorn burr for small hand piece 10
7. Pin Point burr for medium hand piece 25
8.Twist drill for small hand piece 10

4.6 STORAGE AND MAINTENANCE:

1. Oil spray for high speed motor and hand pieces – 50 Nos.
2. Oil spray for perforator – 5 Nos.
3. Autoclavable Perforated basket with covering lid with holders for motors, all handpieces, hose, tools and all other accessories.

5 Environmental factors

5.1 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. or should comply with 89/366/EEC; EMC-directive.

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%

5.3 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug.

7 Standards, Safety and Training

7.1 Should be US – FDA/European CE approved product
7.2 Manufacturer should have ISO or equivalent certification for quality standards.
7.3 Comprehensive warranty for 5 years and 5 years CMC after warranty

8 Documentation

8.1 User/Technical/Maintenance manuals to be supplied in English.
8.2 Certificate of calibration and inspection.
8.3 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.4 List of important spare parts and accessories with their part number and costing

Item No: 55

Ultrasound Machine

The system should be latest fully Digital Color Doppler Ultrasound System and can be used for applications like Abdominal, Obs. / Gynae , small parts, Endocavitary, Pediatric & Vascular applications. The system should have following essential features:

1. The system should have the following image modes:2D,M mode ,PW, Tissue Harmonic mode , Color Doppler, Power Doppler mode.
2. The system should have minimum 1500 or more digital processing channels and 256 or more grey shades.
3. The system should have a very high dynamic range of 170dB or more and should independently selectable in B & M mode.
4. The system should have a very high frame rate for B-mode & Colour mode. Maximum frame rate should be greater than 350 fps for B-mode & colour mode.
5. The system should be able to support all type of transducers (Convex, Endocavitary, Linear, Phased array and Intraoperative Transducers).Frequency range of all transducers should be 2-14Mhz.
6. The system should have Advanced measurement packages for all applications.
7. The system should an integrated high resolution TFT/LCD of 15 inches or more with facility of tilt and swivel facility alongwith convenient grip.
8. The system should have minimum three active universal ports & two parking ports. Active ports can be directly selectable from the control panel.
9. The system should have scanning depth in the range of 2- 28cms.
10. The system should have a very high capacity of Hard Disc Drive min.80GB or 1000 images for storage of images.
11. The system should have inbuilt CD/DVD R/W and USB ports for image export.
12. The system should have zoom facility both in real time and frozen image and it should be minimum 6 times or more in both real time & frozen modes.
13. The system should have minimum 6 steps transmitting focusing (transmit focal zones) and adjustable gain should be available up to 100 dB for B-mode & M-mode.
14. The system should have Directional Power Doppler to define the low blood flow directions.
15. The system should have HD-flow/Advanced dynamic flow to acquire the blood flow with directions in the deeper region at a very high frame rate.

16. The system should have automatic optimization in B-mode and auto adjustment of Doppler base-line & velocity range.
17. The system should have B-mode image steering & Color Doppler steering .
18. The system should have the facility of on-screen adjustment for Dynamic range, Frequency selection, Presets, Name of the patient,etc.
19. The system should have the facility to view the Thumbnail images and system can be programmed for various users with the facility of user passwords.
20. The system should have the Trapezoid scan facility for linear probes.
21. The system should have Compound Imaging and Contrast Harmonic Imaging.
22. The system should be US-FDA or European CE approved product.
23. The system should have the facility of having direct image print out through a B/W thermal printer.
24. The system should be upgradeable to real time 3D (4D) package. Please quote optionally for convex volume probe.

25. System should be offered with the following probes and accessories:
    (a) Convex probe with frequency range of 3.0-6.0 Mhz.
    (b) TV/TR probe with frequency range of 5.0-7.5 Mhz. And minimum field of view of 140 degree.
    (c) Linear probe with frequency range of 6.0-11.0 Mhz.
    (d) B/w Thermal Printer with 100 paper rolls.

    Above mentioned probes must have multifreqency selection and THI.
26. Essential accessories: Black & White Thermal printer and color laser printer, Suitable UPS with one hour backup, mobile cart with transducer holder, jelly bottle holder and space for printer.
27. The bidder should enclose the original product data sheet, brochure and compliance sheet, without which the bid will be rejected. Computer generated data sheet and brochure will not be accepted. The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.

Item No: 56

PORTABLE ULTRASOUND WITH COLOR DOPPLER SYSTEM

DICOM Ready fully digital, compact portable Colour Doppler Ultrasound machine is required with the following technical features:

1. The unit should be compact, lightweight and portable. Weight upto 11Kg without battery, Probe & Cart. System should be hand carry.
2. It should be suitable for abdominal, small parts and vascular applications in adults and paediatric patients.
3. Multiple preloaded as well as user configurable application presets should be available.
4. It should have 1024 or more digital channels for image formation and acquisition.
5. Transducers:
   (1) Convex 5 - 2 MHz for abdominal imaging. – One Each
   (2) Linear 13 - 6 MHz. - One Each
   (3) Endocavitory 8 - 5 MHz for transrectal ultrasonography and end firing biopsy, one each. – One each for OBGY, Urology & Radiology Departments

6. All transducers should be lightweight digital phased array broadband type transducers with at least 1024 elements.
6 (a) - The system should have a very high dynamic range of 170dB or more
7. Detachable needle guide should be available with convex and endocavitory probes.
8. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Power (energy) Doppler and triplex Doppler should be available.
9. Advanced features such as tissue harmonic imaging with contrast media and compound imaging Advance dynamic flow / HD flow should be available.
10. Controls for 2D mode: Total gain, depth, TCG, dynamic range, acoustic power output, number for position of focus.
11. Controls for Colour Doppler: PRF, colour gain, position and size of ROI, steering of ROI, colour maps and colour invert.
12. Controls for pulsed Doppler: variable sample volume size from 1 to 5mm or more, steer, PRF, baseline, gain angle correction, spectral invert, duplex/triplex on/off.
13. Measurements for 2D mode: Multiple distances, area and volume.
14. Measurements for Doppler modes: Stenosis quantification in percentage, diameter, Area, PSV, EDV, mean, PI, RI, floor volume, acceleration time and index. Automatic and manual measurements and display of pulsed Doppler calculations should be possible.
15. Cineloop memory of minimum 30 seconds on all modes.

16. **Monitor**
Integrated with system Flat LCD/TFT monitor of at last 15 inches or more.

17. **Keyboard**
Alphanumeric soft keys keyboard with easy access scans controls and trackball.
18. **Storage**
Onboard storage of atleast 1000 images. Storage in JPEG and AVI format should be possible.
19. Sorting of data base with patient name and date should be possible.
20. USB port connectivity to printer or computer.
21. Facility for storage on CDR should be available.
22. Unit should function with 200-240 V, 50 Hz AC, 5 amp power outlet. Power requirement to be specified.
23. In built battery back up should be at least one hour or more.
24. The unit should be compatible with and should have facilities for interfacing with the hospital LAN.
25. Essential accessories: Black & White Thermal printer and color laser printer, Suitable UPS with half hour battery back , mobile cart with transducer holder, jelly bottle holder and space for printer.
26. Paper and cartridges for 1000 image printouts should be provided.
27. The unit offered must be sturdy and should be able to withstand accidental hits and falls during transportation.

28. The bidder should enclose the original product data sheet, brochure and compliance sheet, without which the bid will be rejected. Computer generated data sheet and brochure will not be accepted. The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.
29. The system should be US-FDA or European CE approved product.

Item No: 57

MOBILE C- ARM IMAGE INTENSIFIER

Sl no	Features
1.	**Generator** Microprocessor controlled High Frequency generator with 2.5Kw or More with integrated beam filters to reduce patient skin radiation dose
2.	**Collimator: IRIS or multi leaf**
3.	**X Ray mode (kV & mA range):** KV- range 40- 110KV Fluoroscopy- a) Fluoroscopy should not exceed 5 mA . b) Pulsed Fluoroscopy with last Image Hold Radiography – Radiographic mode for cassette exposures: minimum of 20mA
4.	**Image Intensifier:** 9”or More Dual Mode Image Intensifier with CCD Camera
5.	**Image Processing:** a) Minimum 12 bit Digital Fluoroscopy Imaging Unit with dedicated video pipe-line processor b) Archival memory CD/DVD mode. c) Detachable Cassette holder for film recording.
6.	**Image Display:** Two 19” TFT/ LCD High resolution, high contrast and flicker free Monochrome Monitors of at least 1024 X 1024 matrix with automatic adaptation of monitor brightness to ambient light
7.	**System Functionality:** Vertical ,Horizontal and Orbital Travel should be available C arm rotation 135 degree or more
8.	**The System should be DICOM ready**
9.	**Accessories:** a)Wrap around light weight Lead free Aprons with 0.5 mm lead equivalence certified by BARC or AERB or ISO : 4Nos (Four Nos.)
10.	**The Complete unit should be AERB type approved.**

Item No: 58 (a)

DIGITAL RADIOGRAPHY - 800mA

A fully digital radiography system capable of detector exposure in vertical, horizontal and oblique positions to perform all skeletal body and chest radiography. The unit must be completely integrated (integrated Generator and Image Acquisition) and comprise the following along with auto quality

control features incorporated. Out of three components Generator, Detector and Tube, two components must be from same principle X-Ray system manufacturer.

A.	**Generator:**
1.	Generator must be of latest technology with high frequency/inverter technology for constant output.
2.	Output 80 KW or more.
3.	KVP range 40 KV – 150 KV.
4.	Output at 100 KV must be 800 mA or more.
5.	It must have automatic exposure control device.
6.	It must have digital display or KVP & mAs.
7.	Anatomical programming radiography must be possible.
8.	It must have over loading protection.
B.	**X – Ray tube and Collimator:**
1.	The x – ray tube must be rotating anode high speed (9000rpm), compatible with the generator and must have dual focus. Focal spots of the following sizes: Large focus: 1.2mm or less min output 80KW Small focus: 0.6mm or less min output 40KW Tube with anode heat storage capacity 600 KHU or more.
2.	Multi leaf collimator having halogen lamp/bright light source and auto shut provision for the light.
C.	**Ceiling suspended 3 D Column stand:**
1.	It must be ceiling suspended.
2.	It must have movements in all directions i.e. 3D transverse 200 cm or more, longitudinal 300 cm or more (up and down-ward i.e. vertical 125 cm or more).
3.	It must have electromagnetic brakes with fully counter balanced mechanism.
4.	It must have facility to display FFD/SID.
5.	It must have provision of auto centering with table bucky centering.
6.	Tube rotation at vertical axis and horizontal axis $\pm$ 180 degree.
D.	**X – Ray Table:**
1.	Horizontal table with floating table top.
2.	It must have transverse movements of + 10 cm or more and longitudinal movements + 40 cm with electromagnetic brakes.
3.	It must have height adjustments facilities.
4.	It must have flat top of carbon fibre.
5.	It must have built in flat detector system of 40x40 cm size or more
6.	It must have automatic exposure control AEC with ion chambers.
E.	**Vertical Bucky Stand**
1.	The unit must be provided with vertical bucky having tilting facility.
2.	It must have provision to do chest radiography without grid.
3.	It must have built in flat detector system of at least 40x40 cm size
4.	It must have automatic exposure control AEC with ion chambers.
F.	**Detector System:**
1.	The detector must be of solid state flat detector of latest technology.
2.	The size of the detector must be 40 cm x 40 cm or more.
3.	The resolution must be minimum of 2.5 lines pair/millimetre.
4.	The pixel size must be 140 micrometers or less.
5.	Detector Quantum Efficiency (D.Q.E) must be more 65% @ Zero Line Pairs.
6.	Detector panel should be made of amorphous silicon with CSI or selenium

6.	The active matrix size must be 2 k x 2k or more.
G.	**Image acquisition and image Processing based on body part and viewing position:**
1.	The digital workstation must be based on the latest high speed processors of at least 32 bit.
2.	It must have the possibility of acquiring the image from the detector system.
3.	It must have image storage disk of 80 Gigabyte or more.
4.	The system must have ready DICOM interface and networking capability with RIS/HIS/PACS.
5.	Post processing function must be available.
6.	Workstation must be provided for image processing, image display, post processing functions and net working with colour monitor LCD type size 18" with matrix 1024x1024.
7.	Separate viewing work station with essential software
8.	Dry Laser camera 500 dpi or more for printing the digital images must be available.
	A CD – R/W based long term archiving must be offered along with 1000 No. of CD's.
H.	**Essential Accessories:**
1.	Voltage stabilizer must be quoted along with the unit of the required capacity. The capacity and make of the voltage stabilizer must be specified.
2.	On line UPS with 30 minutes back up for computer system and image viewing work station.
I	**Radiation protection**
	Lead glass 100cmX80cm
J	**Product datasheet:** **All specifications to be provided with original product data sheet. All technical specifications must be supported with original data sheet highlighting the page number in the compliance sheet.** **Photocopy/computer print will not be accepted.**
K	System should be AERB type approved. The vendor will get site approval and approval of the installation from AERB, all required support shall be provided by the user.
i.	***Turnkey as per the site requirement***

Item No: 58 (b)

DIGITAL RADIOGRAPHY - 800mA

A fully digital radiography system capable of detector exposure in vertical, horizontal and oblique positions to perform all skeletal body and chest radiography. The unit must be completely integrated (integrated Generator and Image Acquisition) and comprise the following along with auto quality control features incorporated. Out of three components Generator, Detector and Tube, two components must be from same principle X-Ray system manufacturer.

A.	**Generator:**
1.	Generator must be of latest technology with high frequency/inverter technology for constant output.

2.	Output 80 KW or more.
3.	KVP range 40 KV – 150 KV.
4.	Output at 100 KV must be 800 mA or more.
5.	It must have automatic exposure control device.
6.	It must have digital display or KVP & mAs.
7.	Anatomical programming radiography must be possible.
8.	It must have over loading protection.
B.	**X – Ray tube and Collimator:**
1.	The x – ray tube must be rotating anode high speed (9000rpm), compatible with the generator and must have dual focus. Focal spots of the following sizes: Large focus: 1.2mm or less min output 80KW Small focus: 0.6mm or less min output 40KW Tube with anode heat storage capacity 600 KHU or more.
2.	Multi leaf collimator having halogen lamp/bright light source and auto shut provision for the light.
C.	**Ceiling suspended 3 D Column stand:**
1.	It must be ceiling suspended.
2.	It must have movements in all directions i.e. 3D transverse 200 cm or more, longitudinal 300 cm or more (up and down-ward i.e. vertical 125 cm or more).
3.	It must have electromagnetic brakes with fully counter balanced mechanism.
4.	It must have facility to display FFD/SID.
5.	It must have provision of auto centering with table bucky centering.
6.	Tube rotation at vertical axis and horizontal axis $\pm$ 180 degree.
D.	**X – Ray Table:**
1.	Horizontal table with floating table top.
2.	It must have transverse movements of + 10 cm or more and longitudinal movements + 40 cm with electromagnetic brakes.
3.	It must have height adjustments facilities.
4.	It must have flat top of carbon fibre.
5.	It must have built in flat detector system of 40x40 cm size or more
6.	It must have automatic exposure control AEC with ion chambers.
E.	**Vertical Bucky Stand**
1.	The unit must be provided with vertical bucky having tilting facility.
2.	It must have provision to do chest radiography without grid.
3.	It must have built in flat detector system of at least 40x40 cm size
4.	It must have automatic exposure control AEC with ion chambers.
F.	**Detector System:**
1.	The detector must be of solid state flat detector of latest technology.
2.	The size of the detector must be 40 cm x 40 cm or more.
3.	The resolution must be minimum of 2.5 lines pair/millimetre.
4.	The pixel size must be 140 micrometers or less.
5.	Detector Quantum Efficiency (D.Q.E) must be more 65% @ Zero Line Pairs.
6.	Detector panel should be made of amorphous silicon with CSI or selenium
6.	The active matrix size must be 2 k x 2k or more.
G.	**Image acquisition and image Processing based on body part and viewing position:**
1.	The digital workstation must be based on the latest high speed processors of at least 32 bit.

2.	It must have the possibility of acquiring the image from the detector system.
3.	It must have image storage disk of 80 Gigabyte or more.
4.	The system must have ready DICOM interface and networking capability with RIS/HIS/PACS.
5.	Post processing function must be available.
6.	Workstation must be provided for image processing, image display, post processing functions and net working with colour monitor LCD type size 18" with matrix 1024x1024.
7.	Separate viewing work station with essential software
8.	Dry Laser camera 500 dpi or more for printing the digital images must be available.
	A CD – R/W based long term archiving must be offered along with 1000 No. of CD's.
H.	**Essential Accessories:**
1.	Voltage stabilizer must be quoted along with the unit of the required capacity. The capacity and make of the voltage stabilizer must be specified.
2.	On line UPS with 30 minutes back up for computer system and image viewing work station.
I	**Radiation protection**
	Lead glass 100cmX80cm
J	**Product datasheet:** **All specifications to be provided with original product data sheet. All technical specifications must be supported with original data sheet highlighting the page number in the compliance sheet.** **Photocopy/computer print will not be accepted.**
K	System should be AERB type approved. The vendor will get site approval and approval of the installation from AERB, all required support shall be provided by the user.
i.	***Turnkey as per the site requirement***

Details of existing equipment at consignee site (GMC, Mumbai) for buyback offer

With 800 mA Digital Radiography X-ray machine – following old x-ray machines are Proposed for buyback

Sl. No.	Name of old X-ray machine	Date of purchase
1	**Elpro IG 500 mA**	**25/09/1997**
2	**Pleuophos-D 300 mA**	**20/09/2006**
3	**Tridoras 6 R 800 mA**	**06/04/1983**
4	**500 mA Klinoskop – H Ploymet 50**	**16/02/1995**
5	**300 mA X-ray Machine Multiphos 10**	**19/05/2003**

Item No: 59(a)

RADIOGRAPHY-FLUOROSCOPY SYSTEM -500mA

Specifications for State of the art versatile, remote controlled Digital Radiography Fluoroscopy system capable of all radiological examinations like GI procedures, Urological procedures, ERCP, Endoscopy, and Venography etc.

Features
1. Table : a. Patient must be easily accessible from back & front of the table. b. +90°/-15° tilting facility c. Table top must have motorized longitudinal and transverse movements / RF Imaging chain movements. d. Full coverage of patient anatomy must be possible without having to reposition the patient. e. Must be able to withstand maximum patient weight of 180 kg or more
2. Automatic Spot Film device : a. Grid ratio of at least 13:1 with 60 lines/cm (higher grid ratio is preferred) b. Under table spot film device must have travel of 100 cm or more. c. Automatic sensing and fast positioning of cassettes d. Table-top to film distance must be small to avoid magnification
Ceiling mounted 3D column stand
3. X-Ray Unit : a. 50 kW High frequency/inverter technology generator with automatic exposure control. b. Output should be 500mA at 100KVA b. Dual focus X-Ray tube with anode heat storage capacity 400 kHU or more c. Motorized collimator with additional Copper filters for dose reduction. Automatic filter selection must be available. d. Additional X-Ray dose reduction measures must be available
4. Imaging System: a. CCD based 30 cm Image Intensifier mounted in under table position. b. CCD Senor 1K x 1K c. DQE must be minimum of 61% for full field. d. 18” Antiglare flicker-free TFT/LCD colour monitors for live image display in the examination room and control room. e. Foot switch for table-side release of fluoroscopy and acquisition during the examination.

Features
5. Digital System: a. High resolution system capable of image acquisition and display in 1024x1024 matrix with 12 bit resolution or higher. b. Image processing functions including real-time harmonization, edge enhancement, measurements. c. Serial exposures of 4 frames / sec or more for fast serial acquisitions. d. Last Image hold (LIH) and Collimation on LIH must be available. e. Networking capabilities with DICOM send and Print. f. Image storage capacity of 15,000 images or more g. CD/DVD recorder for archiving images in DICOM, TIFF and AVI formats h. 5000 CDs /1000 DVDs must be provided
6. Wall Stand: a. Vertical Bucky travel at least 150 cm b. Oscillating Grid
7. Accessories : a. Vertical Bucky b. Compression band c. Servo Voltage Stabilizer/CVT with Suitable rating for the entire system d. UPS for the computer system & view station with 30 mins back up e. Lead Glass 100cm x 120 cm. f. Lead free Aprons - 6 nos.
Turnkey as per the site requirement
System should be AERB type approved. The vendor will get site approval and approval of the installation from AERB, all required support shall be provided by the user.
Product datasheet: **All specifications to be provided with original product data sheet. All technical specifications must be supported with original data sheet highlighting the page number in the compliance sheet. Photocopy/computer print will not be accepted.**

Item No: 59 (b)

RADIOGRAPHY-FLUOROSCOPY SYSTEM -500mA

Specifications for State of the art versatile, remote controlled Digital Radiography Fluoroscopy system capable of all radiological examinations like GI procedures, Urological procedures, ERCP, Endoscopy, and Venography etc.

Features

Features
1. Table : a. Patient must be easily accessible from back & front of the table. b. +90°/-15° tilting facility c. Table top must have motorized longitudinal and transverse movements / RF Imaging chain movements. d. Full coverage of patient anatomy must be possible without having to reposition the patient. e. Must be able to withstand maximum patient weight of 180 kg or more
2. Automatic Spot Film device : a. Grid ratio of at least 13:1 with 60 lines/cm (higher grid ratio is preferred) b. Under table spot film device must have travel of 100 cm or more. c. Automatic sensing and fast positioning of cassettes d. Table-top to film distance must be small to avoid magnification
Ceiling mounted 3D column stand
3. X-Ray Unit : a. 50 kW High frequency/inverter technology generator with automatic exposure control. b. Output should be 500mA at 100KVA b. Dual focus X-Ray tube with anode heat storage capacity 400 kHU or more c. Motorized collimator with additional Copper filters for dose reduction. Automatic filter selection must be available. d. Additional X-Ray dose reduction measures must be available
4. Imaging System: a. CCD based 30 cm Image Intensifier mounted in under table position. b. CCD Senor 1K x 1K c. DQE must be minimum of 61% for full field. d. 18” Antiglare flicker-free TFT/LCD colour monitors for live image display in the examination room and control room. e. Foot switch for table-side release of fluoroscopy and acquisition during the examination.
5. Digital System: a. High resolution system capable of image acquisition and display in 1024x1024 matrix with 12 bit resolution or higher. b. Image processing functions including real-time harmonization, edge enhancement, measurements. c. Serial exposures of 4 frames / sec or more for fast serial acquisitions. d. Last Image hold (LIH) and Collimation on LIH must be available. e. Networking capabilities with DICOM send and Print. f. Image storage capacity of 15,000 images or more g. CD/DVD recorder for archiving images in DICOM, TIFF and AVI formats h. 5000 CDs /1000 DVDs must be provided

Features
6. Wall Stand: a. Vertical Bucky travel at least 150 cm b. Oscillating Grid
7. Accessories : a. Vertical Bucky b. Compression band c. Servo Voltage Stabilizer/CVT with Suitable rating for the entire system d. UPS for the computer system & view station with 30 mins back up e. Lead Glass 100cm x 120 cm. f. Lead free Aprons - 6 nos.
Turnkey as per the site requirement
System should be AERB type approved. The vendor will get site approval and approval of the installation from AERB, all required support shall be provided by the user.
Product datasheet: **All specifications to be provided with original product data sheet. All technical specifications must be supported with original data sheet highlighting the page number in the compliance sheet. Photocopy/computer print will not be accepted.**

Details of existing equipment at consignee site (GMC, Mumbai) for buyback offer

With 500 mA X-ray machine with IITV – following old X-ray machines are proposed for buyback

Sl. No.	Name of old X-ray machine	Date of purchase
1	**Tridoras 6 R 500 mA**	**Not Known**
2	**Tridoras 6 R 500 mA**	**29/03/1990**
3	**Med Ex 6010 AR 60 mA**	**02/05/1990**

Note:

The bidder may visit consignee site on working days to inspect the buyback equipment before the tender opening date as mentioned in the NIT.

Item No: 60

X-Ray machine with CR system

State of Art High Frequency microprocessor controlled X-Ray machine. It should have the following features:

1. Generator:

a. Generator should be high frequency(200 MHz or more) for constant output.
b. Output 50 kW or more
c. KV Range 40 KV to 150 KV in steps of 1 KV
d. mA range should be 10 to 640 mA or more
e. Output at 100 KV should be 500 mA or more,
f. It should have automatic exposure control device
g. Exposure time 0.001 sec to 5 secs
h. It should have digital display of all parameters with independent parameter setting
i. Anatomical programming radiography(APR) should be possible (Minimum 100)
j. It should have overload protection

2. X-Ray tube and Tube mount:

a. Tube should be suspended by a 3D column to support full range of general radiographic application
b. The X-Ray tube should be rotating anode (9000 RPM or more)
c. Dual focus x-ray tube Focal spot of 1.2/1.2 mm or better and 0.6/0.6 mm or better
d. Tube anode heat storage capacity 300 KHU or more
e. HT cable of adequate length
f. Auto tracking / centering with vertical bucky and table bucky should be available and offered as standard
g. Auto-positioning should be available
h. Tube mount should have digital display of SID and tube angle
i. Column should support up and down movement of tube with electromagnetic locks
j. Multi-leaf collimator should have halogen light with auto shut off
k. Should have auto collimation and adjust automatically to the size of the inserted cassette

3. X-Ray Table:

a. Table should have motorized elevation with foot pedals and offer a floating table top
b. It should have minimum patient weight capacity of 200 kg
c. The table top should be carbon fibre type
d. It should be provided with bucky which can hold all standard sizes of cassettes up to

14" X 17". It should have a grid ratio of 10:1 or better

e. Should have automatic sensing of cassette size
f. It should have AEC with 3 Ion chambers as standard

4. Vertical Bucky Stand:

a. The unit should be provided with tiltable vertical bucky with vertical movement of 110 cm or more with electromagnetic lock
b. Stationary focused grid with 10:1 and 100 lines per inch or more
c. Should have automatic sensing of cassettes
d. It should have AEC with 3 Ion chambers as standard

5. Accessories:

Suitable KVA servo stabilizer for the complete unit.
View box with variable Lumin and area size 14X17 -02No.

6. Approval:

The system should have AERB approval for the whole system. The bidder to provide any other certificate (eg. BIS) required to import the machine in case of any imported equipment

7. Warranty:

Warranty of 2 years for complete system including X-Ray tube and accessories

8. CMC:

Year-wise CMC charges for 8 years after warranty period including labour cost and all spares including X-Ray tube for whole equipment including accessories supplied with the unit.

9. Spares:

Company should give undertaking from principal manufacture availability of spares of the quoted model for the next 10 years.

10. Installation:

The vendor will get site approval and approval of the installation from AERB, all required support shall be provided by the user.

11. Datasheet:

The bidder should enclose the original product data sheet, brochure and compliance sheet, without which the bid will be rejected. Computer generated data sheet and brochure will not be accepted. The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.

12. Turnkey – As per the site requirement

CR System

CR Digitizer & Imager	
	Specifications for State of the art Latest Generation Computed Radiography (CR) system for high resolution Digital radiography. Should be compatible with the X-ray system.
	Features Remarks
1	Technical Requirements - CR system configuration shall include:
a)	Imaging plates (IP)
b)	Image reader system
c)	CR workstations
d)	RIS interface
e)	Remote ID and Preview stations
f)	Accessories and consumables
g)	Laser Imager
2	CR Compatible imaging plates (Unit cost of each CR plate to be Quoted)
	Following sizes are required -
a)	35 cm x 35 cm - 1 2Nos.
b)	24 cm x 30 cm - 12 Nos.
c)	18 cm x 24 cm - 12 Nos.
d)	15 cm x 30 cm - 6 nos.
e)	35 cm x 43 cm – 6 nos.
f)	30 cm x 37.5 cm – 6 nos.
g)	18 cm x 24 cm - 04 Nos. (Mammography)
h)	24 cm x 30 cm - 2 Nos. (Mammography)
3	Image plate storing Rack- one
4	Image reader shall meet the Functional requirements:
	Various image-processing protocols available for the respective regions of the body
	IP processing rate should be about 90 plates / hour
	Mechanism for accepting exposed Imaging Plates with out patient demographics, for Causality /Trauma workflow requirement
	Mechanism for Re-routing the newly acquired Images to the preconfigured CR workstation
	Capability of retrieving (Service Intervention) at least last 10 scanned images, as part of contingency plan.
	Capability for quick check of the image and exam data of at least the last 4 Imaging Plates scanned at the x- ray room
	Protocol for verifying the connectivity status of configured image destinations
	Spatial resolution of the digital image shall preferably be 2kx2kx16 bits for optimal resolution.
	Identification and Preview
	System Functional requirements:
	Capability of interfacing to HL7, Non-HL7, Proprietary, DICOM Work list or user defined
	Windows/DOS /Linux based interface protocols to HIS/RIS.
	Mechanism for retrieving Demographics of at least last 10 patients identified on a particular Identification Terminal.
	Customizable Graphic User Interface (GUI) in Identification station with facility of selecting DICOM print & Storage destination.
	Indication of Over Exposure on the preview module.

	Mechanism for User release from Preview terminal in case of Auto-routing Images to Predefined DICOM Destinations.
	Customizable Graphic User Interface (GUI) for Preview terminal.
	Solution for storing patient demographic data for multiple exams in RIS/non RIS environment.
	It should be possible to put a custom configurable data field in the demographic information of the patient linked with the image.
5	**Software**
	System should include the following Software applications:
	Please list all the optional software(s) which are available with you for enhancing the workflow and service in the Digital Radiology environment for the following
i	Advanced Processing Software
ii	Application Software
iii	Connecting Software
iv	Visual Output Software
v	Quality Monitoring Software
6	The system should include the following SW applications as standard:
i	Full Leg/Full spine image processing.
ii	Quality Control software.
iii	Software, which enables to see in the preview terminal the deviation from normal exposure and with the details of the deviation on the CR workstation.
iv	Software masking of the collimation areas.
v	Special attention should be placed on pediatric applications.
vi	Software for storing images on any DICOM 3 (or newer versions) compliant stations.
v	Software for printing on any DICOM printer.
7	CR Workstation
	System configuration requirements:
	Accept images from CR Reader without any loss of data Capable of Archiving & Printing selected image to a standard DICOM destination in DICOM
	3.0 Format.
	Storing images in the local disk for pre-defined period.
	Mechanism for accepting New images when the local disk is full
	Should include 21” antiglare flicker free TFT/LCD color monitor (1.2K X 0.78K resolution)
	Should include 21” Monochrome antiglare flicker free Medical Grade TFT/LCD monitor with at least 2k X 2k resolution.
	DVD Burner
	240 GB or more on board storage
8	System Functional requirements:
a)	Support DICOM Work list or user defined Windows/Dos based interface to HIS/RIS
b)	Mechanism for retrieving Demographics of atleast last 10 patient identified on that Terminal.
c)	Customizable Graphic User Interface with facility of selecting DICOM print & storage destination.
d)	Indication of Over Exposure on the preview module.
e)	Mechanism for User release in case of Auto-routing Images to Pre-defined DICOM Destinations.
	Functional requirement for CR workstation:
	Built in routine for using predefined image processing parameters for image quality enhancement.
	Mechanism for storing the Patient image based on name, date, exam, etc.
	Capability of storing user defined image processing parameters.

	Capability of overwriting predefined image parameter with user-defined parameters & storing these two images separately.
	Correcting typographically in Patient Demographic module, in case the RIS connection was down and manually data entry was done.
	Capability of changing W/l, Flipping, Rotating, Zooming, Collimating Annotating incoming image.
	Auto-routing incoming image to predefined DICOM Store (SCP storage) or Print Destination (SCP Print Destination)
h)	Mechanism for printing Multiple Images in one film, with the possibility of slide and True Size printing
i)	Compatible DVD Writer along with relevant software to be quoted separately.
9	Laser Imager System Configuration requirements:
	Print Images from CR Workstation Capable of Printing Images in DICOM 3.0 format Mechanism to print images 14x 17,11X14, 8 x 10 film sizes simultaneously.
	Resolution should be 500 dpi or more Capable of handling mammography plates.
	Functional requirement for Laser Imager:
	Capable of Printing images in High quality
	Mechanism for printing images in 14 x 17,11X14 and 8 x 10 film sizes simultaneously.
	Mechanism for Printing Multiple Images in one film, with the possibility of slide printing.
	Provision for Distributed CR System should be present. Please quote price separately for additional workstation image reader preview stations and image planes.
	Warranty/AMC: All items and accessories should covered under warranty
	Please list all the Optional software's, which are available with you for enhancing the workflow and services in the Digital Radiology environment.
10	Price for On line UPS with one hour back up for complete system should be quoted.
	System should have CE/FDA approval
11	Review station at key areas – qty 04 nos. (in OPD, OR, DOCTOR'S room etc.) (Unit Price of review stations to be quoted separately)
	PC based DVD reader image manipulating software and high definition monitor (1.2K ×0.78K) (approx.).
	Acceptance tests as per International Standard should be carried out at manufacturing facility as well as installation site (including all Safety and QA tests)

Item No: 61

MOBILE X-Ray Unit (High end)

S.No.	Operational requirements
1.	Compact, lightweight, easily transportable mobile radiographic unit suitable for bedside x-rays.
2.	The unit must have an effective braking system *for* parking and transport. The tube stand must be fully counterbalanced with rotation in all directions
3.	Exposures with remote control should be available.
4.	The unit must have cassette storage facility for all size of cassettes

S.N.	Technical Specifications
1.	**The Generator:** 1. Microprocessor controlled high frequency, output 20 KW or above. 2. It should have a digital display of mAs and kV. 3. KV range:40kV to 120kV 4. mA range: 300 mA or more
2.	**X-Ray Tube:** 1. Rotating anode with at least 2500 rpm and focal spot size should be 1 mm. or less. 3Light Beam Collimator of multi leaf type with auto cut off switch
3.	The exposure release switch should be detachable with a cord of sufficient length as per ICRP recommendation

S.N.	System Configuration Accessories, spares and consumables
1.	Grid(Ratio 12:1) of following sizes should be provided- 01 each -12"x15" -10"x12"

S.N.	Standards and safety
1.	Should comply with AERB /BIS/ICRP Guidelines for radiation leakage and X-Ray equipments.

S.N.	Documentation
1.	The unit should be AERB type approved
2.	Wrap around light weight Lead free Aprons with 0.5 mm lead equivalence certified by BARC or AERB or ISO : 2Nos (two Nos.)

Item No: 62

MOBILE C- ARM IMAGE INTENSIFIER WITH DSA

Sl no	Features	Remarks
1.	**Generator** Microprocessor controlled High Frequency generator with 2.5Kw or More with integrated beam filters to reduce patient skin radiation dose	
2.	**Collimator: IRIS or multileaf**	
3.	**X Ray mode (kV & mA range):** KV- range 40- 110KV Fluoroscopy- a) Fluoroscopy should not exceed 5 mA . b) Pulsed Fluoroscopy with last Image Hold Radiography – Radiographic mode for cassette exposures: minimum of 20mA	
4.	**Image Intensifier:** 9"or More Dual Mode Image Intensifier with CCD Camera	

5.	**Image Processing:** a) Minimum 12 bit Digital Fluoroscopy Imaging Unit with dedicated video pipe-line processor b) Archival memory CD/DVD mode. c) Detachable Cassette holder for film recording.	
6.	**Image Display:** Two 19" TFT/ LCD High resolution, high contrast and flicker free Monochrome Monitors of at least 1024 X 1024 matrix with automatic adaptation of monitor brightness to ambient light	
7.	**System Functionality:** Vertical ,Horizontal and Orbital Travel should be available C arm rotation 135 degree or more	
8.	The system should perform **DSA** with acquisition of 6 frames per second or more, real time and peak hold , road mapping, annotation, re-masking and multi image display.	
9.	**The System should be DICOM ready**	
10.	**Accessories:** a)Wrap around light weight Lead free Aprons with 0.5 mm lead equivalence certified by BARC or AERB or ISO : 6 Nos (Six Nos.)	
11.	**The Complete unit should be AERB type approved on bid receipt date.**	
12.	**Suitable and compatible Table should be supplied with the system**	

Item No: 63

Urodynamic System (HIGH END)

1 Description of Function	
1.1	The Urodynamic system should have multi channel (minimum 6 channel) microprocessor based compact system with a high resolution color monitor for the Urodynamic study for Neurovesical and erectile dysfunction The equipment should be modular design and should be able to carryout different tests like Uroflowmetry, Cystometry (CO_2 & H_2O), Electromyography (EMG), Urethral pressure profile (UPP), Pressure flow study (PFS), Video Urodynamics, Bladder/Valsalva leak point measurement & Cavernosometry.

2 Operational Requirements	
2.1	The equipment should be modular design and should be able to carryout different tests like Uroflowmetry, Cystometry (CO_2 & H_2O), Electromyography (EMG), Urethral pressure profile (UPP), Pressure flow study (PFS), Video Urodynamics, Bladder/Valsalva leak point measurement
3 Technical Specifications	
3.1	It should have different pre set program according to users preferences.
3.2	There should be online monitoring of measurement minimum six different parameters with simultaneous measurement of three direct pressure studies like vesical, abdominal and urethral
3.3	There should be a high resolution, medical grade high defination monitor with speaker & microphone with a dedicated controlled keyboard, mouse, speakers for EMG
3.4	Facility for fully automatic comprehensive patient filing & report generation with editing/post processing mode. Latest software for analysis of data should be incorporated with provision of future upgradation of software.
3.5	The pressure transducers should be of long life Statham transducer so as to last for more than 8-10 years The Uroflowmetry should have rotating disc transducer or weight transducer so as to provide graphical representation of relation between detrusor pressure and uro-flow rate
3.6	The equipment should have control panel inside the equipment to avoid water spillage. System should have automatic drainage system of wire.
3.7	Advanced window based Software for operating, analyzing & report generation with templates of full text.
3.8	**Flowmetry :** Range – 0-60ml/sec; Volume – 2 *l* Transducer –Weight Rotating disc type with incorporated automatic spinning disk artifact compersaation.
3.9	**Pressure Study :** Range: 1 – 250 cm of water; Transducer – Long life Statham type
3.10	**EMG :** Two channel (minimum) with surface electrodes and needle electrodes.
3.11	**Water Pump Unit :** Infusion Rate – 2-10ml/min, Increment – 1ml/min –10-100ml/min, Increment – 5ml/min Puller speed @ 0.25 to 5 mm/sec with accuracy ± 2% and reserve speed of 10-15 mm/sec.
3.12	**Console** : Pentium Duo Core 2.5 GHz or more with a hard disk drive (HDD) – 120GB & RAM-512MB, DVD-writer 18X or more for recording of DVDs/CDs

3.13	Equipment should have Uro-Video system with facility to super-impose the bladder images on graph tracing and PIP with graph tracing. Facility for Digital video recording. Should have facility to store the patient data designing of user preferred reports.
3.14	**Patient Unit should include** : Trolley –1, Pole – 1, 17" Monitor with speakers & microphone-1, Water Pump Unit with 30 infusion sets, EMG Module-1, Pressure Transducer Statham-3, Uroflowmetry transducer-1, Puller for urethral pressure profile study.
3.15	**Software in Original: Latest & Compatible operating window systems**
3.16	Facility to connect with hospital information system (HIS - VII) and to transfer data through cable and wireless.
3.17	**Compatible Micturition chair - separate**
3.18	The Urodynamic system should be up gradable for future with technical advances
3.19	Compatible Laser Printer.
3.20	Compatible C – Arm with 9" IITV
3.21	Bladder scanner to measure post void residual wire.
3.22	Boifed back system should be incorporated (price to be quoted separately)

4 System Configuration Accessories, spares and consumables

4.1	System as specified-
4.2	All consumables required for installation and standardization of system to be given free of cost as mentioned below: Dampening tube-24, Two lumen catheter-12, Infusion set-12, Y-Piece-4, Three way stop cork-50, Disposable Domes-50, Rectal catheter-4, , Concentric needle electrode-10, Ground Electrode-4, Surface Electrode-12, Pressure line (150cm) – 50, Anal plug electrode – 2

5 Environmental factors

5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2	UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.

7 Standards, Safety and Training

7.1	Should be US-FDA/ European CE approved product		
7.2	Manufacturer/Supplier should have ISO certification for quality standards.		
7.3	Shall comply with IEC 60601-2-16 SAFETY requirements of medical electric equipment part2- particular requirements for the safety of Haemodialysis equipment.		
7.4	Comprehensive warranty for 2 years and 5 years CMC after warranty		
7.5	On site Comprehensive training for lab staff and support services till familiarity with the system.		

8 Documentation

8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		

Item No: 64

Flexible Cysto-Nephroscope (High End)

1 Description of Function

1.1 The Flexible Cysto – Nephroscope with employs an ultra-miniature digital video CMOS sensor placed directly at the tip of the endoscope that captures full-motion video images in digital format. Illumination of the surgical site is provided by white light LEDs that are built into the endoscope. This illumination technology eliminates the need for a separate high-intensity light source and related cables.

2 Operational Requirements

2.1 The Flexible Cysto-Nephroscope is used for transurethral and percutaneous nephroscopic procedures. It is ideal for bedside cystoscopy / office practice under local analgesia as well as during operating procedures and anaesthesia. Large working channel to accommodate full range of operating instruments for therapeutic applications. The flexible shaft, small outer diameter, and beveled, ultra-glide covered tip to provide minimal traumatic access. Should be suitable for gas as well as chemical sterilization.

3 Technical Specifications

3.1 Field Of View: 110 degree or better Length: 37 cm (approx) Direction Of View: Straight forward (zero to six degrees). Working Channel: 6.0 Fr or better Distal tip Diameter: 14.0 Fr (approx)

3.2 Compatible Accessories

(i) Grasping forceps – 2 Nos.
(ii) Biopsy forceps – 2 Nos.
(iii) Ball tip Fulgurating electrode 5 Fr – 2 Nos.
(iv) Luer Lock Y connector Biopsy port
(v) Soak disinfection tray
(vi) Cleaning brush – 2 Nos.
(vii) Appropriate rigid storage case

4 System Configuration Accessories, spares and consumables

4.1 System as specified-
4.2 All consumables required for installation and standardization of system to be given free of cost.

5 Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 UPS of suitable rating with voltage regulation and spike protection for 30 minutes back up.

7 Standards, Safety and Training

7.1 Should be US-FDA/ European CE approved product
7.2 Manufacturer/Supplier should have ISO certification for quality standards.
7.3 Shall comply with IEC 60601-2-16 SAFETY requirements of medical electric equipment part2- particular requirements for the safety of Haemodialysis equipment.
7.4 Comprehensive training for lab / OT staff and support services till familiarity with the system.

8 Documentation

8.1 User/Technical/Maintenance manuals to be supplied in English.
8.2 Certificate of calibration and inspection.
8.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual.
8.4 List of important spare parts and accessories with their part number and costing.
8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out

Item No: 65

PEDIATRIC CYSTOSCOPE / RESECTOSCOPE

1.) Cystourethroscope for Neonates and Children

A). Telescopes:

1.Telescope (one each) Autoclavable 134 ° C / 273°F with enlarged image & brightness size 1.9 mm, 0^o Length 20 cm- 01No.

2. Telescope (one each) Autoclavable 134 °C, 273^oF With enlarged image and brightness, size 1.9 mm, 25° Length 20 cm - 01No.

B). Sheath with obturator with fixed irrigation channel with stop cock

1. Size 7.5 Fr. (one each) for diagnostic use compatible with 0 ° telescope
2. Size 8.5 Fr. (one each) with instrument port capacity 3Fr.
3. Size 9.5 Fr. (one each) with instrument port capacity 5Fr.

a) Electrode : (three each)

1. Button electrode, flexible , uniploar , 580 mm length and 3 Fr. Size
2. Button electrode, flexible , uniploar , 580 mm length and 5 Fr. Size
3.

2.) Resectoscope - for Neonates and Children

A. Sheath with obturator with fixed irrigation channel with stopcock with distal end insulated Size 9 Fr. (one each) with instrument port capacity 3Fr.

B. Working element (bridge) with spring controlled thumb support and with monopolur cable attachment port and one port for telescope and one slot for working element- 01 Nos.

C. 1.9 mm 0 ° telescope to match the Resectoscope and working element – No 1

Accessories:

a) Electrodes

1. Set of 6 hook electrodes – 2 Nos
2. Cold Knife – set of 6 knife – 1 Nos

b) Forceps

1.) Rigid grasping forceps**: for Stent Removal Length not <55 cm, size – 3Fr. (**one**)**

2.) Rigid grasping forceps: for Stent Removal Length not < 55 cm, size – 5Fr. (one)

C) Biopsy forceps:

Flexible, Length not <25 mm, size 3 Fr. (one)

Biopsy forceps: Length not <25 mm, size 5 Fr. (one)

3). Fibre optic cable: (two) compatible with telescope.

4). Light Source (one), Xenon - 300

3.) Cystouretheroscope for children

A Telescope

Telescope - Autoclavable 134 °C/ 273 °F, with enlarged image and brightness Size 2.7 mm, 0° - 01No.

B Sheath with obturator with fixed irrigation channel with stop cock

1. Size 11 Fr. (One each) - for diagnostic use with 0° telescope

2. Size 13 Fr. (One each) - with two instrument ports capacity

4). Resectoscope - for Children

A. Sheath with obturater with fixed irrigation channel with stopcock with distal end insulated Size 11.5 Fr. (One) With instrument port capacity 5 Fr.

B. Adaptor (Bridge) (one)
For examination without instrument port

D. Working element with passive cutting action (one)

E. Accessories

a. Electrodes

1. Coagulating electrode for resectoscope with telescope of 2.7 mm, angled 90 ° retrograde, Hook electrode set of 6- 1 Nos.

2.Cold knife set of 2.7mm set of 6- 1 Nos.

NOTE

1) The supplied instruments should have warranty period of 2 years
2) Comprehensive Maintenance Contract facility to be provided after completion of warranty period of 5 years.
3) Equipment should be US-FDA/European CE approve product.

3). Supplier company will have to give training to doctors and staff of Operation theatre, regarding the handling and maintenance of the instrument.

Item No: 66

Laparoscopic unit

Full High Definition Three Chip Camera System-1

1. Camera control unit with 3 chip HD camera head having HD CCD chip of same aspect ratio of 16:9
2. Pure Digital signal with high definition video (1920*1080 P) with aspect ration 16:9 with DVID & S-VHS video output.
3. Integrated Flexible Scope filter
4. Progressive scan technology

5. Brightness Control
6. Aperture Control
7. Automatic digital Image Enhancer
8. Should have optical/digital zoom 14-30mm, to increase and decrease the size of image which should remain in focusing zone, without readjusting the focus.
9. Should have integrated Gain, shutter, Enhancement, white balance with brightness control.
10. The Camera head should have integrated zooms and focus lens/rings to make it fully soakable.

High Resolution HD Video medical Monitor-1

1- 26" High Definition Medical grade Monitor, resolution 1920 X 1200 with DVI input, option for wall mounting and desktop in same unit
2- Fast response time
3- Number of colors : 16.8 million
4- Vertical/Horizontal viewing Angle:120 deg or more

Xenon Light Source-1

1- Xenon light source of 300 Watts
2- Should be able to produce colour temperature of 6000 k
3- Should have continuous manual adjustment of light output
4- One spare xenon lamp 300 watts.
5- Should be certified IEC 601-1 and CE according to MDD.

Fibre Optic Light Cable-2

Fibre Optic light cable, length: 250cm.- 01No.

CO2 Electronic Insufflator-1

1- Electronic CO2 insufflators with pin index connection.
2- Adjustable flow rate of Should be upto 40 ltr or above, Per minute and a pressure range adjustable between 0-30 mm Hg.
3- Pre-set and actual value for pressure and flow should be displayed together on the front panel in digital display.
4- Constant monitoring of intra-abdominal pressure; any overpressure is released immediately with back flow with acoustic alarm.
5- Unit should have in-built heater to warm up and preheat the CO2 gas.
6- Should be able to select either central supply (4.5Kg/cm 2) input pressure from central supply as well as direct connection to high pressure CO2 Cylinder and should indicate the right inlet pressure of CO2 gas supply by bar graph on front panel of machine.
7- Unit should produce immediately acoustic alarm in case of sudden blockage in the gas outlet tube or wrongly placed veress Needle.
8- Provided with Silicon autoclave tubing with luer attachment.
9- Instrument should work on a universal power supply of 100-240 V, with a frequency of 50 Hz single phase.

HP Hose-1

1- Suitable high pressure hose pin index to connect the gas to insufflator, length: 1.0 meter.

CO2 Cylinder-2

1- 5 Kg. Carbon Dioxide bottle with pin index connection with wrench

Electro Surgical Unit with vessel sealer-1

1- Microcontroller based Digital Electrosurgical Unit/Cautery having peak power of minimum of 300 Watts, with Digital Display/LCD display Push Switch/touch Control Provides Consistent Performance for laparoscopic Surgical Procedures & Delivers its Optimum & Reliable Power by using latest & Advance Technology, Convenient for all Surgical Application.
2- Unipolar as well as bipolar facility having operating frequency between 450-700 KHz.
3- Must have Mono-polar & Bipolar Coagulation Facility on the unit.
4- Facility for pure cut adjustable from 0-300 watts, blend/haemostatic effects variable up to 0-250 watts, endocut/lapro/gastro cut up to 200 watts, Bipolar cut and Coagulation variable up to minimum of 100 & 120 watts respectively. Spray & Forced coagulation facility should be there up to 120 watts.
5- System should be USFDA or CE approved
6- Unit should be supplied with double paddle footswitch, patient plate, patient cable, hand control pencil with standard accessories

Video Trolley-1

1- Suitable Medical Grade video trolley to be supplied for mounting equipment's having minimum three self in addition to with one drawer, with antistatic wheel casters, front lockable,
2- High grade of electrical insulation and earth protection.
3- 5 Ampere socket, 10Nos, inbuilt with trolley to connect all electronic devices.
4- CO2 bottle stand should be integrated with trolley.

UPS 2.0 KVA-1

1- UPS-2.0 KVA On- line with One hour battery backup and battery should be covered under warranty and CMC

The core Operating laparoscope like Telescopes, Endovision Three chip HD Camera, light source, CO2 Insufflator should be from same manufacturer. .

Telescopes Full HD

Telescope 0º 10MM-2
Telescope 30º 10MM-2
Telescope 0º 5MM-2
Telescope 30º 5MM-2

1- Rod lenses system, Length: 29-31 cm, Autoclavable, Fibre optic light transmission incorporated
2- Straight forward telescope, 0 degree enlarged view
3- Forward Oblique Telescope, 30 degree enlarged view

Trocar & Cannula

Trocar & Cannula size 11mm- 4 (Valved)

Trocar & Cannula size 6mm- 4 (Valved)

1. Cannula size: 11mm diameter; should have multifunctional valve and automotive valve to prevent damage of sharp instruments. It should have stopcock for CO2 insufflation.
2. Trocar should have pyramida tip with pin holes near the tip for safety outlet of CO2 gas. The working length of the cannula should be 100-110 mm.

Trocar under optical vision-2 each

1- Trocar with endo tip size: 10mm, cannula rotatable with multifunction valve, working length: 11 cm.
2- The endo tip cannula should compartible with 10mm telescope for under vision entry into peritoneum.
3-

Veress Needle-2 -Working length 13cm with luer lock.

Accessories & Instruments

Length-36 cm, 5mm

1- Grasping Forcep Fenestrated-2
2- Grasping Forcep Fenestrated curved Fundus grasper-1
3- Grasping Forcep Atraumatic Hartmann pouch-1
4- Bowel Grasping Forcep-2
5- Unipolar Curved Marryland dissescting and Grasping Forcep-2
6- Insert Forcep Unipolar: Insert forceps only Marryland type curved atraumatic jaw compartible with main Kelley curved dissecting forceps-2
7- Unipolar curved Right angle dissecting and Grasping Forceps-2
8- Unipolar Tooth Grasping forcep-2
9- Scissor curved unipolar length of blade 12mm, connection for unipolar HF cable,-2
10- Bipolar Scissor - 2
11- Insert curved scissor- Scissor curved inset to fit with main curved scissor-2
12- Hook Scissor Unipolar-2
13- L Hook with unipolar HF connection-2
14- Spatula with unipolar HF dissector-2
15- Puncture Needle, size : 5mm, length 36cm-2
16- Claw Forceps, 10 mm claw forceps, 2x3 teeth short with ratchet-2
17- Spoon Forceps, 10mm without ratchet-2

18- Heavy Duty Bipolar Forceps length : 36cm, rotating, wide jaw with spare insert and handle. Suitable bipolar HF cable 2 Nos. to be included along with it-2
19- Bipolar HF Connecting Cable-2
20- Unipolar HF Cable-Unipolar HF cable suitable to connect with forcep and electrosurgical unit-2
21- Clip Applicator-Medium Large clip applicator dismantable rotating size: 10mm, length 36cm, for Titanium clips with ratchet to lock the jaw holding the clip-2
22- Clip Applicator- Large clip applicator dismantable rotating size: 10mm, length 36cm, for Titanium clips with ratchet to lock the jaw holding the clip-2
23- Titanium Clips- Titanium clips medium large & Large, box with 16 sterile cartridges, 10 clips each for use with clip applicator-10
24- Two Way Suction irrigation cannula, size: 5mm&10mm each with special handle with trumpet control for irrigation and suction with silicon tubing-2 each
25- Babcock Grasping Forceps, metal handle, rotating, dismantling in 3 parts (insert, outer tube, handle),with connector pin for unipolar coagulation, size 5mm, length 36 cm – 2 no
26- Babcock Grasping Forceps, metal handle, rotating, dismantling in 3 parts (insert, outer tube, handle),with connector pin for unipolar coagulation, size 10mm, length 36 cm – 2 no
27- Micro Hook Scissors, rotating, dismantling in 3 parts (insert, outer tube, 01 handle),with connector pin for unipolar coagulation, size 5mm, length 36 cm – 2 no
28- Hem-o –lock clip applicator – 5 mm (green) - 1 no
29- Hem-o –lock clip applicator – 10 mm (purple) – 2 no
30- Hem-o –lock clip applicator – 10 mm (black) – 1 no
31- Vascular Clamp applicator size 10mm length 32cm for use with deployable vascular clamps consisting of Inner Rod, outer tube – 1 no
32- Deployable Vascular clamp, Parallel -action jaws length of jaws 5cm size 10mm overall length 11cm for use with vascular clamp applicator – 1 no
33- Deployable Vascular clamp, Parallel-action jaws length of jaws 5cm size 10mm overall length 11cm for use with vascular clamp applicator – 1 no
34- Laparoscopic SATINSKY Clamp short version length of jaws 8cm depth of jaws 2cm straight sheath size 10mm, length 30cm with axial ring handle ratchet with security locking device – 1 no
35- Laparoscopic SATINSKY Clamp short version length of jaws 8cm depth of jaws 5cm straight sheath size 10mm, length 30cm with axial ring handle ratchet with security locking device – 1 no
36- Laparoscopic SATINSKY Clamp short version length of jaws 8cm depth of jaws 5cm curved sheath size 10mm, length 30cm with axial ring handle ratchet with security locking device – 2 no
37- Cleaning Brush, length 35cm, 0.0 - 7mm – 2 nos
38- Cleaning Brush, length 35cm, 0.0 - 2.5mm – 2 nos
39- Cleaning Brush, length 50cm, 0.0 - 11 mm – 2 nos
40- Cleaning Brush, length 50cm, 0.0 - 7mm – 2 nos
41- Oil Dropper 38 - 1 no
42- Oil for Instruments, Bottle of 50ml – 4 nos
43- Special-Lubricant for stopcocks - 4 nos
44- Duraglit for polishing metal sheaths and instruments – 2 nos
45- Hydatid cannula – 1

Needle Holder –Macro needle holder with tungsten carbide insert, ergonomic pistol handle, with disengageable ratchet, jaw curved to left, size : 5mm, length: 33cm for use with suture material size: 0/0 to 7/0-2

Fan retractor-Fan retractor with simple opening of the fan by axial movement of the outer sheath, dismountable and distendable, size:10mm, length: 36cm-1

CUSHERI Liver retractor- size : 10mm & 5mm; Length: 36cm- 1each

Hassan Cannula-1

Knot Pusher (Open) reusable-2

Knot Pusher (closed) reusable-2

Port closure Needle-2

SUCTION & IRRIGATION DEVICE-1

1. Compact suction and irrigation unit having Irrigation pressure not less than 400mmHg & Suction pressure not less than (-0.75mmHg).

2- The unit should be supplied with 1.5 litre glass bottle with bottle cap and stand ; the unit should be supplied with 1.0 Litre irrigation bottle sterilization in autoclave with bottle cap attachment to connect tubing.
3- The unit should be supplied with reusable irrigation and suction silicon tubing set 2 Nos. each.

Laparoscoopic Instrument Tray Compatible with 3mm,5mm,10mm instrument-3

Sterlization/Disinfection Tray having sieve tray to lift. Size: 27”x7”x5”(LXBXD)-4Nos

Formaline Chamber made of Virgin Acrylic 4.5mm thickness; size 26”x8”x8” (LxBxH) with three tray, for sterilizing the laparoscope, preferable with three tray

Should be US - FDA/European CE approved product,

Manufacturer/Supplier should have ISO certification for quality standards.

Item No: 67
Laparoscopic unit

Full High Definition Three Chip Camera System-1

1. Camera control unit with 3 chip HD camera head having HD CCD chip of same aspect ratio of 16:9
2. Pure Digital signal with high definition video (1920*1080 P) with aspect ration 16:9 with DVID & S-VHS video output.
3. Integrated Flexible Scope filter
4. Progressive scan technology

5. Brightness Control
6. Aperture Control
7. Automatic digital Image Enhancer
8. Should have optical/digital zoom 14-30mm, to increase and decrease the size of image which should remain in focusing zone, without readjusting the focus.
9. Should have integrated Gain, shutter, Enhancement, white balance with brightness control.
10. The Camera head should have integrated zooms and focus lens/rings to make it fully soakable.

High Resolution HD Video medical Monitor-1

1- 26" High Definition Medical grade Monitor, resolution 1920 X 1200 with DVI input, option for wall mounting and desktop in same unit
2- Fast response time
3- Number of colors : 16.8 million
4- Vertical/Horizontal viewing Angle:120 deg or more

Xenon Light Source-1

1- Xenon light source of 300 Watts
2- Should be able to produce colour temperature of 6000 k
3- Should have continuous manual adjustment of light output
4- One spare xenon lamp 300 watts.
5- Should be certified IEC 601-1 and CE according to MDD.

Fibre Optic Light Cable-2

Fibre Optic light cable, length: 250cm.- 01No.

CO2 Electronic Insufflator-1

1- Electronic CO2 insufflators with pin index connection.
2- Adjustable flow rate of Should be upto 40 ltr or above, Per minute and a pressure range adjustable between 0-30 mm Hg.
3- Pre-set and actual value for pressure and flow should be displayed together on the front panel in digital display.
4- Constant monitoring of intra-abdominal pressure; any overpressure is released immediately with back flow with acoustic alarm.
5- Unit should have in-built heater to warm up and preheat the CO2 gas.
6- Should be able to select either central supply (4.5Kg/cm 2) input pressure from central supply as well as direct connection to high pressure CO2 Cylinder and should indicate the right inlet pressure of CO2 gas supply by bar graph on front panel of machine.
7- Unit should produce immediately acoustic alarm in case of sudden blockage in the gas outlet tube or wrongly placed veress Needle.
8- Provided with Silicon autoclave tubing with luer attachment.
9- Instrument should work on a universal power supply of 100-240 V, with a frequency of 50 Hz single phase.

HP Hose-1

1- Suitable high pressure hose pin index to connect the gas to insufflator, length: 1.0 meter.

CO2 Cylinder-2

1- 5 Kg. Carbon Dioxide bottle with pin index connection with wrench

Electro Surgical Unit with vessel sealer-1

1- Microcontroller based Digital Electrosurgical Unit/Cautery having peak power of minimum of 300 Watts, with Digital Display/LCD display Push Switch/touch Control Provides Consistent Performance for laparoscopic Surgical Procedures & Delivers its Optimum & Reliable Power by using latest & Advance Technology, Convenient for all Surgical Application.
2- Unipolar as well as bipolar facility having operating frequency between 450-700 KHz.
3- Must have Mono-polar & Bipolar Coagulation Facility on the unit.
4- Facility for pure cut adjustable from 0-300 watts, blend/haemostatic effects variable up to 0-250 watts, endocut/lapro/gastro cut up to 200 watts, Bipolar cut and Coagulation variable up to minimum of 100 & 120 watts respectively. Spray & Forced coagulation facility should be there up to 120 watts.
5- System should be USFDA or CE approved
6- Unit should be supplied with double paddle footswitch, patient plate, patient cable, hand control pencil with standard accessories

Video Trolley-1

1- Suitable Medical Grade video trolley to be supplied for mounting equipment's having minimum three self in addition to with one drawer, with antistatic wheel casters, front lockable,
2- High grade of electrical insulation and earth protection.
3- 5 Ampere socket, 10Nos, inbuilt with trolley to connect all electronic devices.
4- CO2 bottle stand should be integrated with trolley.

UPS 2.0 KVA-1

1- UPS-2.0 KVA On- line with One hour battery backup and battery should be covered under warranty and CMC

The core Operating laparoscope like Telescopes, Endovision Three chip HD Camera, light source, CO2 Insufflator should be from same manufacturer. .

Telescopes Full HD

Telescope 0º 10MM-2
Telescope 30º 10MM-2
Telescope 0º 5MM-2
Telescope 30º 5MM-2

1- Rod lenses system, Length: 29-31 cm, Autoclavable, Fibre optic light transmission incorporated
2- Straight forward telescope, 0 degree enlarged view
3- Forward Oblique Telescope, 30 degree enlarged view

Trocar & Cannula

Trocar & Cannula size 11mm- 4 (Valved)

Trocar & Cannula size 6mm- 4 (Valved)

1. Cannula size: 11mm diameter; should have multifunctional valve and automotive valve to prevent damage of sharp instruments. It should have stopcock for CO2 insufflation.
2. Trocar should have pyramida tip with pin holes near the tip for safety outlet of CO2 gas. The working length of the cannula should be 100-110 mm.

Trocar under optical vision-2 each

1- Trocar with endo tip size: 10mm, cannula rotatable with multifunction valve, working length: 11 cm.
2- The endo tip cannula should compartible with 10mm telescope for under vision entry into peritoneum.

Veress Needle-2 -Working length 13cm with luer lock.

Accessories & Instruments

Length-36 cm, 5mm

1- Grasping Forcep Fenestrated-2
2- Grasping Forcep Fenestrated curved Fundus grasper-1
3- Grasping Forcep Atraumatic Hartmann pouch-1
4- Bowel Grasping Forcep-2
5- Unipolar Curved Marryland dissescting and Grasping Forcep-2
6- Insert Forcep Unipolar: Insert forceps only Marryland type curved atraumatic jaw compartible with main Kelley curved dissecting forceps-2
7- Unipolar curved Right angle dissecting and Grasping Forceps-2
8- Unipolar Tooth Grasping forcep-2
9- Scissor curved unipolar length of blade 12mm, connection for unipolar HF cable,-2
10- Bipolar Scissor - 2
11- Insert curved scissor- Scissor curved inset to fit with main curved scissor-2
12- Hook Scissor Unipolar-2
13- L Hook with unipolar HF connection-2
14- Spatula with unipolar HF dissector-2
15- Puncture Needle, size : 5mm, length 36cm-2
16- Claw Forceps, 10 mm claw forceps, 2x3 teeth short with ratchet-2
17- Spoon Forceps, 10mm without ratchet-2
18- Heavy Duty Bipolar Forceps length : 36cm, rotating, wide jaw with spare insert and handle. Suitable bipolar HF cable 2 Nos. to be included along with it-2
19- Bipolar HF Connecting Cable-2
20- Unipolar HF Cable-Unipolar HF cable suitable to connect with forcep and electrosurgical unit-2
21- Clip Applicator-Medium Large clip applicator dismantable rotating size: 10mm, length 36cm, for Titanium clips with ratchet to lock the jaw holding the clip-2

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23- Titanium Clips- Titanium clips medium large & Large, box with 16 sterile cartridges, 10 clips each for use with clip applicator-10
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27- Micro Hook Scissors, rotating, dismantling in 3 parts (insert, outer tube, 01 handle),with connector pin for unipolar coagulation, size 5mm, length 36 cm – 2 no
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29- Hem-o –lock clip applicator – 10 mm (purple) – 2 no
30- Hem-o –lock clip applicator – 10 mm (black) – 1 no
31- Vascular Clamp applicator size 10mm length 32cm for use with deployable vascular clamps consisting of Inner Rod, outer tube – 1 no
32- Deployable Vascular clamp, Parallel -action jaws length of jaws 5cm size 10mm overall length 11cm for use with vascular clamp applicator – 1 no
33- Deployable Vascular clamp, Parallel-action jaws length of jaws 5cm size 10mm overall length 11cm for use with vascular clamp applicator – 1 no
34- Laparoscopic SATINSKY Clamp short version length of jaws 8cm depth of jaws 2cm straight sheath size 10mm, length 30cm with axial ring handle ratchet with security locking device – 1 no
35- Laparoscopic SATINSKY Clamp short version length of jaws 8cm depth of jaws 5cm straight sheath size 10mm, length 30cm with axial ring handle ratchet with security locking device – 1 no
36- Laparoscopic SATINSKY Clamp short version length of jaws 8cm depth of jaws 5cm curved sheath size 10mm, length 30cm with axial ring handle ratchet with security locking device – 2 no
37- Cleaning Brush, length 35cm, 0.0 - 7mm – 2 nos
38- Cleaning Brush, length 35cm, 0.0 - 2.5mm – 2 nos
39- Cleaning Brush, length 50cm, 0.0 - 11 mm – 2 nos
40- Cleaning Brush, length 50cm, 0.0 - 7mm – 2 nos
41- Oil Dropper 38 - 1 no
42- Oil for Instruments, Bottle of 50ml – 4 nos
43- Special-Lubricant for stopcocks - 4 nos
44- Duraglit for polishing metal sheaths and instruments – 2 nos
45- Hydatid cannula – 1

Needle Holder –Macro needle holder with tungsten carbide insert, ergonomic pistol handle, with disengageable ratchet, jaw curved to left, size : 5mm, length: 33cm for use with suture material size: 0/0 to 7/0-2

Fan retractor-Fan retractor with simple opening of the fan by axial movement of the outer sheath, dismountable and distendable, size:10mm, length: 36cm-1

CUSHERI Liver retractor- size : 10mm & 5mm; Length: 36cm- 1each

Hassan Cannula-1

Knot Pusher (Open) reusable-2

Knot Pusher (closed) reusable-2

Port closure Needle-2

SUCTION & IRRIGATION DEVICE-1

1. Compact suction and irrigation unit having Irrigation pressure not less than 400mmHg & Suction pressure not less than (-0.75mmHg).

2. The unit should be supplied with 1.5 litre glass bottle with bottle cap and stand ; the unit should be supplied with 1.0 Litre irrigation bottle sterilization in autoclave with bottle cap attachment to connect tubing.
3. The unit should be supplied with reusable irrigation and suction silicon tubing set 2 Nos. each.

Laparoscoopic Instrument Tray Compatible with 3mm,5mm,10mm instrument-3

Sterlization/Disinfection Tray having sieve tray to lift. Size: 27"x7"x5"(LXBXD)-4Nos

Formaline Chamber made of Virgin Acrylic 4.5mm thickness; size 26"x8"x8" (LxBxH) with three tray, for sterilizing the laparoscope, preferable with three tray

Should be US - FDA/European CE approved product,

Manufacturer/Supplier should have ISO certification for quality standards.

Item No: 68

Extracorporeal Shock Wave Lithotriptor (E.S.W.L) High End

1 Description of Function

1.1 Renal extracorporeal lithotripter systems non invasively disintegrate kidney stones with focused shock waves, allowing the resulting sand-size fragments to pass out of the body during urination.

2 Operational Requirements

2.1 Completely integrated system with Fluoroscopy and Ultrasound guided stone localization and targeting along with digital documentation and patient data management system with data storage is required. The system should be compatible with available Hospital Information System.

3 Technical Specifications

3.1 Shockwave Generator:

Type: Electromagnetic

Triggering: Manual, Automatic & ECG gating.

Pulse Frequency: = 60 – 120 per minute (User Selectable)

Penetration Depth minimum130 mm

Pressure at focus. Minimum 20 MPa or less, Maximum 50 MPa or more

Energy level: User Selectable & Variable

The Shock wave Generator should be guaranteed for minimum of two million shockwaves

3.2 Imaging System: Integrated non detachable Fluoroscopy

Should have high frequency generator and allow pulse fluoroscopy.

kV Range: 40-110 kV

mA Range: 4 – 8 mA

Focal Spot Sizes: Dual: **0.3/0.6 or 0.6/1.2/1.5**

Image Intensifier Size: 9 inches.

Collimation: Motorized, Iris collimator.

Post Exposure Image Enhancement facility.

3.3 Imaging System Ultrasound: High resolution ultrasound system

Localization should be done through integrated Ultra-sound iso centric to the shock wave source with inline/outline transducer for best image quality

Transducer:

I)3.5 /5 MHz Convex Sector

II)Ultrasound system should be able to accept 6.0-7.5 MHz electronic biplane trans rectal probe.

Mode: B

Coupling arm to integrate the ultrasound probe with shockwave generator.

3.4 Patient Table System:

i) Fluoroscopy compatible motorized patient Table with Vertical, Longitudinal and lateral movements. Facility for tilt and Trendelenburg. Patient load capacity of app 150 Kg.

ii) The table should be provided with accessories suitable for urological endoscopic procedures

3.5 Fluoroscopic Imaging System: 17 inches LCD Display with data storage and image storage. Minimum storage would be 1000 images with 1024x1024x(12 bits)

3.6 Patient Monitoring: Monitoring of ECG, RESPIRATION, SpO2 and Arrhythmia.

3.7 Separate Remote Console with facility for:

i) Controlling imaging, computerized stone localization, targeting and shockwave parameters

ii) Patient monitoring

4 System Configuration Accessories, spares and consumables

4.1 System as specified

5 Environmental factors

5.1 Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.

5.2 The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%

5.3 Pre Requisites should be clearly spelt out in terms of room requirements, civil and electrical works.

6 Power Supply

6.1 Power input: 220-240V/ 50 Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.

7 Standards, Safety and Training

7.1 Should be US - FDA/European CE approved product

7.2 Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.

7.3 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements

7.4 Comprehensive training for lab staff and support services till familiarity with the system.

8 Documentation

8.1 User/Technical/Maintenance manuals to be supplied in English.

8.2 Certificate of calibration and inspection.

8.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer documentation in service/technical manual.

8.4 List of important spares and accessories with their part number and costing.

8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

Item No: 69

Open Surgical Instrument Set (General / Urogynae / Vascular)

BLADDER SET (One Each)

1. MAIER POLYPUS FORCEPS, WITH RATCHET, CVD
2. BACKHAUS TOWEL HOLDING FORCEPS, 110MM,
3. TOWEL CLAMP, 115 MM LENGTH
4. SCALPEL HANDLE, NO. 4
5. SCALPEL HANDLE, NO. 3
6. SCALPEL HANDLE NO. 4L
7. SCALPEL HANDLE NO. 3L
8. DISSECT.SCISS.,METZENBAUM,180,CVD.DUROTP
9. DUROTIP DISS.SCISS.,METZENBAUM,CVD.200MM
10. DUROTIP DISS.SCISS.,METZENBAUM,CVD.230MM
11. DUROTIP DISS.SCISS,NELSON-METZENBAUM,260
12. DUROTIP-LIGATURE SCISSORS, 180MM LONG
13. DUROTIP-LIGATURE SCISSORS, 230MM LONG
14. DUROTIP DISS.SCISS.,MAYO-LEXER,CVD,165MM
15. POTTS-SMITH, CARDIOVASC.SCISSORS,180 MM
16. DUROTIP SCISSORS,220MM,CVD.DOWNW.,60DEGR
17. OP. SCISSORS, STR., BL/SH, 145 MM, S
18. DISSECTING FORCEPS, SLEND. PATT., 145 MM
19. TISSUE FORCEPS, AM. PATT., 1X2 T., 145MM
20. TISSUE FORCEPS, 1X2 T.,200MM MEDIUM SIZE
21. TISSUE FORCEPS, 1X2 T.,250MM MEDIUM SIZE
22. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.150MM
23. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.200MM
24. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.240MM
25. GERALD BRAIN FORCEPS, 1X2 TEETH, 175 MM
26. KOCHER FORCEPS, STR., 1X2 TEETH, 140MM
27. HALSTED MOSQUITO FORCEPS, CURVED, 125MM
28. HALSTED FORCEPS, 1X2 TEETH, STR., 185CM
29. KOCHER HYSTERECTOMY FORCEPS STR., 200 MM
30. KOCHER HYSTERECTOMY FORCEPS STR., 240 MM
31. MAIER POLYPUS, SPONGE AND DRESS.FORCEPS
32. MIKULICZ PERITONEUM FORCEPS LARGE, 205MM
33. OVERHOLT-GEISSENDOERFER, DISS. FORCEPS
34. OVERHOLT-GEISSENDOERFER, DISS. FORCEPS
35. DISSECT.FORC.,OVERHOLT-GEISSENDOERFER
36. GEMINI DISS. AND LIGATURE FORCEPS, 230MM
37. GEMINI DISS. AND LIGATURE FORCEPS, 280MM
38. DESCHAMPS NEEDLE, BL, CVD TO LE, 215 MM
39. GUIDE PROBE,4,5MM BROAD, 195 MM
40. DUROGRIP CRILE-WOOD NEEDLE HOLDER,145MM
41. DUROGRIP HEGAR NEEDLE HOLDER, 205MM
42. DUROGRIP DE BAKEY NEEDLE HOLDER, 180 MM
43. DUROGRIP DE BAKEY NEEDLE HOLDER, 230 MM
44. DUROGRIP DE BAKEY NEEDLE HOLDER, 250 MM
45. STRATTE MEEDLEHOLDER, 230MM, DUROGRIP
46. ROUX RETRACTOR, DOUBLE-ENDED, SET OF 3
47. KOCHER RETRACTOR, 60X25 MM
48. VOLKMANN RETRACTOR, SEMI-SHARP,4-PRONGED
49. FRITSCH ABDOMINAL RETRACTOR, 75 MM WIDE

50. MIKULICZ ABDOMINAL RETRACTOR
51. MIKULICZ ABDOMINAL RETRACTOR
52. KELLY RETRACTOR
53. HABERER ADOMINAL SPATULA, MALLEAB., TAP.
54. LEGUEU BLADDER RETRACTOR, 260 MM
55. VAGINAL RETRAC., TUEBINGER PATT.,95X20MM
56. SIMON VAGINAL RETRACTOR, 115 X 26 MM,
57. KRISTELLER, VAGINAL SPEC. SET, 110X30 MM
58. CASPAR EXPLORATION HOOK, 7 MM
59. CUSHING VEIN- A. WOUND RETRACTOR,10X13MM
60. EMMET FISTULA HOOK, 220 MM
61. NON-TRAUMATIC OVUM FORCEPS,STR.,250 MM
62. NON-TRAUM.GRASPING FORCEPS,ALLIS, 220 MM
63. NON-TRAUM.GRASPING FORCEPS,ALLIS, 255 MM
64. STOCKMANN PENIS CLAMP ,70 MM
65. CHATETER GUIDE, CURVED ,490 MM
66. NON-TRAUM.URETHRAL-FORCEPS, 240 MM
67. PROBE WITH HANDLE, 30 CMS, 2,5 MM TIP
68. PROBE, DOUBLE ENDED, 300MM, OF TIN
69. INTERIOR BOX FOR BL 930
70. NEEDLE CASE, PERFOR., 7 COMP,150X90X10MM
71. LABORATORY DISH, 0.16 L
72. LABORATORY DISH, 0.4 L
73. KIDNEY TRAY, 250 MM
74. REDON SPIKE,CHAR.12,SLIG.CVD.,TRIANG.TIP
75. REDON SPIKE,CHAR.14,SLIG.CVD.,TRIANG.TIP

KIDNEY SET (TWO EACH)

1. MAIER POLYPUS FORCEPS, WITH RATCHET, CVD
2. BACKHAUS TOWEL HOLDING FORCEPS, 110MM, (6 Nos)
3. TOWEL CLAMP, 115 MM LENGTH (6 Nos)
4. SCALPEL HANDLE, NO. 4
5. SCALPEL HANDLE, NO. 3
6. SCALPEL HANDLE NO. 4L
7. SCALPEL HANDLE NO. 3L
8. DISSECT.SCISS.,METZENBAUM,180,CVD.DUROTP
9. DUROTIP DISS.SCISS.,METZENBAUM,CVD.200MM
10. DUROTIP DISS.SCISS.,METZENBAUM,CVD.230MM
11. DUROTIP DISS.SCISS,NELSON-METZENBAUM,260
12. DUROTIP-LIGATURE SCISSORS, 180MM LONG
13. DUROTIP-LIGATURE SCISSORS, 230MM LONG
14. DUROTIP DISS.SCISS.,MAYO-LEXER,CVD,165MM
15. POTTS-SMITH, CARDIOVASC.SCISSORS,180 MM
16. DUROTIP SCISSORS,220MM,CVD.DOWNW.,60DEGR
17. OP. SCISSORS, STR., BL/SH, 145 MM, S
18. DISSECTING FORCEPS, SLEND. PATT., 145 MM
19. TISSUE FORCEPS, AM. PATT., 1X2 T., 145MM
20. TISSUE FORCEPS, 1X2 T.,200MM MEDIUM SIZE
21. TISSUE FORCEPS, 1X2 T.,250MM MEDIUM SIZE
22. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.150MM
23. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.240MM
24. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.240MM
25. GERALD BRAIN FORCEPS, 1X2 TEETH, 175 MM
26. KOCHER FORCEPS, STR., 1X2 TEETH, 140MM (10 Nos)
27. HALSTED MOSQUITO FORCEPS, CURVED, 125MM (10 Nos)
28. HALSTED FORCEPS, 1X2 TEETH, STR., 185CM
29. KOCHER HYSTERECTOMY FORCEPS STR., 200 MM
30. KOCHER HYSTERECTOMY FORCEPS STR., 240 MM
31. MAIER POLYPUS, SPONGE AND DRESS.FORCEPS (4 Nos)
32. MIKULICZ PERITONEUM FORCEPS LARGE, 205MM (6 Nos)
33. OVERHOLT-GEISSENDOERFER, DISS. FORCEPS
34. OVERHOLT-GEISSENDOERFER, DISS. FORCEPS
35. MIXTER LIGATURE FORCEPS230MM
36. DISSECT.FORC.,OVERHOLT-GEISSENDOERFER
37. GEMINI DISS. AND LIGATURE FORCEPS, 230MM
38. DISSECTING FORCEPS, O'SHAUGNESSY,230 MM
39. DESCHAMPS NEEDLE, BL, CVD TO LE, 215 MM

40. GUIDE PROBE,4,5MM BROAD, 195 MM
41. DUROGRIP CRILE-WOOD NEEDLE HOLDER,145MM
42. DUROGRIP HEGAR NEEDLE HOLDER, 205MM
43. DUROGRIP DE BAKEY NEEDLE HOLDER, 180 MM
44. DUROGRIP DE BAKEY NEEDLE HOLDER, 230 MM
45. DUROGRIP DE BAKEY NEEDLE HOLDER, 250 MM
46. STRATTE MEEDLEHOLDER, 230MM, DUROGRIP
47. ROUX RETRACTOR, DOUBLE-ENDED, SET OF 3
48. VOLKMANN RETRACTOR, SEMI-SHARP,4-PRONGED
49. FRITSCH ABDOMINAL RETRACTOR, 75 MM WIDE
50. MIKULICZ ABDOMINAL RETRACTOR
51. MIKULICZ ABDOMINAL RETRACTOR
52. MIKULICZ ABDOMINAL RETRACTOR
53. HABERER ADOMINAL SPATULA, MALLEAB., TAP.
54. CASPAR EXPLORATION HOOK, 7 MM
55. CUSHING VEIN- A. WOUND RETRACTOR,10X13MM
56. NON-TRAUM.KIDNEY PED.CLAMP,GUYON, 240 MM
57. GUYON ATRAUMATA KIDNEY CLAMP, 230 MM
58. DE'BAKEY VESSEL CLAMP, JAW 38MM,220 MM
59. DE'BAKEY VESSEL CLAMP, JAW 48MM,265 MM
60. DE'BAKEY VESSEL CLAMP, JAW 54MM,270 MM
61. DE BAKEY DISS. A. LIG. FORC., ACUT. CVD.
62. NON-TRAUMATIC OVUM FORCEPS,STR.,250 MM
63. NON-TRAUM.GRASPING FORCEPS,ALLIS, 220 MM
64. NON-TRAUM.GRASPING FORCEPS,ALLIS, 255 MM
65. RANDALL KIDNEY STONE FORCEPS
66. RANDALL KIDNEY STONE FORCEPS
67. RANDALL KIDNEY STONE FORCEPS
68. RANDALL KIDNEY STONE FORCEPS
69. PROBE WITH HANDLE, 30 CMS, 2,5 MM TIP
70. BAKES COMMON BILE DUCT DILATOR, 2 MM
71. LUER GALL STONE SCOOP, 2,8 MM, SIZE 000
72. LUER GALL STONE SCOOP, 4,3 MM, FIG 0
73. PROBE, DOUBLE ENDED, 300MM, OF TIN
74. INTERIOR BOX FOR BL 930
75. NEEDLE CASE, PERFOR., 7 COMP,150X90X10MM
76. LABORATORY DISH, 0.16 L
77. LABORATORY DISH, 0.4 L
78. KIDNEY TRAY, 250 MM
79. REDON SPIKE,CHAR.12,SLIG.CVD.,TRIANG.TIP
80. REDON SPIKE,CHAR.14,SLIG.CVD.,TRIANG.TIP

INSTRUMENTS FOR RADICAL PROSTATE SURGERY

a. Mc Dongal Right Angle for Right Hand
b. YU Hoffgroo Retractor
c. Prostatic Retractor- (Nante's Tech)
d. Apical Retractor-(Nante's Tech)
e. Dorsal Venous Clamp-(Nante's Tech)
f. B P handle-Long and Curved-(Nante's Tech)
g. Right Angle-fine and long-(Nante's Tech)
h. Jemmy's Scissor-(Nante's Tech)
i. Lowley's Retractor-Curved
j. Lowley's Retractor-Straight
k. Suction-steel-curved
l. Lighted suction
m. Curved needle holder single curved
n. Curved needle holder double curved
o. 5x optical loop
p. Head light camera system with light source
   300 watt Xenon Dual port light source
q. Balfour Retractor,self retaining with three blades(63x35mm) maximum spread 180mm-4 No.

r. Baby Satinsky clamp,18 cm,straight-4 No.
s. Equipment Trolley-2 no(one for storage of equipment and one for procedure)

VASCULAR - SUPPLEMENT (ONE EACH)

1. DE'BAKEY VESSEL CLAMP, JAW 48MM,265 MM
2. DE'BAKEY VESSEL CLAMP, JAW 54MM,270 MM
3. DE'BAKEY VESSEL CLAMP, JAW 58MM,270 MM
4. DE'BAKEY VESSEL CLAMP, JAW 75MM, 280 MM
5. GLOVER VESSEL CLAMP, 210 MM
6. DE BAKEY-GLOVER VASC ULAR FORCEPS, 240MM
7. DE BAKEY-GLOVER VASC. FORCEPS, 240MM
8. NON-TRAUM.MOSQUITO FORC.STR.6 1/2" DULL
9. NON-TRAUMATIC MOSQUITO FORCEPS,CVD 165MM
10. NON-TRAUM.FCPS.COOLEY,BRANCHES ANG,125MM
11. NON-TRAUM.FCPS., COOLEY, ANGLED, 120 MM
12. NON-TRAUM.FORC.COOLEY,DERRA-JAWS,115 MM
13. DUROGRIP DE BAKEY NEEDLE HOLDER, 305 MM

SUPPLEMENT SET, THORACOTOMY (ONE EACH)

1. DOYEN RASPATORY, ADULT SIZE, LEFT SIDE
2. DOYEN RASPATORY, ADULT SIZE, RIGHT SIDE
3. LAMBOTTE RASPATORY, 15 MM BROAD
4. SEMB RASPATORY, SIZE 2, 231 MM
5. SEMB RASPATORY, SIZE 3, 230 MM
6. SEMB RIB AND BONE HOLDING FORCEPS 190 MM
7. RUSKIN-LISTON BONE CUTTING FORCEPS, CVD.
8. STILLE-RUSKIN BONE RONGEUR, 240 MM
9. BRUNNER RIB SHEARS, 340 MM

URETHRA SET (ONE EACH)

1. MAIER POLYPUS FORCEPS, WITH RATCHET, CVD
2. BACKHAUS TOWEL HOLDING FORCEPS, 110MM,
3. TOWEL CLAMP, 115 MM LENGTH
4. SCALPEL HANDLE, NO. 3
5. SCALPEL HANDLE, NO. 4
6. DISSECT.SCISS.,METZENBAUM,145MM,CVD.DURO
7. KILNER DISSECTING SCISSORS, 150 MM
8. POTTS-SMITH, CARDIOVASC.SCISSORS,180 MM
9. DISSECT.SCISS.,METZENBAUM,180,CVD.DUROTP
10. DUROTIP DISS.SCISS.,MAYO-LEXER,CVD,165MM
11. OP. SCISSORS, STR., BL/SH, 145 MM, S
12. DISSECTING FORCEPS, SLEND. PATT., 145 MM
13. TISSUE FORCEPS, AM. PATT., 1X2 T., 145MM
14. TISSUE FORCEPS, 1X2 T.,200MM MEDIUM SIZE
15. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.150MM
16. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.200MM
17. HALSTED MOSQUITO FORCEPS, CURVED, 125MM
18. KOCHER FORCEPS, STR., 1X2 TEETH, 140MM
19. BABY-MIXTER ARTERY FORCEPS,180MM
20. DUROGRIP CRILE NEEDLE HOLDER, 150 MM
21. DUROGRIP CRILE-WOOD NEEDLE HOLDER,145MM
22. DUROGRIP HEGAR-MAYO NEEDLE HOLDER, 205MM
23. RETRACTOR, FINE PATTERN, 2 SHARP PRONGS
24. DESMARRES, LID RETRACTOR, FOR CHILDREN
25. KOENIG VEIN- AND WOUND RETRACTOR, SMALL
26. KOCHER-LANGENBECK RETRACTOR, 25X6MM
27. FINE SKIN RETRACTOR GILLIES,180MM, SMALL
28. CUSHING NERVE HOOK, PROBE POINTED, SMALL
29. BABY-DERRA FORCEPS, LARGE PATTERN, 175MM
30. DITTEL URETHRAL BOUGIE, CURVED, CHAR. 10
31. DITTEL URETHRAL BOUGIE, CURVED, CHAR. 14
32. DITTEL URETHRAL BOUGIE, CURVED, CHAR. 18
33. DITTEL URETHRAL BOUGIE, CURVED, CHAR. 22
34. DITTEL URETHRAL BOUGIE, CURVED, CHAR. 26

35. NELATON DIRECTOR, CVD., 160 MM
36. PROBE, DOUBLE ENDED, 145 MM, DIAM. 1,5MM
37. BOWMAN LACHRYMAL PROBE, 0,7/0,8 MM
38. INTERIOR BOX FOR BL 930
39. LABORATORY DISH, 0.16 L
40. LABORATORY DISH, 0.4 L
41. KIDNEY TRAY, 250 MM

URETHRAL - MICRO - SUPPLEMENT (ONE EACH)

1. SCALPEL HANDLE F.MICRO SURG.BLADES,200MM
2. MICRO SPRING SCISSORS,225MM,CVD.ON FLAT
3. MICRO FCPS.,BAJON.SHAPED,BROAD P.,220 MM
4. FORCEPSF.MICRO SURG.,BAY.SH.,1X2T.200MM
5. FORCEPS F. MICRO SURG.,SMOOTH JAWS,200MM
6. MICRO NEEDLEHOLDER CURVED 225 MM
7. JACOBSON BLOOD VESSEL PROBE, ANGL.,185MM
8. LIGATURE GUIDE,PROBE POINT.3/4 CVD,185MM

GENITAL SET (TWO EACH)

1. MAIER POLYPUS FORCEPS, WITH RATCHET, CVD
2. BACKHAUS TOWEL HOLDING FORCEPS, 110MM, (6 Nos)
3. TOWEL CLAMP, 115 MM LENGTH (3 Nos)
4. SCALPEL HANDLE, NO. 3
5. SCALPEL HANDLE, NO. 4
6. IRIS AND LIGATURE SCISSORS, CVD., 110 MM
7. DISSECT.SCISS.,METZENBAUM,145MM,CVD.DURO
8. DISSECT.SCISS.,METZENBAUM,180,CVD.DUROTP
9. DUROTIP DISS.SCISS.,MAYO-LEXER,CVD,165MM
10. OP. SCISSORS, STR., BL/SH, 145 MM, S
11. DISSECTING FORCEPS, SLEND. PATT., 145 MM
12. TISSUE FORCEPS, AM. PATT., 1X2 T., 145MM
13. TISSUE FORCEPS, 1X2 T.,200MM MEDIUM SIZE
14. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.150MM
15. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.200MM
16. KOCHER FORCEPS, STR., 1X2 TEETH, 140MM (4 Nos)
17. HALSTED FORCEPS, CURVED, 1X2 TEETH,125MM (6 Nos)
18. HALSTED MOSQUITO FORCEPS, CURVED, 125MM (6 Nos)
19. KOCHER HYSTERECTOMY FORCEPS STR., 200 MM
20. MAIER POLYPUS, SPONGE AND DRESS.FORCEPS
21. MIKULICZ PERITONEUM FORCEPS LARGE, 205MM
22. BABY-MIXTER FORCEPS, 140 MM
23. BABY-MIXTER ARTERY FORCEPS,180MM
24. OVERHOLT-GEISSENDOERFER, DISS. FORCEPS
25. OVERHOLT-GEISSENDOERFER, DISS. FORCEPS
26. DUROGRIP CRILE-WOOD NEEDLE HOLDER,145MM
27. DUROGRIP HEGAR-MAYO NEEDLE HOLDER, 205MM
28. DUROGRIP DE BAKEY NEEDLE HOLDER, 180 MM
29. ROUX RETRACTOR, DOUBLE-ENDED, SET OF 3
30. VOLKMANN RETRACTOR, SEMI-SHARP,4-PRONGED
31. MIKULICZ ABDOMINAL RETRACTOR
32. VAGINAL RETRAC., TUEBINGER PATT.,95X20MM
33. ABDOMINAL SPATULA, 30 MM WIDE
34. WEITLANER RETRACTOR, LT-RATCH.,3X4 SH PR
35. NON-TRAUM.HOLDING FORC.,ALLIS,155 MM
36. NELATON DIRECTOR, CVD., 160 MM
37. PROBE, DOUBLE ENDED, 145 MM, DIAM. 1,5MM

38. PROBE, DOUBLE ENDED, 200MM, DIAM. 2,0 MM
39. INTERIOR BOX FOR BL 930
40. NEEDLE CASE, PERFOR., 7 COMP,150X90X10MM
41. LABORATORY DISH, 0.16 L
42. LABORATORY DISH, 0.4 L
43. KIDNEY TRAY, 250 MM
44. HEGAR UTERINE DILATOR, SINGLE, 4 MM
45. HEGAR UTERINE DILATOR, SINGLE, 4,5 MM
46. HEGAR UTERINE DILATOR, SINGLE, 5 MM
47. HEGAR UTERINE DILATOR, SINGLE, 5,5 MM
48. HEGAR UTERINE DILATOR, SINGLE, 6 MM
49. HEGAR UTERINE DILATOR, SINGLE, 6,5 MM
50. HEGAR UTERINE DILATOR, SINGLE, 7 MM
51. HEGAR UTERINE DILATOR, SINGLE, 7,5 MM
52. HEGAR UTERINE DILATOR, SINGLE, 8 MM
53. HEGAR UTERINE DILATOR, SINGLE, 8,5 MM
54. HEGAR UTERINE DILATOR, SINGLE, 9 MM
55. HEGAR UTERINE DILATOR, SINGLE, 9,5 MM
56. HEGAR UTERINE DILATOR, SINGLE, 10 MM
57. HEGAR UTERINE DILATOR, SINGLE, 10,5 MM
58. HEGAR UTERINE DILATOR, SINGLE, 11 MM
59. HEGAR UTERINE DILATOR, SINGLE, 11,5 MM
60. HEGAR UTERINE DILATOR, SINGLE, 12 MM
61. HEGAR UTERINE DILATOR, SINGLE, 12,5 MM
62. HEGAR UTERINE DILATOR, SINGLE, 13 MM
63. HEGAR UTERINE DILATOR, SINGLE, 13,5 MM
64. HEGAR UTERINE DILATOR, SINGLE, 14 MM
65. HEGAR UTERINE DILATOR, SINGLE, 14,5 MM
66. HEGAR UTERINE DILATOR, SINGLE, 15 MM
67. HEGAR UTERINE DILATOR, SINGLE, 15,5 MM
68. HEGAR UTERINE DILATOR, SINGLE, 16 MM
69. HEGAR UTERINE DILATOR, SINGLE, 16,5 MM
70. HEGAR UTERINE DILATOR, SINGLE, 17 MM
71. HEGAR UTERINE DILATOR, SINGLE, 17,5 MM
72. HEGAR UTERINE DILATOR, SINGLE, 18 MM
73. HEGAR UTERINE DILATOR, SINGLE, 19 MM
74. HEGAR UTERINE DILATOR, SINGLE, 20 MM
75. MALE DILATOR SET- CLUTTON
76. MALE DILATOR SET- LISTER

VAGINAL BASIC SET (ONE EACH)

1. MAIER POLYPUS FORCEPS, WITH RATCHET, CVD
2. BACKHAUS TOWEL HOLDING FORCEPS, 110MM, (4 Nos)
3. TOWEL CLAMP, 115 MM LENGTH (6 Nos)
4. SCALPEL HANDLE, NO. 4
5. SCALPEL HANDLE NO. 3L
6. DUROTIP DISS.SCISS.,METZENBAUM,CVD.200MM
7. DUROTIP DISS.SCISS.,METZENBAUM,CVD.230MM
8. DUROTIP-LIGATURE SCISSORS, 230MM LONG
9. DUROTIP DISS.SCISS.,MAYO-LEXER,CVD,165MM
10. DUROTIP-DISSECT.SCISSORS,WERTHEIM,230 MM
11. OP. SCISSORS, STR., BL/SH, 145 MM, S
12. DISSECTING FORCEPS, SLEND. PATT., 145 MM
13. TISSUE FORCEPS, AM. PATT., 1X2 T., 145MM
14. TISSUE FORCEPS, 1X2 TEETH, 200 MM
15. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.150MM

16. FORCEPS, STRAIGHT, 2MM JAW, ATRAUM.200MM
17. ROCHESTER-OCHSNER FORC.,STR.,1X2T.,140MM (10 Nos)
18. PEAN ARTERY FORCEPS, STRAIGHT, 140 MM (6 Nos)
19. KELLY ARTERY FORCEPS, STRAIGHT, 140 MM
20. KOCHER HYSTERECTOMY FORCEPS STR., 200 MM (4 Nos)
21. MAIER POLYPUS, SPONGE AND DRESS.FORCEPS (4 Nos)
22. FAURE PERITONEUM FORCEPS,STRONGLY CURVED
23. WERTHEIM ARTERY FORCEPS, STRONGLY CURVED
24. FOERSTER SPONGE HOLD. FORC., SERRAT.JAWS
25. SCHROEDER TENACULUM FORCEPS, 250 MM
26. UTERINE VULSELLUM FORCEPS, 270 MM
27. FEMALE CATHETER, METAL, FR 12
28. SIMS UTERINE PROBE, GRADUATED, MALLEABLE
29. DOYEN MYOMA SCREW,190 MM
30. DUROGRIP HEGAR-MAYO NEEDLE HOLDER, 205MM
31. DUROGRIP HEGAR NEEDLE HOLDER, 205MM
32. DUROGRIP HEGAR NEEDLE HOLDER, 245MM
33. DUROGRIP WERTHEIM NEEDLE HOLDER, 240 MM
34. DOYEN, VAG. SPEC.,SLIGHTLY CONCAVE,SMALL
35. DOYEN, VAG. SPECULUM, SLIGHTLY CONCAVE
36. DOYEN VAGINAL RETRACTOR, 80 X 30 MM
37. KRISTELLER, VAGINAL SPEC. SET, 90X36 MM
38. KRISTELLER, VAGINAL SPEC. SET, 110X20 MM
39. WOUND AND TRACHEAL HOOK, SHARP, 1 TOOTH
40. INTERIOR BOX FOR BL 930
41. LABORATORY DISH, 0.16 L
42. LABORATORY DISH, 0.4 L
43. KIDNEY TRAY, 250 MM

SUPPLEMENT SET FOR VAGINAL TOTAL OP (ONE EACH)

1. DOYEN, VAG. SPECULUM, SLIGHTLY CONCAVE
2. DOYEN, VAG. SPEC.,SLIGHTLY CONCAVE,LARGE
3. BREISKY, VAGINAL SPECULUM, 30 MM,
4. BREISKY, VAGINAL SPECULUM, 40 MM
5. NON-TRAUMATIC FORC.STR.,300MM, 3,5MM
6. TISSUE FORCEPS, 1X2 TEETH, 300 MM
7. DUROGRIP WERTHEIM NEEDLE HOLDER, 300 MM
8. MASSON DUROGRIP NEEDLE HOLDER, 265 MM
9. ZENKER DISS. ANG LIGATURE FORCEPS, 300MM
10. ZENKER DISS. A.LIGATURE FORC.,290MM,CVD.
11. HOOK- AND ORGAN GRASPING FC.,4X4T.,260MM
12. DOYEN OVUM FORCEPS, 185 MM
13. HEYWOOD-SMITH POLYPUS FORCEPS, LARGE

VAGINAL SPECULA FOR CHILDREN (ONE EACH)

1. SEIDL, VAGINAL SPECULUM,80X 8MM,170MM
2. SEIDL, VAGINAL SPECULUM,80X10MM,170MM
3. SEIDL, VAGINAL SPECULUM,90X14MM,170MM
4. KRISTELLER, VAGINAL SPEC. SET, 70X15 MM
5. BRAUN VAGINAL SPECULUM, FOR VIRGINS
6. BRAUN VAGINAL RETRACTOR, 60 X 10 MM

INSTRUMENT BOX FOR STORAGE AND AUTOCLAVE 6 Nos

All above instrument should be of high medical grade.
All instruments should be US-FDA/European CE approved (copy of certificate have to be enclosed with the bid)

GENERAL TECHNICAL SPECIFICATIONS

GENERAL POINTS:

1. Warranty:

   a) Two years Comprehensive Warranty as per Conditions of Contract of the TE document for complete equipment (including X ray tubes, Helium for MRI, Batteries for UPS, other vacuumatic parts wherever applicable) and Turnkey Work from the date of satisfactory installation, commissioning, trial run & handing over of equipment to Hospital/Institution/Medical College.
   b) 98% 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 X ray tubes, Helium for MRI, 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.
   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 98% 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(c). 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 equipments for carrying out routine and preventive maintenance wherever asked for and should make sure that Electrical Safety Analyzer / Tester for Medical equipments 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 equipments. If the Electrical Safety Analyzer/Tester is not available they should provide a commitment to get the equipments 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.

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

01. The Tenderer must be a Manufacturer or its authorized Agent.

02. (a) The Manufacturer should have supplied and installed in last **Five** years from the date of Tender Opening, atleast 100% of the quoted quantity of the similar equipment meeting major specification parameters which is functoning satisfactorily. The foreign Manufacturer satisfying the above criteria should also have supplied and installed in last **Five** years from the date of Tender Opening, at least 50% of quoted quantity of similar model which is functoning satisfactorily any where outside the country of manufacture.

02. (b) The Tenderers quoting as authorized representative of the manufacturer meeting the above criteria 02 (a) should have supplied and installed in last **Five** years from the date of Tender Opening, atleast 50% of the quoted quantity of similar equipments which is functoning satisfactorily, any where in India of any manufacturer.

Note

1. In support of 2 (a) & 2 (b), the Tenderer shall furnish Performance statement in the enclosed Proforma 'A'.

   The manufacturer as well as the 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.

2. 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.

3. 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.

4. 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

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. If at any time, information furnished is proved to be false or incorrect, the earnest money furnished will be forfeited

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 of _____ (total tender amount in figures and words), as shown in the price schedule(s), attached herewith and 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
Schedule	Brief Description of Goods	Country of Origin	Quantity (Nos.)	Price per unit (Rs.)							Total Price (at Consignee Site) basis (Rs.)
				Ex - factory/ Ex -warehouse /Ex-showroom /Off - the shelf (a)	Excise Duty (if any) [%age & value] (b)	Sales Tax/ VAT(if any) [%age & value] (c)	Packing and Forwarding charges (d)	Inland 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	4 x 5(g)

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**_____

SECTION – XI PRICE SCHEDULE

B) PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD

1	2	3	4	5					6
Schedule	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)	Carriage & 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

Indian Agent:
Indian Agency Commission - ___% of FOB
Signature of Tenderer_____

Name_____
Business Address_____
Signature of Tenderer_____
Seal of the Tenderer_____

Place: _____
Date: _____

SECTION – XI PRICE SCHEDULE

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

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)]**
			1st	**2nd**	**3rd**	**4th**	**5th**	
			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 will be added 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 98 % 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.

Name_____

Business Address_____

Place: _____ **Signature of Tenderer**_____

Date: _____ **Seal of the Tenderer**_____

SECTION – XI PRICE SCHEDULE
D) PRICE SCHEDULE FOR TURNKEY

Schedule No.	BRIEF TURNKEY DESCRIPTION OF GOODS	CONSIGNEE CODE	Turnkey price

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_____

Place: _____ **Signature of Tenderer**_____

Date: _____ **Seal of the Tenderer**_____

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:-

a) fails or refuses to furnish the performance security for the due performance of the contract.

or

b) fails or refuses to accept/execute the contract.

or

c) 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 forty-five days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature 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

To

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

Dear Sirs,

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 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.

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

To

Head (P&CD), HLL Lifecare Limited, Procurement and Consultancy Division, B-14 A, Sector - 62, Noida -201307, Uttar Pradesh/ Hospital / Institution in case of CMC

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 30 (thirty) 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) _____

2. 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

3. Warranty clause
4. Payment terms
5. 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: _____

SECTION – XVI
CONTRACT FORM – B
CONTRACT FORM FOR ANNUAL COMPREHENSIVE MAINTENANCE CONTRACT

Annual CM Contract No._____ dated_____
Between

(Address of Head of Hospital/Institute/Medical College)
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

6. 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)]**
			1st	**2nd**	**3rd**	**4th**	**5th**	
			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 98% 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/ Institute /Medical College's authorised official)

_____

(Signature, name and address of Hospital/Institute/Medical College'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: _____

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) 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:

He has not adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to 'Technical Specifications'.

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).

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

Explanatory notes for filling up the certificate:

He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to 'Technical Specification'.

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).

Training of personnel has been done by the supplier as specified in the contract

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
ANNEXURES

Annexure 1

DETAILS OF SHIPPING ARRANGEMENT FOR LINER CARGOES IN RESPECT OF C & F/CIF/TURNKEY/F.O.R CONTRACTS FOR IMPORTS

1. (a) SHIPMENT FROM PORTS OF U.K INCLUDING NORTHERN IRELAND (ALSO EIRE), FROM THE NORTH CONTINENT OF EUROPE (GERMANY, HOLLAND, BELGIUM, FRANCE, NORWAY, SWEDEN, DENMARK, FINLAND AND PORTS ON THE CONTINENTAL SEABOARD OF MEDITERRANIAN (I.E. FRENCH WESTERN ITALIAN PORTS), TO PORTS IN INDIA.

The Seller should arrange shipment of the goods by vessels belonging to the member lines of the India-Pakistan-Bangladesh Conference. If the Seller finds that the space on the 'Conference Lines' vessels is not available for any specific shipment, he should take up with India-Pakistan-Bangladesh Conference. Conferity House, East Grinstead, Sussex (UK), for providing shipping space and also inform the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159)

The Seller should arrange shipment through the Government of India's Forwarding Agents, M/s Schenker & Co., 2000-Hamburg (Cable: SCHENKER CO., HAMBURG) OR obtain a certificate from them to the effect that shipment has been arranged in accordance with instructions of the Ministry of Surface Transport, (TRANSCHART), New Delhi.

(b) SHIPMENT FORM PORTS OF U.K. INCLUDING NORTHERN

Goods under this contract would be shipped by the national shipping companies of the Contracting Parties operating bilateral shipping service and vessels under the flag of third countries in accordance with the Agreement between the Government of German Democratic Republic and the Government of the Republic of India in the Field of Merchant Shipping signed on 9.1.1979, as amended up-to-date.

(c) ISHIPMENT FROM ADRIATIC PORTS OF EASTERN ITALY AND YUGOSLAVIA

The seller should arrange shipment of the goods by vessels belonging to the following Indian member lines;

1. The Shipping Purchaser of India Ltd.
2. The Scindia Steam Navigation Co., Ltd
3. India Steamship Co., Ltd

For the purpose of ascertaining the availability of suitable Indian vessels and granting dispensation in the event of their non-availability, the Seller should give adequate notice about the readiness of each consignment from time to time at least six weeks in advance of the required position to M/s Schenker & Co. 2000 HAMBURG (Cable: SCHENKER CO., HAMBURG) and also endorse a copy thereof to the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159)

The seller should arrange shipment through the Government of India's Forwarding Agents M/s Schenker & Co. 2000 HAMBURG (Cable: SCHENKER CO., HAMBURG) or obtain certificate from them to the effect that shipment has been arranged in accordance with the instructions of the Ministry of Surface Transport, (TRANSCHART), New Delhi.

(d) SHIPMENT FROM POLAND & CZECHOSLOVAKIA

(i) IMPORTS FROM POLAND

Shipment under this contract would be made by the National flag lines of the two parties and vessels of the third flag conference lines, in accordance with the agreement between the Govt. of the Republic of India and the Govt. of the Polish People's Republic regarding Shipping Co-operation dated 27.6.1960 as amended up-to-date.

(ii) IMPORTS FROM CZECHOSLOVAKIA

Goods under this contract would be signed by the National flag lines of the two parties and vessels of the third flag conference lines, in accordance with the Agreement Co-operation in shipping between India and Czechoslovakia signed on 3.11.1978 and ratified on 19.12.1979, as amended up-to-date.
Shipping arrangement should be made by the Sellers in consultation with Resident Representative of the Indian Shipping Lines in Gdynia, Co., Morska Agencja W. Gdyniul, Pulaskiego 8, P.O. Box 246, Gdynia (Poland) – Telex : MG PL. 054301, Tel.: 207621, to whom details regarding contract number, nature of cargo , quantity, port of lading, discharging, name of Government consignee, expected date of readiness of each consignment etc. should be furnish at least six weeks in advance of the required position, with a copy thereof endorsed to the Shipping Co-ordination Officer, Ministry of Surface Transport, (Chartering Wing), New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159)

(e) SHIPMENT FROM U.S.S.R

Shipment under this contract should be made in accordance with the agreement between the Government of the Republic of India and the Government of U.S.S.R on Merchant Shipping 1976, as amended up-to-date, by vessels of Indo-Soviet shipping Service.

(f) SHIPMENT FROM JAPAN

The shipment of goods should be made of India vessels to the maximum extent possible subject to the minimum of 50%.

The Seller should arrange shipment of the goods in consultation with the Embassy of India in Japan, Tokyo to whom details regarding contract number, nature of cargo, quantity, port of loading/discharge, name of Govt. consignee, expected date of readiness of each consignment etc. should be furnished at least six weeks in advance of the required position.

Note: The copies of such contracts are to be endorsed both to the Attached (commercial) embassy of India in Japan, Tokyo, and the shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi.

(g) SHIPMENT FROM AUSTRALIA, ALGERIA, BULGARIA, ROMANIA, EGYPY

The Seller shall arrange shipment of the goods by Indian flag vessels to the maximum extent possible subject to a minimum of 50 %. For the purpose of ascertaining the availability of suitable Indian vessels, the seller shall give adequate notice of not less than six weeks about the readiness of each consignment to the Shipping Purchaser of India Ltd., SHIPPING HOUSE, 245, Madame Cama Road, Bombay – 400 021 (CABLE: SHIPINDIA BOMBAY) and also endorse a copy thereof to the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159)

(h) SHIPMENT FROM PAKISTAN

The shipment of cargoes should be made by Indian vessels to the maximum extent possible subject to a minimum of 50 %.

Shipment arrangement should be made by the sellers in consultation with M/s Mogul Line Ltd., 16-Bank Street, Fort, Bombay – 400023 (Cable: MOGUL BOMBAY: Telex: 011 – 4049 MOGUL), to whom, details regarding contract number, nature of cargo, quantity, port of lading discharging, name of government consignee, expected date of readiness of each consignment etc. should be furnish at least six weeks in advance of the required position, with a copy thereof endorsed to the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159)

(i) SHIPMENT FROM U.S ATLANTIC & GULF PORTS

The Seller should arrange shipment of the goods by vessels belonging to the member lines of the India – Pakistan – Bangladesh – Ceylon and Burma Outward Freight Conference. If the Seller finds that the space of the 'Conference Lines' vessels is not available for any specific shipment he should take up with India – Pakistan- Bangladesh – Ceylon and Burma Outward Freight Conference, 19, Rector Street, New York, N.Y. 10006 USA, for providing shipping space and also inform the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159)

(j) SHIPMENT FROM ST. LAWRENCE AN EASTERN CANADIAN PORTS

The Seller should arrange shipment of the goods by vessels belonging to the following shipping lines;

1. The shipping Purchaser of India Ltd.
2. The Scindia Steam Navigation Co., Ltd

If the Seller finds that the space in the vessels of these Lines is not available for any particular consignments, he should inform the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159) immediately so that dispensation from the shipping lines concerned to use alternative lifting may be sought.

(k) SHIPMENT FROM WEST COAST PORTS OF U.S.S CANADA AND OTHER AREAS NOT SPECIFICALLY MENTIONED ABOVE

The Seller should arrange shipment of the goods by Indian vessels to the maximum extent possible subject to a minimum of 50 %. For the purpose of ascertaining the availability of suitable Indian vessels and granting dispensation in the event of their non-availability, the Seller should furnish the details regarding contract number, nature of cargo, quantity, port of lading, discharging, name of government consignee, expected date of readiness of each consignment etc. to the Shipping Co-ordination Officer, Ministry of Surface Transport, New Delhi, (Cable: TRANSCHART, NEW DELHI, Telex: VAHAN IN – 031 – 61157, 61158, 61159) at least six weeks in advance of the required position.

2. BILLS OF LADING

(i) C.I.F./C&F/TURNKEY SHIPMENTS

The Bills of lading should be drawn to indicate Shipper and 'Consignee' as under:

SHIPPER: The C.I.F (C&F)/TURNKEY SUPPLIERS concerned.

CONSIGNEE: As per consignee's particulars in the contract (The name an address of the 'Port Consignee' and 'Ultimate' both should be indicated).

(ii) F.O.R SHIPMENTS

The Bills of lading should be drawn to indicate shipper Consignee as under:

SHIPPER: The F.O.R suppliers Concerned

CONSIGNEE: Supplier's Indian Agent on order

Note:

1. Moreover the name of the 'Purchaser' and 'Ultimate' Consignee should appear in the body of the Bills of Lading as the 'Notify' or as a remark.
2. Two non-negotiable copies of the Bills of Lading indicating the freight amount and discount, if any allowed, should be forwarded to The Shipping Co-ordination Officer, Ministry of surface Transport (Chartering Wing), New Delhi after the shipment of each consignment is effected.
3. The seller should avoid the use of over-aged vessels for the shipment of the goods under the contract and if so used the cost of additional. Insurance, if any, shall be borne by the seller.

SECTION – XX
CHECKLIST
Name of Tenderer:
Name of Manufacturer:

Sl No.	Activity	Yes/ No/ NA	Page No. in the submitted document	Remarks
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. a.	Have you enclosed duly filled Tender Form as per format in Section X?			
b.	Have you enclosed Power of Attorney in favour of the signatory?			
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?			

Sl No.	Activity	Yes/ No/ NA	Page No. in the submitted document	Remarks
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 an 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?			
14.	Have you accepted the warranty/CMC as per TE document?			
15.	Have you accepted terms and conditions of TE document?			

Sl No.	Activity	Yes/ No/ NA	Page No. in the submitted document	Remarks
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.

1. All pages of the Tender should be page numbered and indexed.
2. The Tenderer may go through the checklist and ensure that all the documents/confirmations listed above are enclosed in the tender and no column is left blank. If any column is not applicable, it may be filled up as NA.
3. It is the responsibility of tendered to go through the TE document to ensure furnishing all required documents in addition to above, if any.

(Signature with date)

(Full name, designation & address of the person duly authorised sign on behalf of the Tenderer)
For and on behalf of

(Name, address and stamp of the tendering firm)

Section – XXI

Consignee List

Consignee Code	Medical Institutions	Contact Address.	AirPort	Sea Port
BJMC	Civil Hospital / BJ Medical College	The Medical Superintendent, Civil Hospital / BJ Medical College, Ahmedabad-380016 Gujarat Ph: 079-22681024 079-22680074	Ahmadabad	Kandla
BMC	Bangalore Medical College and Research Institute	The Director , Bangalore Medical College and Research Institute, Fort, Near KR Road Bangalore – 560002 Karnataka Ph: 080-26704342	Bengaluru	Chennai
GMC	Grant Medical College & Sir J.J. Group of Hospitals	The Dean, Grant Medical College & Sir J.J. Group of Hospitals, Byculla, Mumbai 400 008 Ph: 022 23731144	Mumbai	Mumbai
JMC	Govt.Medical College, Jammu	The Principal, Govt. Medical College, Bakshinagar Jammu – 180006 Ph: 0191-2584247	Delhi	Kandla
RIMS	Rajendra Institute of Medical Sciences	The Director, Rajendra Institute of Medical Sciences Bariatu, Ranchi – 834009 Jharkhand Ph - +91-651-2541533	Kolkata	Kolkata

Consignee Code	Medical Institutions	Contact Address.	AirPort	Sea Port
TMC	Medical College Thiruvananthapuram	The Principal, Medical College Thiruvananthapuram, Medical College P.O Thiruvananthapuram -695011 Kerala Ph: 0471-2443095	Trivandrum	Cochin
VIMS	Institute of Medical Sciences, BHU	The Director Institute of Medical Sciences, BHU Varanasi -221005 Uttar Pradesh Ph: 0542-23075000	Delhi	Kolkata

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