GLOBAL TENDER ENQUIRY DOCUMENT

FOR PURCHASE OF MEDICAL EQUIPMENT

FOR & ON BEHALF OF

Ministry of Health and Quality of Life, Govt. Of Republic of Mauritius, Mauritius

On E-Tender Basis

HSCC/PUR/Mauritius/Cancer Hospital Equipment/2019 Dt. 12.09.2019

BY

HSCC (INDIA) LTD

(A GOVERNMENT OF INDIA ENTERPRISE)

Plot No. 6-A, Block-E, Sector-1, NOIDA (U.P.) – 201 301, INDIA
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SECTION- I

NOTICE INVITING TENDERS (NIT)

For GLOBAL TENDER ENQUIRY DOCUMENT

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Ministry of Health and Quality of Life, Govt. Of Republic of Mauritius, Mauritius

Tender Enquiry No.: HSCC/PUR/Mauritius/Cancer Hospital /2019 Dt. 12.09.2019

Senior Chief Executive, Ministry of Health & Quality of Life, Govt. Of Republic of Mauritius, Mauritius through their Project Management Consultant (PMC) HSCC (India) Ltd. under Ministry of Health & Family Welfare, Govt. of India invites **On-line bids** from eligible bidders, in single stage two bid system for supply, installation, testing, commissioning & handing-over of **Medical Equipment for Cancer Hospital in Solferino,, Mauritius**:

I. INTENSIVE CARE UNIT

S. No.	NAME OF EQUIPMENT	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
1	Invasive Ventilator	3	90,000	45,000	1,268
2	Non Invasive Ventilator	1	12,000	6,000	169
3	Multipara Monitor (24 Nos.) with Central Nursing Station (2 Nos.) Transport Monitor (1 No.)	Monitor 24 Nos. CNS 2 Nos. Transport Monitor 1	2,42,000	1,21,000	3,408
4	Video Laryngoscope	1	14,000	7,000	197
5	Syringe Infusion Pump (ICU 16 Nos., OT - 2 Nos. & HDU- 4)	22	22,000	11,000	310
6	Portable Ultrasound Machine	1	40,000	20,000	563
7	Biphasic Defibrillator (ICU - 2 Nos. , Operation Theatre - 1 No. * High Dependency Unit – 1No.)	3	40,000	20,000	563
8	Stress Test System	1	50,000	25,000	704

II. OPERATION THEATRES/ANEASTHESIA (1 NO.) & RECOVERY ROOM

Sr. No.	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
9.	Aneasthesia workstation	1	56,000	28,000	789
10.	Operation Table	1	60,000	30,000	845
11.	Video Laryngoscope with Endoscope Paediatric & Adult	1	30,000	15,000	423
12.	Peripheral Nerve Stimulator	1	30,000	15,000	423
13.	Surgical Instrument Sets	2	80,000	40,000	1,127

III. HIGH DEPENDENCY UNIT

Sr No	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
14.	Portable ventilator (Adult) High Dependency Unit – 1 Nos. Operation Theatre / Recovery	5	50,000	25,000	704

IV. RADIOLOGY (IMAGING)

Sr No	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
15.	256 slice CT Scanner (Inclusive Turnkey)	1	24,00,000	12,00,000	33,803
16.	Digital Flat Panel Radiography System.	1	5,50,000	2,75,000	7,746
17.	Portable X Ray Machine (For Radiology – 1 No. & ICU – 1 No.)	2	40,000	20,000	583
18.	Color Doppler USG with biopsy	1	1,00,000	50,000	1,408

V. HISTOPATHOLOGY & IMMUNO CHEMISTRY

Sr. No.	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
	Support Services				
(a)	**Histopathology & IMMUNO CHEMISTRY:**				
19.	Cryostat	1	30,000	15,000	423
20.	Automatic Tissue Embedding System	1	16,000	8,000	225
21	Micro wave tissue processor	1	16,000	8,000	225
22	Automated Flexible cover shipping work station	1	30,000	15,000	423
23	Fully automated IHC stainer	1	60,000	30,000	845
24	Fully automated high throughput multi strainer	1	50,000	25,000	704
25	Automatic tissue processor	1	30,000	30,000	423

26	Grossing station with fume hood	1	16,000	8,000	225
27	Cystopin	1	13,000	6,500	183
28	Trinocular microscope with camera with combined video display and image analysis	1	15,000	7,500	211
29.	Fluorescence microscope double head	1	30,000	15,000	423
30.	Standalone paraffin dispensing module cold plate holding more than 100 cassettes	1	14,000	7,000	197
31	Deep freezer (-20C) (For Histopathology & Immunochemistry 1 No + Biochemistry 1 No.)	2	24,000	12,000	338
32.	Deep freezer (-80C) (For Histopathology & Immunochemistry 1 No + Biochemistry 1 No.+ Blood Bank 2 Nos.)	4	72,000	31,000	1,014

VI. HAEMATOLOGY AND FLOW CYTO METER

Sr. No.	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
33.	Automatic hematology Cell Counters (5 part)(with retics, IPF & malaria parasites)	1	40,000	20,000	563
34.	Pentahead Microscope	1	30,000	15,000	423
35.	Fluorescence microscope, double head	1	30,000	15,000	423
36.	Automatic Urine Analyzer	1	20,000	10,000	282
37.	Fully Automated Coagulometer	1	20,000	10,000	282
38.	Cytocentrifuges	1	30,000	15,000	423
39.	Automated ESR Analyzer	1	18,000	9,000	254
40.	HPLC Electrophoresis Machine	1	20,000	10,000	282
41.	Automated Haematology Slide stainer	1	16,000	8,000	225
42.	Laer Flow Cytometer	1	60,000	30,000	845
43.	Spectrophotometer for Hb Analysis	1	16,000	8,000	225
44.	Automatic Semen Analyser	1	20,000	10,000	282
45.	Glassware & chemicals reagents	As per List	30,000	15,000	423

VII. CLINICAL BIOCHEMISTRY

Sr. No.	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
46.	Fully Automated & Integrated Biochemistry and Immunochemistry Open System Auto Analyser.	1	50,000	25,000	704
47.	Fully Automated Immunochemistry Autoanalyzer.	1	50,000	25,000	704
48.	Refrigerated Centrifuge	1	80,000	40,000	1,127
49.	Laboratory Refrigerator 400 Litres with 3 to 5 shelves	2	20,000	10,000	282
50.	Cold Room (+2 to +8)	1	16,000	8,000	225
51.	Computerized Colorimeter	2	20,000	10,000	282
52.	Automated Protein Electrophoresisi Apparatus & Automated Haemoglobin Electrophoresisi Apparatus)	1	40,000	20,000	563
53.	Fixed Volume Micropipettes with Tips (1000/Pack) 5ul, 10 ul, 25ul, 50ul, 100ul, 200ul		36,000	18,000	507
54.	Blood Gas Analyzer **(Intensive Care Unit + High Dependency Unit(1No) + Clinical Biochemitry (1 No.)**	3	30,000	15,000	423

VIII. BLOOD BANK

Sr. No.	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
55.	Blood Storage Refrigerators	2	32,000	16,000	451
56.	Deep Freezer -40 Degree	2	24,000	12,000	338
57.	Refrigerated Centrifuge	1	70,000	35,000	986
58.	Cell Separator	1	80,000	40,000	1,127

LOW VALUE ITEMS

Sr. No.	Name of Equipment	Qty.	EMD (INR)	EMD (MUR)	EMD (US $)
59	Items for Department of High Dependency Unit, Operation Theatre, Anesthesia, ICU etc **(Quoting of all items is mandatory**)	**Refer List of Requirements**	66,200	33,100	938
60.	Items for Departments of Diagnostic Laboratories. **(Quoting of all items is mandatory**	**Refer List of Requirements**	1,44,100	72,050	2,030

The bidders are required to be registered at HSCC e-tender portal www.tenderwizard.com/HSCC. Please log on to www.tenderwizard.com/HSCC only for downloading bid document and for participation through **E-tendering basis.** For submission and other details please refer HSCC e-tender portal www.tenderwizard.com/HSCC. For submission of the bids, the bidders are required to have Type-II Digital Signature Certificate (DSC) from the authorized Certifying Authorities.

Complete set of Bid Documents has been made available at E-Tender portal www.tenderwizard.com/HSCC, www.hsccltd.com , CPPP Portal for downloading from **16.09.2019 to 16.10.2019**. Prospective bidders are advised to regularly scan through HSCC E-tender portal www.tenderwizard.com/HSCC and www.hsccltd.com as corrigendum/modification/amendments, if any, will be notified on this portal only and no separate advertisement will be made for this.

(2) **Tender Enquiry No.: HSCC/Mauritius/Cancer Hospital Eqpt./2019 Dated 12.09.2019**

Sl. No.	Description	Schedule
i.	Dates of sale of tender enquiry documents	16.09.2019 to 16.10.2019 10.00 hrs to 1400 hrs IST
ii.	Place of sale of Tender Enquiry Documents	HSCC (India) Ltd, Plot No. 6-A, Block-E, Sector-1, Noida (U.P)-201301, India.
iii.	Pre Tender Meeting Date & Time	26.09.2018, 14.30 hrs. IST
iv.	Pre Tender Meeting Venue	HSCC (India) Ltd, Plot No. 6-A, Block-E, Sector-1, Noida (U.P)-201301, India.
v.	Closing date & time for receipt of Tender	16.10.2019, 1430 hrs IST
vi.	Time and date of opening of Techno – Commercial tenders	16.10.2019, 1500 hrs IST
vii.	Venue of Opening of Techno Commercial Tender	Same as 2 (ii)

2. Interested tenderers may obtain further information about this requirement from this office inviting the tenders.

3. The prospective bidders who have not registered can register with E-procurement system of NIC by paying necessary registration charges. The bidders may prepare a banker cheque/Draft in favour of HSCC (India) Ltd. Office at Noida, payable at Noida/Delhi and deposit it. In order to submit the bids electronically bidders are required to have type-II Digital Signature Certificate. Digital Signature can be obtained from any of the certifying agency.

The tenderer shall submit all the necessary documents and in physical form (with respect to few documents as mentioned in the SIT) in parts/covers as mentioned below:

Part-I In Original Offline (In separate Envelope) & its scanned Copy Online

(i) Tender Fee and EMD
(ii) Affidavit as per Section XIX
(iii) Technical compliance for the quoted goods vis-à-vis the Technical specifications and with all related brochures/catalogues in the tender enquiry, technical bid.
(NOTE : Submit : *"Compliance report should be in a tabulated and point wise manner clearly highlighting the parameters in technical literature/data sheets /brochure/ Certificates.)*

Part-II Online

(i) Scanned copy of Tender Fee and EMD
(ii) Power of Attorney
(iii) Tender Form as per section X.
(iv) Manufacturers Authorization Form **(for all Items except item 59 & 60)**
(v) Affidavit as per Section XIX
(vi) Proforma A
(vii) Performance statement along with required PO copies and its corresponding end user's satisfactory performance certificate as per section IX.
(viii)Technical compliance for the quoted goods vis-à-vis the Technical specifications
(NOTE : Submit : *"Compliance report should be in a tabulated and point wise manner clearly highlighting the parameters in technical literature/data sheets /brochure/ Certificates.)*
(viii) Name, address and details of account with respect to bidder and/or beneficiary of L/C. Copy of PAN. Certificate of Incorporation/Declaration being a proprietary firm.
(x) Audited Annual report of last 3 completed financial years (Balance sheet and Profit & Loss Account). Certificate of Regn. Issued by Directorate of Industries/NSIC, if SSI unit.
(xi) Quality Control Requirements as per Section VIII

Price Bid (Only online).

- Price Schedule
- CMC Price Schedule
- Turnkey Price Schedule

4. All prospective tenderers may attend the Pre Tender meeting. For all the above tender IDs, Pre-bid meeting shall be held as mentioned above.

5. To participate in the submission against the tender, it is mandatory for the Applicants to get digital signature and get themselves registered with e-tendering system.

6. Complete set of Bid Documents has been made available at E-Tender portal www.tenderwizard.com/HSCC, www.hsccltd.com for downloading. Tenderer may download the tender enquiry documents from the website and submit its tender online after logging in to their user ID. The bidders are required to be registered at HSCC e-tender portal www.tenderwizard.com/HSCC. Please log on to www.tenderwizard.com/HSCC only for uploading its tender on-line for participation through **E-Tendering basis**. For submission and other details, please refer HSCC e-tender portal www.tenderwizard.com/HSCC.

7. Tenderers shall ensure that their tenders, complete in all respects, are submitted online and desired hard copies in original dropped in the Tender Box located at **HSCC (India) Ltd., E-6A, Sector-1, Noida, U.P.-201301, India** on or before the closing date and time indicated above, failing which the tenders will be treated as late and rejected.

8. In the event of any of the above mentioned dates being declared as a holiday /closed day for the purchase organisation, the physical form of tenders will be received/opened on the next working day at the appointed time. Bidders are requested to regularly visit website www.tenderwizard.com/HSCC & www.hsccltd.com for corrigendum/amendments etc., if any, as these there no separate advertisement for them.

9. Purchaser/HSCC reserves the right to annul the tendering process at any stage without assigning any reason thereof. Further, Client has the right to omit any one or all of the equipment.

Senior Chief Executive,
Ministry of Health & Quality of Life,
Govt. Of Republic of Mauritius,
Mauritius

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, i.e. Senior Chief Executive, Ministry of Health & Quality of Life, Govt. Of Republic of Mauritius, Mauritius.
(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 instruments, machinery, equipment, medical equipment, 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 Head, Cancer Hospital Solferino,, Solferino,, Mauritius/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 and 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) "LC" means Letter of Credit
(viii) "DP" means Delivery Period
(ix) "BG" means Bank Guarantee
(x) "CD" means Custom Duty
(xi) "VAT" means Value Added Tax
(xii) "CST" means Central Sales Tax
(xiii) "FOB" means Free on Board
(xiv) "FCA" means Free Carrier
(xv) "CIF" means Cost, Insurance and Freight
(xvi) "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.
(xvii) "INCOTERMS" means International Commercial Terms as on the date of Tender Opening
(xviii) "CMC" means Comprehensive maintenance Contract (labour, spare and preventive maintenance)
(xix) "MUR" means Mauritius Rupees

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 – Affidavit
- Section XX – Check List
- Section XXI – Consignee

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

9. Amendments to TE documents

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

9.2 Such an amendment will be notified in the referred website only.

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

10. Clarification of TE documents

10.1 A tenderer requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser **in writing on or before the due date of pre-bid meeting**. No queries will be entertained later on. The purchaser will respond in writing to such request as per the schedule.

C. PREPARATION OF TENDERS

11. Documents Comprising the Tender

11.1 The bids shall be submitted online and in physical form in three parts/covers as mentioned below:
(i) Tender Fee, EMD, Pre-qualification as per Tender Terms and referred in checklist at section XIX and as mentioned in para A below.
(ii) Technical Bid
(iii) Price Bid (Only online).

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

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 **(for all Items except for Items 59 & 60)**

v) Power of Attorney in favour of signatory of TE documents.
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/Installation Reports.
viii) Certificate of Incorporation in the country of origin.

B) Price Tender:

1. Prices are to be quoted in the attached Price Bid format online as per the directions on the official website.

2. The price should be quoted for the accounting unit indicated on the website.

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

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

11.2 A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrantee that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages

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

11.4 Tender sent by fax/telex/cable/electronically shall be ignored.

12. Tender currencies

12.1 The tenderer supplying indigenous goods or already imported goods shall quote only in MUR.

12.2 For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP, CHF or Yen. Commission for Agent, if any and if payable shall be indicated in the space provided for in the price schedule and will be payable in MUR.

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 Mauritius and that for goods offered from abroad are to be indicated separately in the applicable Price Schedules attached under Section XI. Bidders must quote the prevailing taxes and duties as applicable.

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 Mauritius, 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 GST/Applicable Tax, Custom 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) 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;
c) the price of Incidental Services, as mentioned in List of Requirements and Price Schedule;
d) the prices of Turnkey (if any), as mentioned in List of Requirements, Technical Specification and Price Schedule; and
e) the price of annual CMC, as mentioned in List of Requirements, Technical Specification and Price Schedule.

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

a) The price of goods quoted FOB/FCA port of shipment, as indicated in the List of Requirements and Price Schedule;
b) the price of goods quoted CIP (name port of destination) as indicated in the List of Requirements, Price Schedule and Consignee List;
c) 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;
d) the charges for Incidental Services, as in the 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 Total tender price of goods quoted CIP basis at consignee site in Mauritius as indicated in the List of Requirements, Price Schedule and Consignee + Insurance + Local Transportation & Storage + quoted custom duty
g) 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 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. 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 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 Agent.
b) The details of the services to be rendered by the agent for the subject requirement.
c) Details of Service outlets in India, nearest to the consignee(s), to render services during Warranty and CMC period.
d) Copy of the agreement between Agent & their principal detailing the scope of work/services during warranty & after sales periods.

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 except for Items 59 & 60)
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 Mauritius, it is duly represented by an agent stationed in Mauritius fully equipped and able to carry out the required contractual functions and duties of the supplier including after sale service, maintenance & repair etc. of the goods in question, stocking of spare parts and fast moving components and other obligations, if any, specified in the conditions of contract and/or technical specifications.

18. Documents establishing Good's Conformity to TE document.

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

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

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

19. Earnest Money Deposit (EMD)

19.1 Pursuant to GIT clauses 8.1 and 11.1 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 earnest money shall be denominated in Indian Rupees/MUR/US $ 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
iv) FDR

19.3 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 **"HSCC (India) Ltd"** payable at New Delhi/Noida. 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.

19.4 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 the **original last date** for submission of the tender/bid.

19.5 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.

19.6 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.

19.7 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 The original and other 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.

21.3 The tender shall be duly signed at the appropriate places as indicated in the TE documents and all other pages of the tender including printed literature, if any shall be initialled by the same person(s) signing the tender. The tender shall not contain any erasure or overwriting, except as necessary to correct any error made by the tenderer and, if there is any such correction; the same shall be initialled by the person(s) signing the tender.

D. SUBMISSION OF TENDERS

22. Submission of Tenders

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

(i) Tender Fee and EMD (Both online and physical)

(ii) Pre-qualification and Technical compliance as per following documents (Online submissions for all the documents and physical submission only for affidavit as per point i) below and original Technical brochures/catalogues against point j):

a) Manufacturer's authorization (for all schedule except for Items 59 & 60) in case bid is submitted by an agent (A declaration must be attached here in case quoted by an agent).
b) Tender Form as per section X.
c) Certificate of Incorporation/Declaration being a proprietary firm.
d) Annual report of last 3 years (Balance sheet and Profit & Loss Account)
e) Name, address and details of account with respect to bidder and/or beneficiary of L/C.
f) Quality Control Requirements as per Section VIII
g) Performance statement along with required PO copies and its corresponding end user's satisfactory performance certificate as per section IX.
h) Affidavit as per Section XIX
i) Technical Bid along with clause-by-clause technical compliance statement for the quoted goods vis-à-vis the Technical specifications in the tender enquiry (online and physical).

(NOTE : Submit : "Compliance report should be in a tabulated and point wise manner clearly highlighting the parameters in technical literature/data sheets /brochure/ Certificates.)

(iii) Price Bid (Only online).

Bidders are requested not to submit the hard copy of Price Bid along with the physical form of tender. Uploading of the price bid in prequalification bid or technical bid will result in rejection of the tender.
Unless otherwise specified, the tenderers are to submit its tender online and deposit the physical form of tenders in the tender box kept for this purpose at **HSCC (India) Ltd., E-6A, Sector-1, Noida-201301, ((UP), India.**

22.2 The tenderers must ensure that they deposit their tenders not later than the closing time and date specified for submission of tenders. It is the responsibility of the tenderer to ensure that their Tenders whether sent by post or by courier or by person, are dropped in the Tender Box by the specified clearing date and time. In the event of the specified date for physical submission of tender falls on /is subsequently declared a holiday or closed day for the purchaser, the tenders will be received up to the appointed time on the next working day.

23. Late Tender

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

24. Alteration and Withdrawal of Tender

24.1 The tenderer, after submitting its tender, is permitted to alter / modify its tender so long as such alterations / modifications are received duly signed, sealed and marked like the original tender, within the deadline for submission of tenders. Alterations / modifications to tenders received after the prescribed deadline will not be considered.

24.2 No tender should be withdrawn after the deadline for submission of tender and before expiry of the tender validity period. If a tenderer withdraws the tender during this period, it will result in forfeiture of the earnest money furnished by the tenderer in its tender.

E. TENDER OPENING

25. Opening of Tenders

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

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

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

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

25.3 The **Techno - Commercial Tenders** are to be opened in the first instance, at the prescribed time and date as indicated in NIT. These Tenders shall be scrutinized and evaluated by the competent committee/ authority with reference to parameters prescribed in the TE document.

F. SCRUTINY AND EVALUATION OF TENDERS

26. Basic Principle

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

27. Scrutiny of Tenders

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

27.2 Purchaser will determine the responsiveness of each Tender to the TE Document without recourse to extrinsic evidence.

27.3 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.

27.4 **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 IX (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.
(vi) Tenderer has quoted for goods manufactured by other manufacturer(s) without enclosing the required Manufacturer's Authorisation Form as per Section XIV.
For Low Value Items 59 & 60 Manufacturer Authorization Not required)
(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, delivery, 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.

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

(i) The bidder has submitted hard copy of financial bid (only online submission price bids are allowed).
(ii) Tender validity is shorter than the required period.
(iii) Required EMD (Amount, validity etc.)/ exemption documents have not been provided.
(iv) Tenderer has quoted for goods manufactured by other manufacturer(s) without enclosing the required Manufacturer"s Authorisation Form (for all Items except Low Value Items 59 & 60) as per Section XIV.
(v) Tenderer has not agreed to give the required performance security of required amount in an acceptable form in terms of GCC clause 5, read with modification, if any, in Section - V – "Special Conditions of Contract", for due performance of the contract.
(vi) Tenderer has not agreed to other essential condition(s) specially incorporated in the tender enquiry like terms of payment, liquidated damages clause, warranty clause, delivery, dispute resolution mechanism applicable law.
(vii) Poor/ unsatisfactory past performance.
(viii) Tenderers who stand deregistered/banned/blacklisted by any Govt. Authorities.
(ix) Tenderer is not eligible as per GIT Clauses 5& 17.1.
(x) Tenderer has not quoted for the entire quantity as specified in the List of Requirements in the quoted schedule.
(xi) Tenderer has not agreed for the delivery terms and delivery 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 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/e-mail 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 Mauritius 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., Mauritius Rupees for the purpose of equitable comparison and evaluation, as per the exchange rates for similar transactions, as on the date of '**Techno-commercial Tender**' opening.

33. Equipment-wise Evaluation

33.1 The tenders will be evaluated and compared separately for each equipment. The tender for a schedule will not be considered if the complete requirements prescribed in that schedule are not included in the tender.

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 on CIP basis + Insurance + Local Transportation & Storage at Consignee site basis, inclusive of applicable taxes, duties, incidental services. The quoted Turnkey prices (if applicable) and CMC prices will also be added for comparison/ranking purpose for evaluation.

35. **Additional Factors and Parameters for Evaluation & 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) Government of Mauritius exempts payment of VAT, Legal Taxes, Levies etc.

ii) Government of Mauritius shall provide exemption of Custom Duties and other fees payable to Custom officials.

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.

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 Fifty (50) 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 Fifty (50) 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.
Further, Purchaser reserves the rights to delete any of the tendered items without assigning any reason whatsoever. Purchaser as deemed fit, out of the total tendered quantity for the tendered items may place Notification of Award for the quantity as per the requirements and may defer the balance quantity of the item(s) to be supplied later.

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/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 XV) 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	26
B	8 to 10	TE documents	No Change	26
C	11 to 21	Preparation of Tenders	No Change	26
D	22 to24	Submission of Tenders	No Change	26
E	25	Tender Opening	No Change	26
F	26 to 27	Scrutiny and Evaluation of Tenders	No Change	26
G	36 to 46	Award of Contract	No Change	26

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

Submission of Tenders

(i) All the necessary documents as prescribed in the NIT shall be prepared and scanned in different files (in PDF or JPEG format as prescribed) and uploaded for on-line submission of Proposal. However, physical documents as per NIT to be submitted in **"ORIGINAL"** to HSCC (India) Ltd. before the prescribed date & time for submission of physical tender restricted to the following documents only.

a) Demand Draft towards Tender Fee in favour of HSCC (India) Ltd.
b) EMD in the prescribed format in favour of HSCC (India) Ltd.
c) Technical Data Sheet and original technical literature/ Brochure (if any)
d) Affidavit as per Section XIX

(ii) All document(s)/ information(s) other than above including the Financial Proposal (i.e. FORMAT FOR SUBMISSION OF PRICE BID/FINANCIAL PROPOSAL) should be **uploaded online only** in the prescribed format given in the website. No other mode of submission shall be acceptable.

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

(iv) The prospective bidders may upload Drawing files, if any, in **".dwf" format** so that the size of document is less. This is a generic format and all software supports this format.

(v) At the time of cover content creation, the prospective bidders would have to define the document type as **".rar" format**.

(vi) The prospective bidders should be asked to zip all the .dwf files to a .rar file & upload it

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

GENERAL CONDITIONS OF CONTRACT (GCC)

1. Application

1.1 The General Conditions of Contract incorporated in this section shall be applicable for this purchase to the extent the same are not superseded by the Special Conditions of Contract prescribed under Section V, List of requirements under Section VI and Technical Specification under Section VII of this document.
All documents submitted physically or uploaded as scanned copies must be self-attested, legible and numbered.

2. Use of contract documents and information

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

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

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

3. Patent Rights

3.1 The supplier shall, at all times, indemnify and keep indemnified the purchaser, free of cost, against all claims which may arise in respect of goods & services to be provided by the supplier under the contract for infringement of any intellectual property rights or any other right protected by patent, registration of designs or trademarks. In the event of any such claim in respect of alleged breach of patent, registered designs, 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 Mauritius has trade relations.

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

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

5. Performance Security

5.1 Within fifteen (15) days from date of the issue of notification of award by the Purchaser/Consignee, the supplier, shall furnish performance security to the Purchaser/Consignee for an amount equal to ten percent (10%) of the total value of the contract, valid up to sixty (60) days after the date of completion of all contractual obligations by the supplier, including the warranty obligations of 1 year, from the date of Notification of Award.

5.2 The Performance security shall be denominated in Mauritius 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 Mauritius or Bank Guarantee issued by a Scheduled bank in Mauritius, 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 consignee, 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 Purchaser/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.

Please ensure the following compliances are met for the Medical equipment:

1. For Radiology equipment i.e. X-Ray, Ultrasound, MRI & CT-Scan etc.

    a. Equipment should be DICOM (Digital Imaging and Communications in Medicine) enabled DICOM provides reliable protocols for integration of image data between imaging, non-imaging modalities, devices and systems.

    b. Equipment complied with HL7 (Health Level Seven) standards

    c. Capable to link with PACS & HMIS. Any Hardware/lock/software license required for interfacing with PACS & HMIS should be supplied with the equipment/device.

2. For Laboratory Equipment/device:

a. Equipment communicates in one of the following ways:

A. TCP/IP
B RS-232
C. USB

Any type of cable/hardware/lock/software/license required for integration with HMIS system should be provided.

Please provide configuration parameters to connect with HMIS successfully.

b. Data accepted/send by the device/equipment should be readable as standard data Type in ANSI C/C++.

c. Comprehensive list of all data structures imported and exported by the device should be documented with examples.

d. API of equipment should be provided.

e. Technical interface specification should be provided.

Above standards are required for interfacing of equipment with PACS (Picture Archiving & Communication System) & HMIS (Hospital Management & Information System) during the computerization of the Hospital.

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-g 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 pre-dispatch inspections, inspections and, also the identity of the officials to be deputed for this purpose. The cost towards the transportation, boarding & lodging will be borne by the purchaser and/or its nominated representative(s).

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

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

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

8.5 If the supplier tenders the goods to the purchaser's inspector for inspection at the last moment without providing reasonable time to the inspector for completing the inspection within the contractual delivery period, the inspector may carry out the inspection and complete the formality beyond the contractual delivery period at the risk and expense of the supplier. The fact that the goods have been inspected after the contractual delivery period will not have the effect of keeping the contract alive and this will be without any prejudice to the legal rights and remedies available to the purchaser under the terms & conditions of the contract.

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

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

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

8.9 Third Party Inspection to include only Physical & Relevant records Inspection of the Ordered Goods. However, Dispatch Clearance Certificate is issued without prejudice to the Purchaser's right to accept/reject the Ordered Goods after it's arrival at site/destination, if not found in

accordance with the Purchase Order during the installation and testing at site and during the performance guarantee period. This dispatch clearance certificate will not absolve manufacturer from his responsibility to ensure that the Ordered Goods supplied are totally in accordance with the Purchase Order/Notification of Award.

8.10. The stores (both Indian & Import origin goods) should be dispatched only after the equipment inspected by recognized/reputed agency like SGS, Lloyd, TUV & Bureau Veritas prior to dispatch prior to dispatch at the supplier's cost and furnish necessary Certificate from the said agency in support of their claim.

To enable HSCC to issue Dispatch Clearance Certificate, supplier/manufacture is to furnish following documents:

1. Copy of supplier's invoice showing contract number, goods description, quantity, unit price & total amount.
2. Country of Origin Certificate
3. Quality & Quantity Certificate
4. Packing List with Complete contents.
5. Internal Factory Inspection Report
6. Warranty Certificate
7. Inspection certificate for the dispatched equipments issued by recognized/reputed agency like SGS, Lloyd, TUV & Bureau Veritas, prior to dispatch.

All such Invoice/Documents/Certificates/Reports mentioned above shall be addressed as:

Senior Chief Executive,
Ministry of Health & Quality of Life,
Govt. Of Republic of Mauritius,
Mauritius
through HSCC (I) Ltd., Noida, UP, India.

After scrutiny, if the documents found in order, **Dispatch Clearance Certificate** shall be issued to the supplier.

No goods (both Indians & Import origin goods) shall be dispatched before issue of Dispatch Clearance Certificate by HSCC.

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 for an amount equal to 110% of the value of the goods from ware house to ware house (consignee site) on all risk basis. The insurance cover shall be obtained by the Supplier and should be valid till 3 months after the receipt of goods by the Consignee.

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

If the equipment is not commissioned and handed over to the consignee within 3 months, the insurance will 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 XVI 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, Bureau Veritas, TUV prior to despatch
(vii) Manufacturer's own factory inspection report;
(viii) Certificate of origin
(ix) Port of Loading;
(x) Port of Discharge and
(xi) Expected date of arrival.

15. Warranty

15.1 The supplier warrants comprehensively that the goods supplied under the contract is new, unused and incorporate all recent improvements in design and materials unless prescribed otherwise by the purchaser in the contract. The supplier further warrants that the goods supplied under the contract shall have no defect arising from design, materials (*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 **12 months** from the date of installation & commissioning followed by a **CMC for a period of 3 (Three) 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 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 against any manufacturing defects.
   - All kind of sensors including oxygen sensors.
   - All kind of coils, probes and transducers
   - 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 twelve **(12) 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 3 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 final acceptance of the contracted goods to the purchaser. However, for goods directly imported shall be guided by the INCOTERM.

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

21. Terms and Mode of Payment

21.1 Payment Terms

All Payments shall be released by the Purchaser. All such Invoice/Documents/ Certificates/Reports as mentioned above shall be addressed as stipulated in Clause GCC8.10. 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 Goods Located within India/Mauritius.

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

a) On delivery:

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

(i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;

(ii) Consignee Receipt Certificate as per Section XVI 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 confirming that dispatch documents has already been sent to all concerned as per the contract within 24 hours;
(vi) Certificate of origin.
(vii) Dispatch Clearance Certificate issued by HSCC.

b) On Acceptance:

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

For Low Value Items

For Low Value Items 59 & 60 :

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.
100% payment of the contract price shall be paid on receipt of goods in good condition and final acceptance 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) Two copies of packing list identifying contents of each package;
(iii) Inspection certificate issued by the nominated Inspection agency, if any.
(iv) Final Acceptance Certificate' issued by the Consignee as per Section XVIII
(v) Insurance Certificate as per GCC Clause 11

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:

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

(i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;

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

b) On Acceptance:

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

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

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

C) Payment of Turnkey, if any:

Turnkey payment will be made to the manufacturer's agent in Mauritius 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.

D) Payment for Annual Comprehensive Maintenance Contract Charges: (Not applicable for Low value Items 59 & 60)

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

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

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

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

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

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

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

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

21.9 In case where the supplier is not in a position to submit its bill for the balance payment for want of receipted copies of Inspection Note from the consignee and the consignee has not complained about the non-receipt, shortage, or defects in the supplies made, balance amount will be paid by the paying authority without consignee's receipt certificate after three months from the date of the preceding part payment for the goods in question, subject to the following conditions:

(a) The supplier will make good any defect or deficiency that the consignee (s) may report within six months from the date of despatch of goods.
(b) Delay in supplies, if any, has been regularized.
(c) The contract price where it is subject to variation has been finalized.
(d) The supplier furnishes the following undertakings:

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

22. Delivery/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. The time for and the date of delivery of the goods stipulated in the schedule shall be deemed to be of the essence of the contract and the delivery must be completed not later than the date (s) as specified in the contract.

22.2 Subject to the provision under GCC clause 26, any unexcused delay by the supplier in maintaining its contractual obligations towards delivery of goods and performance of services shall render the supplier liable to any or all of the following sanctions:

(i) imposition of liquidated damages,
(ii) forfeiture of its performance security and
(iii) termination of the contract for default.

22.3 If at any time during the currency of the contract, the supplier encounters conditions hindering timely delivery of the goods and performance of services, the supplier shall promptly inform the Purchaser/Consignee in writing about the same and its likely

duration and make a request to the Purchaser/Consignee for extension of the delivery schedule accordingly. On receiving the supplier's communication, the Purchaser/ Consignee shall examine the situation as soon as possible and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages for completion of supplier's contractual obligations by issuing an amendment to the contract.

22.4 When the period of delivery is extended due to unexcused delay by the supplier, the amendment letter extending the delivery period shall, 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 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 which takes place after the expiry of the date of delivery stipulated in the contract.

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

22.6 Passing of Property:

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

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

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

23. Liquidated damages

23.1 Subject to GCC clause 26, if the supplier fails to deliver 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.

23.2 Deleted

23.3 Deleted

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. In the case of a dispute or difference arising between the Purchaser/Consignee and a domestic Supplier of Mauritius relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to arbitration in accordance with Laws of Government of Mauritius. In case of a dispute or difference arising between the Purchaser/consignee and a foreign supplier it shall be settled by arbitration in accordance with UNCITRAL Arbitration Rules. The award of the arbitrator shall be final and binding on the parties to the contract.

30.3 Venue of Arbitration: The venue of arbitration shall be the place from where the contract has been issued, i.e., Mauritius.

30.4 **Jurisdiction of the court shall be Mauritius.**

31. Applicable Law

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

32. Withholding and Lien in respect of sums claimed

Whenever any claim for payment arises under the contract against the supplier the purchaser shall be entitled to withhold and also have a lien to retain such sum from the security deposit or sum of money arising out of under any other contract made by the supplier with the purchaser, pending finalization or adjudication of any such claim. It is an agreed term of the contract that the sum of money so withheld or retained under the lien referred to above, by the purchaser, will be kept withheld or retained till the claim arising about of or under the contract is determined by the Arbitrator or by the competent court as the case may be, and the supplier will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention.

33. General/ Miscellaneous Clauses

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

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

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

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

33.5 The Supplier/its 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.

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

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

SECTION – V

SPECIAL CONDITIONS OF CONTRACT (SCC)

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

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

SECTION - VI
LIST OF REQUIREMENTS

Part I

I. INTENSIVE CARE UNIT

S. No.	NAME OF EQUIPMENT	Qty.
1	Invasive Ventilator	3
2	Non Invasive Ventilator	1
3	Multipara Monitor (24 Nos.) with Central Nursing Station (2 Nos.) Transport Monitor (1 No.)	Monitor 24 Nos. CNS 2 Nos. Transport Monitor 1
4	Video Laryngoscope	1
5	Infusion Pump (ICU 16 Nos., OT - 2 Nos. & HDU- 4)	22
6	Portable Ultrasound Machine	1
7	Biphasic Defibrillator (ICU - 2 Nos. , Operation Theatre - 1 No. * High Dependency Unit – 1No.)	3
8	Stress Test System	1

II. OPERATION THEATRES/ANEASTHESIA (1 NO.) & RECOVERY ROOM

Sr. No.	Name of Equipment	Qty.
9.	Aneasthesia workstation	1
10.	Operation Table	1
11.	Video Laryngoscope with Endoscope Paediatric & Adult	1
12.	Peripheral Nerve Stimulator	1
13.	Surgical Instrument Sets	2

III. HIGH DEPENDENCY UNIT

Sr No	Name of Equipment	Qty.
14.	Portable ventilator (Adult) High Dependency Unit – 1 Nos. Operation Theatre / Recovery	5

IV. RADIOLOGY (IMAGING)

Sr No	Name of Equipment	Qty.
15.	256 slice CT Scanner (Inclusive Turnkey)	1
16.	Digital Flat Panel Radiography System.	1
17.	Portable X Ray Machine (For Radiology – 1 No. & ICU – 1 No.)	2
18.	Color Doppler USG with biopsy	1

V. HISTOPATHOLOGY & IMMUNO CHEMISTRY

Sr. No.	Name of Equipment	Qty.
	Support Services	
(a)	**Histopathology & IMMUNO CHEMISTRY:**	
19.	Cryostat	1
20	Automatic Tissue Embedding System	1
21	Micro wave tissue processor	1
22	Automated Flexible cover shipping work station	1
23	Fully automated IHC stainer	1
24	Fully automated high throughput multi strainer	1
25	Automatic tissue processor	1
26	Grossing station with fume hood	1
27.	Cystopin	1
28.	Trinocular microscope with camera with combined video display and image analysis	1
29.	Fluorescence microscope double head	1
30.	Standalone paraffin dispensing module cold plate holding more than 100 cassettes	1
31.	Deep freezer (-20C) (For Histopathology & Immunochemistry 1 No + Biochemistry 1 No.)	2
32.	Deep freezer (-80C) (For Histopathology & Immunochemistry 1 No + Biochemistry 1 No.+ Blood Bank 2 Nos.)	4

VI. HAEMATOLOGY AND FLOW CYTO METER

Sr. No.	Name of Equipment	Qty.
33	Automatic hematology Cell Counters (5 part)(with retics, IPF & malaria parasites)	1
34.	Pentahead Microscope	1
35.	Fluorescence microscope, double head	1
36.	Automatic Urine Analyzer	1
37.	Fully Automated Coagulometer	1
38.	Cytocentrifuges	1
39.	Automated ESR Analyzer	1
40.	HPLC Electrophoresis Machine	1
41.	Automated Haematology Slide stainer	1
42.	Laer Flow Cytometer	1
43.	Spectrophotometer for Hb Analysis	1
44.	Automatic Semen Analyser	1
45.	Glassware & chemicals reagents	As per List

VII. CLINICAL BIOCHEMISTRY

Sr. No.	Name of Equipment	Qty.
46.	Fully Automated & Integrated Biochemistry and Immunochemistry Open System Auto Analyser.	1
47.	Fully Automated Immunochemistry Autoanalyzer.	1
48.	Refrigerated Centrifuge	1
49.	Laboratory Refrigerator 400 Litres with 3 to 5 shelves	2
50.	Cold Room (+2 to +8)	1
51.	Computerized Colorimeter	2
52.	Automated Protein Electrophoresisi Apparatus & Automated Haemoglobin Electrophoresisi Apparatus)	1
53.	Fixed Volume Micropipettes with Tips (1000/Pack) 5ul, 10 ul, 25ul, 50ul, 100ul, 200ul	

54.	Blood Gas Analyzer **(Intensive Care Unit + High Dependency Unit(1No) + Clinical Biochemitry (1 No.)**	3	

VIII. BLOOD BANK

Sr. No.	Name of Equipment	Qty.
55.	Blood Storage Refrigerators	2
56.	Deep Freezer -40 Degree	2
57.	Refrigerated Centrifuge	1
58.	Cell Separator	1

LOW VALUE ITEMS

Sr. No.	Name of Equipment	Qty.
59	Items for Department of High Dependency Unit, Operation Theatre, Anesthesia, ICU etc **(Quoting of all items is mandatory**)	**As mentioned below**

Items for Department of High Dependency Unit, Operation Theatre, Anesthesia, ICU etc
(Quoting of all items is mandatory)

1	Suction machine	High Dependency Unit	2
2	ECG Machine with 12 chaneel with Trolley	Intensive Care Unit - 2 Nos & Operation Theatre 1 No.	3
3	Cuff Pressure Manometer with Inflation Bulb	Intensive Care Unit	6
4	Hand Held Audible Doppler Device	Intensive Care Unit	6
5	Intubating LMA	Intensive Care Unit	1
6	Ophthalmoscope	Intensive Care Unit	1
7	Fogger	Intensive Care Unit	2
8	Body Warmer	Operation Theatre	1
9	Cuff Pressure Guaze	Operation Theatre	1
10	Glucometer	Operation Theatre	

			1
11	Manual BP Apparatus	Operation Theatre	2
12	Flash Autoclave	Intensive Care Unit	1
	INSTRUMENTS		**Qty.**
13	Ambu Bag -	OT Instruments	
	Adult	OT Instruments	2
	Paediatric	OT Instruments	2
	Nenonate	OT Instruments	2
14	Laryngoscope with Blades (0,1,2,3,4,5) One Set	OT Instruments	6 Set
15	Magill's Forceps	OT Instruments	
	Adult	OT Instruments	2
	Paediatric	OT Instruments	1
	Nenonate	OT Instruments	1
16	Trupti Blade	OT Instruments	
	No 2	OT Instruments	2
	No 3	OT Instruments	2
	No 4	OT Instruments	2
17	Medium O2 Cylinder	OT Instruments	4
18	Laryngeal Mask Airways No 1,0	OT Instruments	
	No. 1.5	OT Instruments	2
	No. 2.0	OT Instruments	2
	No. 2.5	OT Instruments	2
	No. 3.0	OT Instruments	3
	No. 4.0	OT Instruments	3
19	Stethoscope	OT Instruments	18
20	Weighing Machine	OT Instruments	1
21	Fogger	OT Instruments	2
22	Recovery Kit	OT Instruments	

			1
	Total		
	Operation Theatres/Aneasthesia (1 No.) & Recovery Room	**Operation Theatre**	**Qty.**
	EQUIPMENTS		
24	Blood and Fluid Warmer	Operation Theatre	1
25	Portable ventilator (Pediatric)	High Dependency Unit	1
26	Pulse Oximeter (Adult & Paed Probe)	High Dependency Unit	5
28	Volumetric infusion pump	High Dependency Unit	4

60.	Items for Departments of Diagnostic Laboratories. **(Quoting of all items is mandatory**	**As mentioned below**

ITEMS FOR DEPARTMENTS OF DIAGNOSTIC LABORATORIES.
(QUOTING OF ALL ITEMS IS MANDATORY)

(a)	**Histopathology & IMMUNO CHEMISTRY:**		
1	Rotary microtome with spare disposable blade sets	**Histopathology & IMMUNO CHEMISTRY:**	1
2	Binocular Research microscope with imported oil immersion	**Histopathology & IMMUNO CHEMISTRY:**	1
3	Automatic knive sharpener	**Histopathology & IMMUNO CHEMISTRY:**	1
4	Microscope Binocular, dual viewing system	**Histopathology & IMMUNO CHEMISTRY:**	1
5	Paraffin Embedding bath	**Histopathology & IMMUNO CHEMISTRY:**	1
6	Tissue floatation bath	**Histopathology & IMMUNO CHEMISTRY:**	1
7	Slide warmer	**Histopathology & IMMUNO CHEMISTRY:**	1
8	Grossing instruments set	**Histopathology & IMMUNO CHEMISTRY:**	2
9	Hot air Oven	**Histopathology & IMMUNO CHEMISTRY:**	2
10	Incubator	**Histopathology & IMMUNO CHEMISTRY:**	2
11	Refrigerator 300 litres	**Histopathology & IMMUNO CHEMISTRY:**	2
12	Electric weighing balance (1mg-10mg)	**Histopathology & IMMUNO CHEMISTRY:**	1
13	Single pan balance	**Histopathology & IMMUNO CHEMISTRY:**	1

14	Ph meter	**Histopathology & IMMUNO CHEMISTRY:**	1
15	Autoclave vertical	**Histopathology & IMMUNO CHEMISTRY:**	1
16	Slide cabinets to store slides	**Histopathology & IMMUNO CHEMISTRY:**	5
	HAEMATOLOGY AND FLOW CYTO METERY:		
17	Binocular Research Microscopes	**HAEMATOLOGY AND FLOW CYTO METERY:**	1
18	Laboratory centrifuges	**HAEMATOLOGY AND FLOW CYTO METERY:**	1
19	Hot Ait Oven	**HAEMATOLOGY AND FLOW CYTO METERY:**	1
20	Water Bath	**HAEMATOLOGY AND FLOW CYTO METERY:**	1
19	Laboratory stirrer with magnetic induction	**HAEMATOLOGY AND FLOW CYTO METERY:**	1
20	Micropipette sets	**HAEMATOLOGY AND FLOW CYTO METERY:**	2
21	Slide Warmer	**HAEMATOLOGY AND FLOW CYTO METERY:**	1
22	Electronic Weighing machine	**HAEMATOLOGY AND FLOW CYTO METERY:**	2
21	Distilled water plant	**HAEMATOLOGY AND FLOW CYTO METERY:**	2
22	PH meter	**HAEMATOLOGY AND FLOW CYTO METERY:**	2
23	Incubator	**HAEMATOLOGY AND FLOW CYTO METERY:**	2
24	Refrigerator	**HAEMATOLOGY AND FLOW CYTO METERY:**	2
18	**CLINICAL BIOCHEMISTRY**		
25	Centrifuge Machine with 36 tubes at RPM 10000	**CLINICAL BIOCHEMISTRY**	1
26	Hot Air Oven	**CLINICAL BIOCHEMISTRY**	2
27	BOD Incubator	**CLINICAL BIOCHEMISTRY**	2
28	Electronic Balance (1 mg - 10mg)	**CLINICAL BIOCHEMISTRY**	2
29	PH Meter- LCD Display range 0-14	**CLINICAL BIOCHEMISTRY**	4
30	Constant Temperature Water Bath (30 to 100 Deg C)	**CLINICAL**	1

		BIOCHEMISTRY	
19	**Blood Bank**		
31	Electronic Balance - Chemical	**Blood Bank**	1
32	Plasma Separation Stands	**Blood Bank**	1
33	Micropipette Sets	**Blood Bank**	1
34	Multi Channel Pipette	**Blood Bank**	1
35	VDRL Shaker	**Blood Bank**	1
36	Haemoglobinometer (Instant)	**Blood Bank**	1
37	Colorimeter (Computerized)	**Blood Bank**	1
38	Binocular Microscope	**Blood Bank**	1

Part II: Required Delivery Schedule:

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

60 days from date of Notification of Award except, for MRI, CT Scan, DR System, DRF System, DSA, Gamma Knife, Gamma Camera, PET CT, Cath Lab. for which the delivery period will be 90 days from date of Notification of Award. 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:

60 days from date of opening of L/C except, for MRI, CT Scan, DR System, DRF System, DSA, Gamma Knife, Gamma Camera, PET CT, Cath Lab. for which the delivery period will be 90 days from date of opening of L/C. The date of delivery will be the date of Bill of Lading/Airway Bill. (Tenderers may quote earliest delivery period).

c) Installation & commissioning within 15 days of receipt of goods at site except for MRI, CT Scan, DR System, DRF System, DSA, Gamma Knife, Gamma Camera, PET CT, Cath Lab. for which installation & commissioning to be done within 60 days of receipt of goods at site.

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

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

Part III: Scope of Incidental Services:

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

Part IV:

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

Part V:

Warranty & Comprehensive Maintenance Contract (CMC) as per bid document.

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 Consignee site basis. The shipping arrangements shall be made by the supplier accordingly.

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.

Consignee/destination details as mentioned in Section-XXI.

Turnkey Works:

The Tenderer shall examine the existing site where the equipment is to be installed to assess the site condition for Equipment placement and installation. Whether the scope of Turnkey Works is mentioned in the Technical Specifications or not, the bidder's offer should be on a "Turn Key" basis including all costs associated with the supply, installation and commissioning of the equipment.

For equipment, the major Turnkey work to be carried out 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 Hospital / Institution/Medical College. The Turnkey costs to be quoted 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 rules and regulations of Government of Mauritius, if any.

Bidders must take into consideration in its bid, the costs to be incurred for any additional work pertaining to civil, Electrical, Plumbing, sanitary, HVAC, IT requirements, Radiation protection as per rules and regulations of Government of Mauritius, furniture, servo stabilizers, U.P.S. etc. required for successful installation testing and commissioning of the Medical Equipment and the "All inclusive lump sum price" should include all such costs, each **schedule/package** is to be considered a package in itself and suppliers to execute the order package on a "turn key basis" including all civil, electrical, air – conditioning & allied requirement for the equipment, at the site.

For X-Ray and related equipment, bidders who have Type Approval/NOC of as per rules and regulations of Government of Mauritius**/concerned regulatory authorities wherever applicable** shall only be considered with documentary evidence. It shall be bidder's responsibility to get the equipment installed and commissioned as per rules and regulations of Government of Mauritius and installed and commission on "Turn Key basis".
Bidders must take into consideration in its bid the costs to be incurred for any additional work viz. Electrical cabling, plugs of suitable ratings from the source, Electrical points of suitable ratings, water connection, water drainage, plumbing, air-conditioning, Radiation protection/shielding, mechanical & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the quoted "All inclusive lump sum price" should include all such costs.

Section – VII
Technical Specifications

INTENSIVE CARE UNIT

1. ICU VENTILATOR

Tender Specification
The ventilator should be microprocessor based and work with hospital external high pressure line/ external compressor to be used in ICU for Adult, Paediatric and infant patients. It should be easy to use having a color inbuilt touch screen at least 12 inch or more in size with screen lock, intuitive menu structure, inbuilt ETCO2 monitoring , Mode preset capability, Pressure bar graph/ breath indicator and prioritized alarms alongwith the following settings/ features :-
Ventilation Mode
Volume Controlled ventilation (Assisted / Control) VCV
Pressure Controlled ventilation (Assisted / Control) PCV
Synchronized intermittent mandatory Ventilation V-SIMV AND P-SIMV
Pressure support ventilation (Spont, CPAP, PEEP) PSV
Non invasive ventilation VCV, PCV, SIMV, PSV
Pressure support with Volume assured (VAPS) /MMV/Auto model /intelligent ASV
Airway pressure release ventilation APRV/BI-PHASIC VENTILATION/BIPAP
Pressure regulated volume control PRVC /Auto flow
Continuous positive airway pressure CPAP
Ventilation Settings & Ranges
Tidal Volume
Inspiratory Peak Flow - 0 to 200 LPM (Compensated)
Maximum Inspiratory Peak Flow - > 200 l/min
(Depending on gas supply pressure)
Respiratory Rate - upto 100 BPM
SIMV Respiratory Rate - 1 to 60 BPM
Inspiratory plataeu - 0 to 60 % of IT
FiO2
Insp pause, Exp Pause, sustained exhalation,
Inspiratory Trigger (pressure and flow trigger)
Complete system including air compressor , trolley and hinged are should be from same manufacturer.
Monitored Parameters
Respiratory Phase & Type, Respiratory Rate, Exhaled Tidal Volume, Exhaled Min. Volume Total, I : E : Ratio, Peak Inspiratory Pressure, Average Pressure, Plateau Pressure , End Expiratory Pressure, % Oxygen Delivered, f/Vt (RSBI), etCo2(End tidal Co2)
Respiratory Mechanics Maneuvers

Static Compliance and Resistance
Low Inflation flow (LIP) and upper inflection point (UIP)
P 0.1 and Maximum Inspiratory Pressure
Displayed Trends Values for 48 hours at least
Graphics Module with
Scalars
Flow vs. Time
Pressure vs. Time
Adjustable Time Scale.
Loops
Flow / Volume
Pressure / Volume
Pressure/flow the screen should display atleast 3 loops/ curves
Facility for Freeze Screen
Individual Analysis of Each Curve
Loop Save and Overlay Function
Individual Analysis of Each Loop
Calculated Values
Inspiratory pause, Expiratory Pause
Should have audio-visual alarms alongwith appropriate message for
Inspiratory pressure (High), circuit, FiO2 (High/Low), Resp Rate, Tidal volume, minute ventilation, gas failure, apnea+ The ventilator should have built-in programmable nebulizer.
AC Power & Battery Indicators
Loss of AC Power Charging, in Use ,Low Main Battery in Use ,Should have atleast one hour built in back-up
Self Test / Self Diagnosis
Quick Self Test and Extended Self Test
Interface Port
RS - 232 Outputs and Remote Communication + Ventilator should be EUROPEAN CE/FDA APPROVED. The manufacturing origin should be EUROPEAN/US.
Scope of supply
Ventilator -–01No
Air supply unit -01No (Optional)
Patient Tubing (adult) -–02 Nos / Unit
Patient Tubing (paed) -–02 Nos / Unit
Nebuliser Kit--05 Nos / Ventilator
NIV Mask with harness (Reusable)-- 02 Nos / Ventilator
Humidifier (F&P 810) with chamber-- 01 No / Ventilator
Bacteriological filters-- 10 Nos / Ventilator
OPTIONAL ITEMS
1. ETCO2 cable with accessories
2. Nebulaizer (<3 micron particle)
3. Air compressor from the same manufacturer with change over facility and it should be European CE / US FDA certified

1. NON-INVASIVE VENTILATOR

1. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%
a. IPAP: 4 to 25 cm
b. EPAP: 4 to 25 cm
c. Breath rate: upto 30 BPM with spontaneous for time mode
d. Timed inspiration: 0.5 to 3.0 sec
e. Rise Time: 150 to 600 msec
2. Mode:- CPAP with PS, Biphasic pressure control, apnea backup
3. System with leakage compensation.
4. System should be supplied with all reusable accessories
5. Power input to be 220-240VAC, 50Hz fitted with Indian plug
6. UPS of suitable rating with voltage regulation, spike protection and maintenance free batteries or internal battery with 60 minutes back up
7. Should be USFDA or European CE approved product..

3.MULTIPARA MONITOR (24 Nos.) WITH CENTRAL NURSING STATION 2 Nos TRANSPORT MONITOR (1 No)

Tender Specification
1.1. Central station for bedside monitors with independently controlled. 21" multi-color TFT Monitor Medical Grade, complete with Ethernet LAN cabling, alarm management, full disclosure of all the waveforms for 72 hours trending, bed to bed viewing of waveforms and remote alarm management like silencing of alarms etc. Central station should be valid USFDA approved with certification.
1.2 Central Station to have capability to display atleast 16 beds Equipment Specifications for Complete Monitoring System
2. Description of Function
2.1 Critical patients need to be monitored continuously in ICU and bedside with central monitors
3. Operational Requirements
3.1 ICU should comprise of modular monitors at the bedside and with central station.
3.2 Capability of storage of patient data
3.3 Demonstration of the equipment is a must.
3.4. Technical Specifications
3.5 Multi colored TFT/LCD display of sizes as specified.
3.6 Eight digital and waveforms/traces display
3.7 Combination of single, dual and multi parameter modules.
3.8 Parameter modules freely exchangeable between all the monitors.
3.9 Multi-channel ST segment analysis.
3.10 Facility to monitor and display ECG, Respiration, NIBP, SPO2(Masimo technology), Temp. 2 channel
3.11 Monitor should have 12-lead ECG Monitoring capability simultaneously.
3.12 Automatic arrhythmia detection & alarm for standard and lethal arrhythmia.
3.13 EtCO2 – Side stream/main stream. Display both inspired and expired values, showing capnography
3.14 Should provide hemodynamic, oxygenation, Ventilation calculation package.
3.15 Should have drug calculation package.
3.16 Trend of at least 72 hours for 19”& 21 Monitors, 24 hours trending for 15”monitor.
3.17 Monitors should be HL7 compatible.
3.18 Minimum 50 nos. event recall/snapshot facility automatically triggered by alarm.
3.19 EEG, BIS, NMT,3 additional IBP's- modules to be offered as per the nos. specified which help clinicians in guiding fluid management.
3.20.Web browsing facility to review each network monitors data through hospital LAN via office PC in Hospital LAN Network and / or through dial up facility from remote location.
3.21. The monitors should have monitor-to monitor overview facility
3.22. Deleted
3.23. System should be complete with Computer System, UPS with 1 hour back-up & Laser Printer for each Central
Station.
3.24. The system offered should not be PC based.
3.25 System including Modules should be valid USFDA approved with certification.
No. of Central Stations with 60 displays & facility to support dual screen (Minimum

21") **No. of Monitor Minimum – 19''inch**
3.26 List of additional Modules to be provide in 19" Monitors
Three IBP
Cardiac output
End tidal CO2
NMT
EEG
BIS
All the above modules should be campatible with 19" Monitors.
3.25 Accessories
ECG Module (5 lead ECG cable- 2 sets per monitor, 6/10 lead ECG cable-1 set per monitor)
SpO2 Probe complete set (2 for Adult, 1 for Pediatric, 1 for neonatal)
NIBP cuff complete set (3 per monitor for adult, 2 for pediatric, 1 for neonatal)
End tidal CO2 (Adult & Ped. kit 01 per Monitor & Disposables sample lines– 50 tubing per monitor)
IBP Reusable Interface Cable (3 per monitor) Disposable pressure transducer kit (10 per monitor)
Two Temperature (Rectal/ esophageal & skin probes per monitor)
BIS Sensors - 20no. For each module
Accessories for Cardiac Output: One set for each monitor
NMT Monitoring Set
EEG Monitoring set for each monitor
4.0 General Specifications
4.01 Comparative compliance statement to be provided, mentioning page and para in the catalogue.
4.02 Undertaking that Local after sales Service will be provided round the clock
4.03 Undertaking from Principal that after sales service, spares & accessories will be provided for minimum 10 years after installation.
4.05 All installation and cabling to be done on turn key basis and cost to be borne by the bidder.
4.06 Bidder to inspect the site of installation before quoting, to confirm the site of wall mounts and length of cables to be installed.
4.07. Service and user manual in English
5. Environmental factors: No interference with use of electrocautry
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 deg C and relative humidity of 15-90%.
Shall meet valid IEC-60601-1-2: 2001general Requirements of Safety for Electromagnetic Compatibility.
6. Power Supply
6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particular requirements for the safety of electrocardiographic monitoring equipment

EQUIPMENT SPECIFICATIONS FOR TRANSPORT MONITOR

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Transport Monitor is required to monitor vital parameters of patients during transportation to and from OT; Emergency; Trauma ambulances etc.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Transport monitor should be portable and light weight and should monitor vital parameters of patients.		
2.2	Capability of storage of patient data and printing of patient reports.		
2.3	Capability to integrate with the HIS and transfer the data through LAN / Wireless LAN to any other monitoring room / doctors desk. Should be HL-7 compatible for transmitting and receiving data to/fro LAN/HIS(OPTIONAL)		
2.4	Demonstration of the quoted equipment is a must		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Portable and Light weight preferably <10kg		
3.2	Modular with 12 inch multi colour TFT display		
3.3	Monitoring parameters;- ECG, respiration,NIBP,SaO2 and temperature		
3.4	Digital and 6 waves / traces display		
3.5	Monitor should have audible and visual alarms capability. Alarms should have three distinct audible alarm tones to distinguish alarm levels as under. Also monitor should permit automatic viewing of alarming parameter waveform and numeric from any bedside in alarm as and when connected in a network.		
3.6	Should include hemodynamics calculations and vital		

	sign and graphic trends. Trends should be automatically stored for at least 24 hours in at least one minute intervals.		
3.7	Numeric monitored data shall be viewable and recordable in a patient chart type format in at least 1, 5, 15, 60 minutes intervals.		
3.8	Convenient handle for carrying the same		
3.9	Able to fix with bed/trolley.		
3.10	OPTION NETWORKING AND REMOTE ACCESS 1.Remote access of patient data -should have facility of accessing patient data including waveforms and numeric remotely in Hospital or at Consultants residence through hardwired LAN connection or through modem. 2.Should also offer viewing station for viewing this data as optional item. 3.Should be upgradeable. 4.Should be able to review DICOM images from PACS. On the bedside or the central station. 5. Web browsing facility to review each networked monitors data through hospital LAN via office PC in Hospital LAN network and/or through dial up facility from remote location. 6. To provide HL 7 compatible server for sending information from the monitoring network to Hospital Information System, Laboratory information etc for integration of various information		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Transport Monitor-01		
4.2	Patient cables(5lead) -01		
4.3	Adult Cuff - 01		
4.4	Paediatric Cuff -01		
4.5	Adult Probe SPO2 -02		
4.6	Paediatric Probe SPO2 -02		
4.7	Skin Temp Probe -02		
4.8	11.Dual channel recorder -01		
4.9	13.Paper Recorder- 100 cases.		
4.10	17.Networking and remote access- (OPTIONAL)--- 01		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of operating continuously in ambient temperature of 10 -400 C and relative humidity of 15-90%		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -500 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

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Resettable overcurrent 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, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA or European CE		
7.2	Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particular requirements for the safety of electrocardiographic monitoring equipment.		
7.3	Manufacturer should have ISO certification for quality standards.		
7.4	Comprehensive warranty and AMC as per contract		

8 Documentation

Sl	Name	Technical Specs quoted	Bidders Deviation if any

		by bidder	
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 the 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.		

4. VIDEO-LARYNGOSCOPE

	Flexible Nasopharyngolaryngoscope
A.	General Specifications:
	1. Should have large viewing angle and movable distal tip for better orientation
	2. Waterproof, fully immersible for cleaning and disinfections
	3. Sterilizable with ETO gas/ low temperature sterilzier
	4. Resistant construction and robust mechanics
B	Technical Specifications:
	1. Direction of view: 0 deg.
	2.Angle of view 85 degree or more
	3. Working length 25 cm or more
	4. Outer diameter: 5.5 mm or less
	5. Instrument Channel: 2-2.5mm
	6. **Deflection upwards 130 deg or more and downward 100 deg or more**
C	The following accessories should be included:
	1. Carrying Case 1 no.
	2. Pressure compensation cap 1 no.
	3. Leakage tester 1 no.
	4. Mouth piece 1 no.
	5. Cleaning Brush 1 no.
	6. One Biopsy Forceps-
	7. One Grasping Forceps-
D	Demonstration of quoted model should be offered if desired
E	All accessories should be from the same manufacturer. Equipment should be European CE/ US FDA approved

5. SYRINGE INFUSION PUMP

1) The syringe pump should be programmable, user friendly, safe to use and should have battery backup and comprehensive alarm system.
2) Must Work on commonly available standard 5ml/10ml/20ml/50ml/60 ml Syringes with accuracy of minimum of +/- 2% or better, with automatic syringe size recognition.
3) US-FDA / European CE with 4 digit notified body number certificate or BIS Approved Product
4) Flow rate programmable from 0.1 to 1000 ml/hr or more in steps of 0.1 ml/hr with user selectable flow set rate option. SAVE last infusion rate even when the AC power is switched OFF.
5) Bolus rate should be programmable to 40 to 1000 ml/hr or more with infused volume display and one key press bolus. Reminder audio after every 1 ml delivered.
6) Display of Drug directory of more than 50 drugs, customized and adjustable.
7) Key board locking system for patient safety.
8) Keep Vein Open (KVO) must be available at 0.1 ml or set rate.
9) Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg./ atleast 3 selectable levels.
10) Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc.
11) Manual pusher with plunger protection guard.
12) Anti bolus system to reduce pressure on sudden release of occlusion.
13) Should have comprehensive ALARM package including: Occlusion limit exceed alarm. Near end of infusion pre-alarm & alarm, volume limit pre-alarm & alarm, KVO rate flow, Low battery pre- alarm and alarm, AC power failure and Drive disengaged alarm.
14) Rechargeable Battery having at least 1 hours backup for about 5ml/hr flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.
15) Mounting device / Docking Station for at least four pumps as per requirement so as to enable to power up to 4 pumps with one power cord when mounted on IV pole.
16) The unit shall be capable of stored and operating continuously in ambient temperature of 10
–50deg C and relative humidity of 15-90%
17) Power input to be 220-240VAC, 50Hz.
18) 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.
19) User Manual and service manual in English.
20) 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.
21) List of important spare parts and accessories with their part number and costing.
22) Demonstration of quoted model should be offered if desired

6. PORTABLE ULTRASOUND MACHINE

Technical Specifications for Portable Color Doppler Ultrasound System	
A state of art fully digital, compact portable Colour Doppler machine is required with following technical features :-	
01.	The equipment including transducers must be US FDA& European CE approved and capable of operating in B Mode, M Mode, Color M Mode, Color Doppler, Color Power Doppler, PW modes. It should weigh less than 10 kg including weight of integrated battery. The system should have a dockable cart with three active ports with facility for electronic switching of probes.
02	Triplex imaging should be standard on the system
03	System should be offered with a 2D frame rate of 750 /sec or more. Acquisition frame rate to be specified.
04	System must be offered with following application: Abdominal, Ob/Gyn, Renal, Small Parts, MSK, TCD imaging.
05.	It must support transducers with linear, transvaginal and curved array probes. Each Transducer quoted should be of the latest technology. Specify the technology for each probe. Matrix technology will be preferred.
06.	The system shall have broadband architecture with an operating frequency of at least 1 -15 MHz.
07.	The system shall have the ability to enhance tissue margins and improve contrast resolution by reducing artifacts. Image processing technology to reduce clutter and speckle artefact.
08	System must be offered with enhanced tissue harmonic imaging in standard configuration.
09	System must be offered with frequency compounding facility or equivalent technology.
10.	**System should possess software for Enhanced Needle Visualization to track the needle clearly at steep angles during the procedures while maintaining good image quality of the target structures and the surrounding anatomy with simple On/Off functionality. This facility should be available on both High frequency Linear and Curvilinear probes for superficial as well as deeper blocks**
11.	The system must display at a maximum depth of 30 cm and shall process a dynamic range that is at least 160db.
12.	The system shall provide the user with minimum 8 generic digital callipers.
13.	The system must have a dedicated calculation packages for all applications.
14.	The system should provide a backlit keypad with ease of use with facility to disinfect the keypad of system so that it is possible to avoid any cross contaminations & nosocomial infections in Wards/ ICU.
15.	The system should be able to go from the off status of active scanning in less than 45 seconds for critical and emergency situations.
16.	Transducer must be sturdy and resistant to breakage.
17.	The system should have an LCD screen size of more than 15 inch or more in size.
18.	The system shall have digital Video Interface (DVI), S-Video, VGA, USB and audio output with provision for storage of images and transfer to external devices.1050X1400 resolution. There should be CD/DVD writer integrated in system.
19.	The system shall have the ability to function by AC/DC or battery power with the same degree of functionality, the battery life (run time) shall be at least 45 mins.
20.	The system shall support the DICOM function with ability for storage, print

	and work list, also ready to connect PACS.
21.	On site demonstration is a must for confirming and evaluating technical features .
22**.**	**Transducers to be supplied as standard**
a	6-13 MHz multi-frequency, broadband linear array transducer for vascular, MSK and small parts. Higher frequency will be preferred.
b	2-5 MHz multi-frequency broadband curved array transducer for general abdominal and ob-gynae imaging .
c	8-5 MHz Intra-cavity transducer for obstetrical and gynaecological applications.
23 .	**Accessories**
a	B/W Thermal printer.
b	Height Adjustable trolley of the same manufacturer .

7. CARDIAC DEFIBRILLATOR

Description of Function
1. Defibrillator should use low energy biphasic waveform for delivering shock energy & must have energy selection 2-200 j and more as per AHA 2010 & 2015 guidelines in AED as well as manual mode.
2. Should have facility to do ECG monitoring from 3-5 leads , with screen size>5”
3. Must be capable of monitoring ECG through ECH cables, multiple functions electrode /pads & external paddles.
4. Unit should have adult & in built pediatric external paddles & should be able to defibrillator both adult & pediatric patients with charging time of <5 seconds.
5. Facility for increase/ decrease energy selectionon paddles as well as on the unit. Should have ECG print out facility.
6. Machine should be compact & portable with in-built rechargeable battery for at least 3 hr. of continues ECG monitoring & should be weighing less than 10 kg. With battery & paddles.
7. Defibrillator should have facility to upgrade for external pacing Spo2 & Etco2 monitoring parameters.
8. Should have user selectable alarm setting .should work on mains as well as rechargeable battery.
9. Should be supplied with following accessories:
i. 3/5 lead ECG cable – 2 Nos.
ii. External Defibrillator paddles (Ped & adult) – 1 Nos.
iii. Multi- functions defibrillator & monitoring pads- 5 Nos.
10. Should be US FDA approved product approved for use in US

8. STRESS TEST SYSTEM

A	**Description of Function**
1.1	A stress test system is used to detect ECG evidence of exercise induced arrhythmia during physical exercise.
B	**Technical Specifications**
1	System should acquire and analyze up to 12 leads
2	System should run on Window 7/ Window XP operating system and should be provided with the computer system with the following configuration: Pentium CPU with DVD, minimum 17" color monitor, minimum 250 GB Hard drive, Mouse, Keyboard and UPS for the CPU.
3	Should provide standard Full Interpretation of Supine ECG with reasoning
4	Display of real time 12 lead diagnostic quality ECG waveform, average complexes beat of all 12 leads with superimposed color comparison along with digital value of ST level and slope. It should also display of enlarged complex and should have the facility of dynamic lead selection for maximum ST changes. Display of 1mm graph on the monitor should be similar to the graph on the recording paper.
5	Automatic detection, display,storage and review of arrhythmia, Heart Rate, Double Product and METS. It should have online HR METs and ST running trends available on screen during exercise.
6	System should provide risk assessment tools like Stroke and Duke Treadmill score.
7	System should have ability to manual edit of J & Isoelectric point during exercise. Filters for line frequency and special filters to reduce noise and baseline artifacts without compromising the ECG frequency response.
8	System should have full disclosure play back, review and storage of patient ECG raw data for unlimited numbers depending upon size of the hard disk. The unit should have the ability to readjust 'J-ST' interval measurement $\pm$ 1m sec points and generate a new report from stored raw ECG data.
9	System should provide multiple and customizable printing formats as per user's choice on A-4 size high resolution thermal printer for online real time printings. It should also be possible to print reports on laser printer.
10	System must have ECG trigger output to interface with external automatic devices.
11	Should be supplied with Heavy Duty Imported Treadmill with following features:
A.	Motor of minimum 3 H.P
B.	Walking surface of minimum 60"
C.	Two Stopping Modes
D.	Emergency Stop Switch
E.	Speed ranging from 0 to 12 mph and grade of 0-20% with suitable 3 KVA stabilizer
F.	Maximum weight bearing capacity of 200kg
G.	Should be US FDA approved.

12	Should be provided with a Non invasive Blood Pressure Monitor which can be programmed to take the blood pressure automatically with each stage.
13	Final reports must be exportable from the system in Word/PDF.
14	Original product catalogs with complete technical specifications to be enclosed for main and allied equipments being offered
15	Should be provided witih Electrode fixing Clip to minimize artifacts
16	OPTIONAL
A.	Stress ECG interpretation
C	Quantity :
1	Main system including Treadmill, Computer(17") with analyzing software 2 Nos for each
2	UPS for at least 30 minutes backup: 2 Nos
3	Laser printer: 2 Nos
3	Non invasive Blood Pressure Monitor: 2 Nos
4	ECG Module: 4 Nos.
5	Patient Cable with Electrode fixing Clip: 4 Nos.
6	Good quality computer table (Durian / Godrej etc) for the system: 2 Nos
8	Pouch for ECG Module: 2 Nos.
D	**Environmental factors**
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
2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity.
3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
E	**Power Supply**
1	Power input to be 170-270 V AC, 50Hz fitted with Indian plug.
F	**Standards, Safety and Training**
1	Complete systems including Treadmill should be US FDA approved product
2	Manufacturer / Supplier should have ISO certification for quality standards.

OPERATION THEATRE / ANESTHESIA (1 No.) & RECOVERY ROOM

9. ANESTHESIA WORKSTATION

1. Anaesthesia Workstation is used for delivering anaesthesia agents to the patients during surgery. The complete unit also monitors the vital signs and ventilates the patient from neonatal to adult.
2. a) Anaesthesia Workstation complete with Anaesthesia gas delivery system.;Circle absorber system.;Precision vaporiser for halothane,isoflurane and Sevoflurane ;Anaesthesia ventilator. Monitoring system to monitor Anaesthetic gases,ECG, EtCO2, Pulse Oximeter and airway pressure,NIBP, IBP (No as required) , rectal/&skin temperature. b) Essential accessories to make the system complete
2.1 Demostration of the equipment is a must.
3. Technical Specifications
3.1 Flow management
1. Should be Compact, ergonomic & easy to use
2. Machine should provide electronic gas mixing.
3. Multi-color TFT display of at least 12” size, with virtual flow meters for O2, N2O or Air
4. Dual flow sensing capability at inhalation and exhalation ports.
5. Should have back-up O2 control which provides an independent fresh gas source and flow meter Control in case of electronic failure.
6. Gas regulators shall be of modular design/ graphic display
7. One no. yoke each for Oxygen & Nitrous Oxide. Separate Pipeline inlet for Oxygen , Nitrous Oxide and Air
8. Hypoxic Guard to ensure minimum 25% O2 across all O2-N2O mixtures and Oxygen Failure Warning.
9. Should have integrated EtCO2 monitor.
10. Should display flow, volume & pressure/volume loops.
3.2 Breathing system
2. Latex free fully autoclavable.
3. Flow sensing capability at inhalation and exhalation ports, sensor connections shall be internal to help prevent disconnect.
4. Sensor should not require daily maintenance.
5. Bag to vent switch shall be bi-stable and automatically begins mechanical\ ventilation in the ventilator position.
6. Adjustable pressure limiting valve shall be flow and pressure compensated.
3.3 Vaporizers
1. New generation Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer.
2. Vaporizer should mount to a Selectatec manifold of 2 vaporizers, which allows easy exchange between agents. Temperature, pressure and flow compensated vaporizers and Maintenance free - for Isoflurane,Halothane, and Sevoflurane
3.4 Ventilation
1. The workstation should have integrated Anesthesia Ventilator system.
2. Ventilator should have Volume Control and Pressure Controlled and SIMV modes.
3. Ventilator should have a tidal volume compensation capability to adjust for losses due to compression, compliance and leaks; and compensation for fresh gas flow.
4. The workstation should be capable of delivery of low flow anesthesia.
5. Ventilator should be capable of atleast 120-150 L/min peak flow to facilitate rapid movement through physiologic ―dead space‖ in the Pressure Control mode

6. Bypass cardiac mode
7. Tidal volume: 5ml-1400ml
3.5 1. Anesthesia Monitoring Specifications: 19” TFT Screen
a. Monitoring of vital parameters:ECG,NIBP,SPO2 and two Invasive Blood Pressure.
b. Twin temperature measurement with skin and rectal probes- Two sets with each monitor
c. Automatic identification and measurement of anesthetic agents, EtCO2, O2 and N2O and MAC value. FiO2 measurement. To be available either on M/c or monitor. It should have a paramagnetic sensor with O2 Sensor.
d. Depth of Anesthesia Monitoring module - one per monitor with 50 sensors with each monitor
e. Neuromuscular Transmission Monitoring with all accessories. One set with each monitor
f. Cardiac Output measurement facility by thermo dilution technology with all accessories- one set for three monitors.
g. 24hrs of graphical and numerical trending
h. Should have Hemodynamic, Oxygenation and Ventilation calculation package. Should also have Ventilation Data available on monitor.
i. Should include inbuilt Anaesthesia record keeping software facility in all OT monitor to document anesthesia event using standardized menu based entries.
j. Facility to store snapshots during critical events for waveform review at a later stage
k. Audio visual and graded alarming system
l. Monitor should be USFDA approved
2. Display of Ventilator:
a. Tidal volume (VT)
b. Inspiratory/expiratory ratio (I:E)
c. Inspiratory pressure (Pinspired)
d. Pressure limit (Plimit)
e. Positive End Expiratory Pressure (PEEP)
3.6 Centralised Monitoring and Networking:
Web Browsing feature for browsing near real time waveforms and graphical & numerical trend upto 24hrs remotely through telephone dial in facility. Compatible with HIS system of the hospital.
3.7 Automatic Recording System
4. System Configuration Accessories, spares and consumables
4.1 Anaesthesia Gas Delivery system -01
4.2 Circle absorber -01
4.3 Ventilator -01
4.4 Monitor -01
4.5 Vaporiser Halothane -01
4.6 Vaporiser Sevoflurane -01
4.7 Vaporiser Isoflurane -01 & Vaporizer Desflurane -01
4.8 Adult and Paediatric autoclavable silicone breathing circuits -02 ea
4.9 Reusable IBP Transducer -04. Reusable IBP cables -04. Disposable Transducers -100
4.10 Disposable domes-100
4.11 Temp probe Skin reusable- 02
4.12 Temp probe Rectal Reusable-02

4.13 Accessories Anesthetic gases-01 set
4.14 Depth of Anesthesia Sensors-100 adult & 100 pediatric
4.15 Accessories for Cardiac Output module- 01 set
4.16 Accessories for neuromuscular transmission monitor- 01 set
4.17 Standard accessories to make all parameters working- 01 set
4.18 Disposable Adult & Paediatric circuits- 100 ea.
4.19 HME filters.- 100
4.20 Vital Parametrer Accessories-01 Set
4.21 Nellcor/Masimo SpO2, Adult, Ped., Neonatal Sensor-2each
4.22 NIBP/Adult, Ped., Neonatal Cuff – 2 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%
5.3 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.4 Safe disposal system of waste anaesthetic gases should be either in place or should be recommended along with the bid if not available. Supplier will be held responsible if this is not ensured at the time of installation.
6. Power Supply
6.1 Power input to be 220-240VAC, 50Hz,/440 V 3 Phase as appropriate fitted with Indian plug
6.2 Resettable over current breaker shall be fitted for protection
6.3 Suitable Servo controlled Stabilizer/CVT
6.4 UPS of suitable rating shall be supplied for minimum 1 hour backup for the entire system
7. Standards, Safety and Training
7.1 Should be US FDA or European CE approved product
7.2 Electrical safety conforms to standards for electrical safety IEC-60601 /IS-13450
7.3 Manufacturer should be ISO certified for quality standards.
7.4 Certified to be compliant with IEC 60601-2-13-Medical Electrical equipment part 213: Particular requirements for the safety of Anaesthesia Workstations

10. OPERATION TABLE

	Operations Table for GENERAL SURGERIES.
1	It should be a mobile universal electric /electro-hydraulic operating table with 5 section table top. Having specialized accessories for General Surgeries. The table should be hundred percent oil free
2	Should have st. steel column with integrated table top, all powered motorized movements including Trendelenburg / Anti-Trendelenburg / Lateral Tilt / Back Section / Back Lift for sitting position must happen with electric / electro-hydraulic drives.
3	**Deleted**
4	Should have removable and interchangeable head and leg sections with an auto-locking mechanism to suit different functions and orientation identifiable by handset
5	The system should be modular and should have mechanically encoded coupling joints.
6	The system should have electrical and functional impact prevention safety with microprocessor and linear and angular position sensors avoid collisions between the motorized sections and the table or the floor
7	Table should be equipped with a motorized table top slide of approx. 300-400mm or more
8	All table positions height, lateral tilt, back, trendelnburg, reverse trendelenburg and zero leveling, longitudinal sliding, table base locking and unlocking should be electro-hydraulically operated using a touch switches on hand held controller. It should also indicate the patient orientation as reverse / normal.
9	Should have automatic 0 (Horizontal) position switch on hand held controller.
10	The table should be equipped with both electronic override control panel embedded in the centre column body offering all the controls as in the hand held controller. Should also have manual back- up from foot operated system
11	Table top reconfiguration should be quick and uncomplicated. Should have head rest with gas spring, double articulation type up/down -45 / +45 degree and pair of Split LEGwith Abduction facility and leg section up/down* -90/ + 90 deg.
12	Should have latest Cordless Bluetooth Hand Control for all Powered motorized / electro-hydraulic movements.Should also have min. two to maximum six memory position selectable by surgeon for pre-determined table positions e.g. Beach Chair
13	Fully charged 2x sealed gelified-lead 12V batteries should be sufficient for full week operative schedule. The centre column panel/base hand held controller should indicate the charging status and table battery status. Should be operational while batteries being recharged
14	The table should have heavy duty minimum antistatic large swivel castors with central hydraulic locking.
15	The table top should be made up of scratch-less X-Ray C-Arm translucent material and should provide full access for C-arm permitting high quality images and should allow easy X-ray with cassette holder bracket through the entire length of table

16	Should be Radiolucent no metallic cross links between the bars. Table top frame, coupling points and standard rails should be resistant to disinfectant agents and constructed with easy-to-clean St. Steel.
17	The base column should have cover of stainless steel and should prevent the ingress of fluid protection by PVC bellows
18	Should have moulded, antistatic with no seams, Polyurethane foam Mattress with easy to fix Velcro system to stop slippage. Mattress must be Latex free.
19	Table electronics should allow table to be connected remotely for diagnostics and maintenance service saving time for productive surgery
20	Should have safe patient weight load capacity of at least 250kg or more in all position. The stationary patient weight capacity should be 350kg or more. The literature should support both types of weight capacities.
21	The table should have additionally a foot operated controls unit for Trendelenburg / Antitrendlenburg, tilt and height
	Table SPECIFICATIONS: + 5% deviation is allowed
a	Height adjustment: min. 580-680 mm, max. 1000-1200 mm
b	Side tilt: min, 18-20 degree
c	Back (seat) section adjustment: -40 degree to + 80 degree
d	Trendelenburg adjustment : 30-40 degree
e	Reverse Trendelenburg adjustment : 25-40 degree
f	Max. width : Min. 520-580 mm with rails
g	Overall length : 200-220 cm
h	Motorized Longitudinal slide of 250-300mm
i	Flex / reflex: 220 degree /120 degree
j	Kidney break /bridge elevation > 4inches
k	Power input to be 220-240 VAC, 50 Hz fitted with Indian plug
	SET of accessories from same source as table:
i	Arm positioning support with radiolucent pad and clamps – One pair
ii	Shoulder supports with Clamps-One pair
iii	Anesthesia Screen – 1 no.
iv	Infusion pole – 1 no.
v	Body strap with locking Clamps – 2nos. (One Large and One Extra large)
vi	Raised arm Support - One
vii	Simple Lateral support with rectangular rubber pads-One pair
viii	Lithotomy Goepel Leg Support with Ball socket joint movement – One pair
ix	Adjustable instrument st. steel table, bridge shaped with clamp- One
x	Head Gel Pad ring- 1nos. – adult and pediatric each.
xi	Set of Visco / Gel 3D pads for supporting: Chest flat Roll, Sacral pad, heels pads (Pair) – each.
xii	The quoted equipment should be having US-FDA/ European CE Certification. approval.

11. VIDEO FIBER OPTIC ENDOSCOPE ADULT & PAEDIATRIC

Sno	**Tender Specifications**
	The flexible Fiberoptic Bronchoscope should be supplied complete with light source and trolley and minimum 17" LCD Monitor
	Adult Scope:
1	Field of View should be 120 degree or more
2	Depth of field should be 3 – 50 mm or better
3	Distal end diameter should be 5.2 mm or less
4	Insertion tube diameter should be 5.2 mm or less
5	Channel diameter should be 2.0 mm or more
6	Working length should be 600 mm or more
7	Total length should be 850 mm or more
8	UP and DOWN Angulations should be 140 degree and 130 degree or better
9	Can be fully immersed in disinfectant solution and water
10	Should be European CE with 4 digit notified body number/US FDA approved.
	Paediatric Scope:
1	Should be 90 degree or more
2	Depth of field should be 3 – 50 mm or better
3	Distal end diameter should be 3.1mm or less
4	Insertion tube diameter should be 3.1 mm or less
5	Channel diameter should be 1.2 mm or more
6	Should be light weight and easy to use
7	Working length should be 600 mm or more
8	Total length should be 850 mm or more
9	Can be fully immersed in disinfectant solution and water
10	Should be European CE with 4 digit notified body number/US FDA approved.
	_
	Video Processor & Light source
1	Outputs - suitable video output
2	Unit should be compact and light weight.
3	Light source - Combined or separate LED or Xenon (covered under warranty)
4	Lamp can be turned on/off without turning off the equipment.
5	Video Processor & Light source Electronic magnification up to 1.2X Or more

6	Should be European CE with 4 digit notified body number/US FDA /BIS approved for the quoted model
	Monitor
1	17 inches or more LCD/LED HD Monitor of Medical Grade. It should be mountable on trolley.
2	Computer with Software
3	Should be supplied with suitable computer system with facility for recording images and video.
	Trolley
	Suitable Trolley to mount monitor, scopes, light source and all accessories.

12. PERIPHERAL NERVE STIMULATOR

SN	Peripheral Nerve
1	Should be suitable to identify peripheral nerves and giving percutaneous stimulation in neuron
2	Should have a percutaneous monopolar/ bipolar stimulating handle for localization of nerves
3	Stimulation current:1-5 mA
4	Stimulation voltage: 95 V max
5	Stimulation frequency: 1 Hz / 2 Hz
6	Impedance measuring range: 1 kΩ – 90 kΩ for target stimulation current > 0.5 mA
7	Stimulus duration: 0.05 ms – 0.10 ms – 0.30 ms – 0.50 ms – 1.00 ms ±1%
8	Weight: 300gm or less
9	Should continuously measure & display actual current passing through the patient and selected
10	Should automatically switch off with a acoustic warning if not operated more than 10 minutes .
11	Should have LCD display for stimulation current/voltage.
12	Machine should be USFDA/European CE with four digit notified body number certified
	Should be supplied complete with
	Plexus Cannula with Thin polymer insulation coating (Teflon coating not desirable) of Length

	BOQ	Qty	UOM
1	Nerve Stimulator as per specification	1	No
2	Plexus Cannula with Thin polymer insulation coating (Teflon coating not	10	No
3	Plexus Cannula with Thin polymer insulation coating (Teflon coating not	10	No
4	Plexus Cannula with Thin polymer insulation coating (Teflon coating not	10	No
5	Needles for continuous plexus block of different sizes (total 10 nos.)	1	set

13. BASIC SURGICAL INSTRUMENT SET SPECIFICATION

1. FORSTER SPONGE HOLDER 18 CMS - **2NOS**
2. BERGMANN SPONGE FORCEPS 24CM - **2NOS**
3. CRILE WOOD NEEDLE HOLDER15 CM- **2NOS**
4. HALSTED MOSQUITO HAEMOSTATIC FORCEPS CURVED 12 CM- **04NOS**
5. HALSTED MOSQUITO HAEMOSTATIC FORCEPS STRAIGHT 12.5 CM - **04NOS**
6. HALSTED MOSQUITO HAEMOSTATIC FORCEPS CURVED 14 CM -**2 NOS**
7. ALLIS TISSUE GRASPING FORCEPS 15.5 CM – **4NOS**
8. BABCOCK TISSUE GRASPING FORCEPS 15.5 CM - **3NOS**
9. BACKHAUS TOWEL CLAMPS 13CM - **5NOS**
10. KIDNEY DISH170X100X35MM - **2NOS**
11. KIDNEY DISH250X140X40 MM - **1NOS**
12. SCALPEL NO 3 - 0**2**
13. SCALPEL NO 4 - 0**2**
14. SCALPEL NO 7 - 0**2**
15. METZENBAUM DISSECTING SCISSOR CURVED 11.5 CM - 0**2**
16. METZENBAUM DISSECTING SCISSOR CURVED 15.5 CM - 0**1**
17. METZENBAUM -NELSON DISSECTING SCISSOR 20.5 CM - 0**1**
18. MAYO DISSECTING SCISSOR STRAIGHT 14.5 CM - 0**1**
19. DISSECTING FORCEPS 14.5 CM - 0**2**
20. DISSECTING FORCEPS 18 CM - 0**2**
21. ROBERT'S ARTERY FORCEPS CURVED, 23 CM- 03
22. RIGHT ANGLED MIXTER FORCEPS 6 INCH- 02
23. RIGHT ANGLED MIXTER FORCEPS 9 INCH- 01
24. ADSON DISSECTING FORCEPS 15 CM - 0**2**
25. TISSUE FORCEPS (SINGLE TOOTHED)13CM - 0**4**
26. TISSUE FORCEPS (MULTIPLE TOOTHED)14.5 CM -**02**
27. TISSUE FORCEPS (MULTIPLE TOOTHED)18 CM - **01**
28. LISTER SINUS FORCEPS 16 CM - **01**
29. DESJARDINS GALL STONE FORCEPS 23 CM - **01**
30. BAKES GALL DUCT DILATOR TIP SIZE 1 TO 13 MM COMPLETE SET - **01**
31. GIL-VERNET SADDLE HOOK 24 CM ,(BREADTH6MM) - **04**
32. HUMBY'S KNIFE - **01**
33. GIL-VERNET SADDLE HOOK 24 CM ,(BREADTH15MM) - **03**
34. LANGENBECK MINI RETRACTOR 16 CM (TIP21X8MM) - **04**
35. LANGENBECK RETRACTOR 22 CM (TIP 50X11MM) - **02**
36. LANGENBECK RETRACTOR 22.5 CM (TIP 85X15MM)- **02**
37. HARINGTON RETRACTOR 32.5CM (TIP137X44MM) - **01**
38. HARINGTON RETRACTOR 32.5CM (TIP137X65MM) - **01**
39. DEAVER RETRACTOR 18CM (TIP 19MM) - **01**
40. DEAVER RETRACTOR 30.5CM (TIP 25MM) - **02**
41. DEAVER RETRACTOR 31.5CM (TIP 50MM) **- 02**
42. CZERNY RETRACTOR 17.2 CM - 02
43. MORRIS RETRACTAR 25CM,(BLADE 7X4 CM) - **01**
44. BALFOUR -STANDARD ABDOMINAL RETRACTOR 20CM - **01**
45. KELLY DISSECTING AND LIGATURE FORCEPS 18.5CM - **02**
46. KELLY DISSECTING AND LIGATURE FORCEPS 21.5CM - **01**
47. FRAZIER SUCTION CANNULA 19.5 CMS, 5MM DIA - **01**
48. MAYO SAFETY PIN 14 CMS - **02**
49. WIRE CUTTER 23 CMS - **01**
50. FISTULA PROBE WITH EYE AND MALLEABLE - **0 1**

51. KELLY PROCTOSCOPE 25X75MM -**02**
52. KELLY PROCTOSCOPE 21X50MM - **02**
53. JACKSON RECTAL BIOPSY FORCEPS - **02**
54. VAN BUREN URETHRAL SOUND 27 CM COMPLETE SET - **01**
55. HEGAR DILATOR ALL SIZE (ONE SET) 18.5 C M - **01**
56. GUYON CATHETER INTRODUCER 40 CM **-** **01**
57. SATTERLEE AMPUTATION SAW 29CM - **02**
58. GIGLI WIRE WITH SAW HANDLE WIRE LENGTH 50 CM - 10
59. SKIN HOOKS DOUBLE PRONGED -**02**
60. DOYEN'S MOUTH GAG - **01**
61. DOYEN'S RETRACTOR 24-26CM, BLADE 6-7 X 8-9CM - **01**
62. LANDON RETRACTOR, 19-21CM, BLADE 8-9 X 2-2.5CM - **01**
63. LANE TISSUE FORCEPS 18-20CM - **01**
64. LIGATURE SCISSORS, 15-18CM - **03**
65. SKIN HOOKS 16 CM / 6 AND 2/8", SHARP TIP, - **02**
66. FRAZIER SUCTION CANNULA 19.5 CMS, 2MM DIA- **02**
67. COBBS DISSECTOR STRAIGHT 15CM,22.5CM - **04**
68. COBBS DISSECTOR CURVED 15CM,22.5CM – **04**
69. METAL BOWL 128X55MM - **02**
70. METAL BOWL 160X65MM - **01**
71. INSTRUMENT CONTAINER 60X30X16 CM - **01**
72. INSTRUMENT TRAY 480 X 250 X 94 MM- 01
73. INSTRUMENT TRAY RECTANGULAR WITH LID 15X12 INCH - **1**
74. METAL DRUMS (LARGE) 15X12 IN - **03**
75. METAL DRUMS 11X9 IN - **02**
76. CHEATLE'S FORCEP - **04**
77. FEMALE METAL CATHETER NO. 14 - **01**
78. FEMALE METAL CATHETER NO. 12 - **01**
79. SIMS BIVALVE SPECULUM MEDIUM - **01**
80. VAN DOREN CERVICAL PUNCH BIOPSY FORCEPS WITH RACHET - **02**
1. All instruments & containers should be from the same manufacturer
2. Should have US FDA or European CE with four digit notified body number certificates and certificate to be submitted
3. All items quoted should be autoclavable & reusable

14. PORTABLE VENTILATOR

Portable Ventilator
Should be microprocessor based Portable Ventilator for use in Emergency Transport/ Intra Hospital Transport purpose. It can be used from infant to adult patients.
It should be less than 7 Kgs. It should have in built source of compressor and work with high pressure hospital pipe line/cylinders for variable Fio2.
It should have volume control and pressure control ventilation with following modes. VCV and AVCV, PCV and APCV, SIMV-(volume) with PS, SIMV-(pressure) with PS, PSV, CPAP, Bipap/Bi –phasic ventilation, Non-invasive ventilation in VCV,PCV,SIMV,CPAP,BIPAP
It should have the following setting parameters:
Tidal volume 20 to 2000 mL
Frequency 1 to 60 bpm
PEEP up to 20 cmH2O or more
FiO2 40 to 100%
I: E ratio 1:4 to 4:1
Inspiratory time 0.25 to 5 s
Inspiratory flow trigger OFF, 0.5 to 10 l/min
Inspiratory pressure 5 to 60 cmH2O
Rise time Adjustable
Peak Flow 2 to 100 l/min in volumetric mode
Up to 230 1/ min in spontaneous mode
Inspiratory pause minimum 6 sec
Expiratory pause minimum 6 sec
It should have the following audio and visual alarms :
High pressure, Tidal Volume (low/high), Minute volume (low/high), Frequency (low/ high), FiO2 (low/ high) disconnection, power supply failure, battery.
It should have user configurable Apnea /backup ventilator settings
It should have the following measured parameters:
Minute volume (insp & Exp), Tidal Volume (Insp & Exp)
Frequency (f)
Peak airway pressure
Positive expiratory pressure (PEEP)
Mean airways pressure
Plateau Pressure
Leak index
Ti/Ttot
I: E ratio
FiO2

etCO2 (preferable)
It should have built in battery backup at least for 4 hours or more.
It should have built in colour touch screen not lesser than 5 inches
It should have graphics-pressure, flow and volume curves and CO2 Curve (preferable)
It should have trending facility for vital parameters
It should be European CE and US FDA.
It should have drop test certificate.
Scope of supply per ventilator.
1. Patient tubing - 1 No. each(Adult & paediatric)
2. Trolley - 1 from OEM (orig equip manuf)
3. etCo2 probes - 1 No (preferable)
4. Mask - 1 Set (Paediatric, Adult)
5. Arm set - 1 No.
6. Connection for high pressure Oxygen pipe line/Cylinders.
Rates to be quoted for spares, consummables which are not covered under the warranty, CMC.
Circuits: Pediatric, Adult :(Silicon material) – 2 each
Test lung: Infant, Pediatric, Adult
Company should do the demo as and when required.
It should have integrated bed rail/trolley mounting facility
It is hereby certified that these specifications are general in nature and not favouring any particular company.

RADIOLOGY AND IMAGING

15. CT 256 Slice

Sr. No.	Specification as per tender
	The system quoted should be latest state of art top of the line with the features of latest RSNA (2014 or later) release. The system to be of 128 or more physical rows of detectors with dual energy application. The scanner should be capable of comprehensive whole body imaging including cardiac, abdomen, neuro and vascular imaging applications, true isotropic volume acquisition. It should also be capable of 3-D reconstructions at fast speeds, quantitative calcium scoring in the vessels using all documented quantification algorithms, 3-D image display during acquisition on-line as well as real time, 3-D vessel imaging with feasibility for volume rendering.
	Please note that if new technological developments occur and an upgraded system becomes available between the notification of this tender and the time of finalization of the bid, then the newer upgraded version shall be supplied at the rates quoted. The RPA compliance for the equipment and its installation would be the responsibility of the supplier.
A.	**Gantry:**
	a. The CT Scanner should have low Voltage Slip Rings incorporated in the Gantry
	b. The Minimum scan time for a 360 Degree rotation should be less than or equal to 0.35 seconds.
	d. The gantry should be provided with User control panels on either side for easy positioning.
	d. The sub millimetre Slice @ 0.63 mm or less in 128 rows or more of detector with 256 or more acquisitions should be available. The system should be in position to perform256 acquisition Slices/ Rotation for general, cardiac/vascular applications. (Specify the submillimetre slice thickness in millimetres)
	f. The Gantry should have 3D Positioning Laser lights.
	g. The Scan field of view (FOV) in acquisition mode should be at least from 200 mm to 500 mm with intermediate Steps for scanning different anatomies.
	h. Aperture should be at least 70 cm diameter.
2.	**X ray Section:**
	a. The X ray Generator should be compact and inbuilt in the Gantry.
	b. The System X ray power should be 100 kW (actual power) and above
	c. The mA range available should be between 20 to 800 mA or more with increments in steps of not more than 10mA.
	d. The X ray Tube should be essentially Dual Focus. The heat storage capacity should be 7 MHU or equivalent. Specify the method and technique of cooling. Any special feature of the X ray tube to be highlighted with literature.
	e. Specify the focal Spots of the X ray tube.
	f. The X ray tube should have a cooling rate of not less than 1000 KHU per MIN
	g. The X ray tube Cooler Unit should be in built in the Gantry.

3.	**Detectors:**
	a. The Detector Offered should be Solid State.
	b. The 256 acquisition slice or more per Rotation should be possible. The Systems should have at least 128 Physical Rows of the detector or more.
	c. Specify the Fan Angle of the X rays and the geometry. The detectors should not require frequent calibration.
4.	**Patient Couch:**
	a. The patient table offered should have a minimum load bearing capacity of at least 200 KG.
	b. The Minimum table top height should not be more than 65cms from the floor level for easy transport of trauma patients.
	c. The Floating table top width should be at least 40 cms for better comfort.
	d. The range of metal free scan should be at least 165 cms.
	e. The vertical range should be at least 55 cms (max height — min height)
	f. Specify the reproducing accuracy of the table.
	g. Remote UP/DOWN, FWD/BWD of the Patient Couch should be standard
5.	**Topogram:**
	a) Length and width: specify range.
	b) Scan times: specify range, specify whether real-time image option available.
	c) Views: should be feasible in frontal and lateral views
	d) Should be possible to interrupt acquisition manually if necessary.
6.	**Spiral/Helical Section:**
	a. The system offered should have Spiral Capability of at least 80 seconds & above. Real Time Spiral @ 10 f/s should be standard.
	b. The range of Spiral facility in Axial Direction should be more than 100 cms.
	c. The Reconstruction Time in Spiral scan should not be more than 100 Milli seconds.
	d. The system should have the Smart Prep or equivalent facility & ability to track Contrast medium to trigger scan should be included in the scope of Supply.
	f. High Resolution scan package should be offered as standard and Specify the minimum slice thickness for which High Resolution scan package is possible.
	g. Multi Slice CT Fluoroscopy to be quoted as standard. Price should be quoted separately.
7.	**Computer Section:**
	a. The Computer offered should be the Latest Multi-tasking Processors and a menu driven platform with a RAM size of at least 4GB.
	b. The medical grade monitor should be the latest Color of at least 18 inches and flat screen. Two Monitors Independent Console preferred. The Twin Monitor system should work on either shared or Common data base.
	c. The display matrix should be at least 1024 x 1024.
	d. The reconstruction time for an Axial scan should not be more than 100 milli seconds.
	e. The Hard disk Capacity for both Image and Raw data should be more than500GB.

	f. It should have facility to store at least 250,000 Images.
	g. The system should be supported with archiving facility of DVD & CD Main Console.
	h. DICOM facility to send , store , print , receive, Query / Retrieve , MWM , MPPS etc should be standard.
	i. PC Based connectivity should be standard for easy transfer of Images & Report. The image transfer from main console to workstation should be automatic and immediate.
	j. CT should be with dual monitor console with two concurrent workstations (thin client server architecture based solution) comprising of medical grade monitors (2 mega pixel resolution) with at least 8GB RAM. The server should have image storage capacity of 3 Tera bytes, minimum 20000 concurrent slice processing power and at least 32 GB RAM. It can be single/dual server configuration. The two concurrent workstations should have processing capabilities for basic 2D /3D and following advanced applications.
	a. MPR
	b. Minimum and maximum intensity projection.
	c. 3D volume rendering.
	d. 3D SSD (Shaded Surface Display).
	e. Advanced vessel analysis.
	f. Auto bone removal.
	g. Lung nodule assessment.
	h. Liver lesion analysis.
	i. Virtual endoscopy.
	j. Dedicated Colonography and colonoscopy.
	k. Time point comparison.
	l. Whole organ (Brain & Body) perfusion CT.
	m. Coronary tree analysis: automated 3D processing of coronary arteries, calcium scoring, stent analysis, LV analysis.
	n. Neuro DSA with Automated Bone Removal.
	o. Fusion CT: Fusion of morphological data of CT & MRI.
8.	**Image Processing section:**
	Cardiology and Oncology post processing tools to be quoted as standard. The post processing tools of the perfusion and others as quoted below to be available in the workstation.
	a. The system should have standard software like 3D Volume rendering , MIP,CT angio, color angio Display, CT Perfusion , Dental scan , Bone Mineral Study should be available as standard on the Workstation . Computer Aided Detection (CAD) to be provided
	b. The following software should be offered as standard (MPR , ROI, VOLUME CALCULATION , CT NUMBER DISPLAY , WINDOW WIDTH , WINDOW LEVEL , TOPOGRAM DISPLAY , CINE DISPLAY , HRCT LUNG, DYNAMIC SCAN)
	c. Cardiac Scan Attachment with ECG Gated Segmented Recon , Calcium score , Vessel Flythrough of the Coronaries should be available with software package at workstation and thin client server stations
	d. Automatic display of MPR Images after scan will be preferred.
	e. Bolus triggered Brain Perfusion CT study (at least 3-level) with automatic CBF, CBV, MTT, TTP maps, ROI placing, comparing ROI, saving maps.

	f. Neuro DSA with automatic bone removal software.
	g. Dental CT: high-resolution evaluation of teeth and jaws with automatic panoramic and paraxial reconstruction, evaluation of mandibular canal and life size filming.
	h. Fusion CT: fusion of morphological data obtained on CT, MR or DSA.
	i. Lung CT: low dose lung CT protocols for advanced lung nodule detection, assessment and follow-up. Lung segmentation software for nodule detection. Provide LUNG CAD for virtual bronchoscopy .
	j. provide Bone / Osteo / Dental CT software.
	k. Post processing should also have liver segmentation analysis, whole body perfusion, tumor tracking, myocardial assessment.
9.	**Resolution:**
	a. The System Spatial Resolution should be mentioned with parameters.
	b. The high contrast resolution should be more then 14.5 lp/mm in all routine scan, including spiral and axial mode.
	c. The low contrast resolution should not be more than 3 mm at 0.5 %. Shoulder, Pelvis Streak Artefact suppression Software should be standard.
	d. Noise Suppression protocols to maintain LCR at low dose should be standard.
	e. Special softwares(like mA modulationin routine & cardiac mode) to ensure dose efficiency should be standard.
	f. Specify the CT Dose Index.
	g. Should have iterative reconstruction technique for X Ray dose reduction.
	h. Low dose Paediatric CT mode should be available
	i. Patient radiation dose should be displayed on the monitor & films.
10.	**Accessories:(Make and Model of all the quoted accessories should be specified)**
	a) Dry chemistry camera of DPI 500 or more of any reputed make.
	b) Lead Glass of 200 x 100 cm.
	c) UPS with half an hour back up to run the entire CT, Computers, Dry chemistry camera, Work Stations etc.
	d) Dual Head Pressure Injector of reputed make with 300 sets of Syringes & 1000 sets of tubings. Specify the make of Injector.
	e) Multi Para monitor with pulse oximeter of a reputed make for monitoring vitals
	f) Patient radiation dose should be displayed on the monitor as well as on the films
	g) ULTRA LIGHT WEIGHT lead free aprons - 4 Nos.
	h)Apron stand — 1 No.
	i) Apron Hanger suitable for the supplied aprons, shields.
	j) LEAD Free Thyroid Shields – 4 nos.
	k) Lead Free Gonadal Shields – 4 nos
	l): Tumour ablation system with treatment planning solution & RF generator . Specifications as below;
	Computerized needle positioning guiding tool along with radio frequency ablation system for CT guidance in tumor ablation.
	System should support different ablation system
	Registration of the data, post processing segmentation before and after ablation should be possible

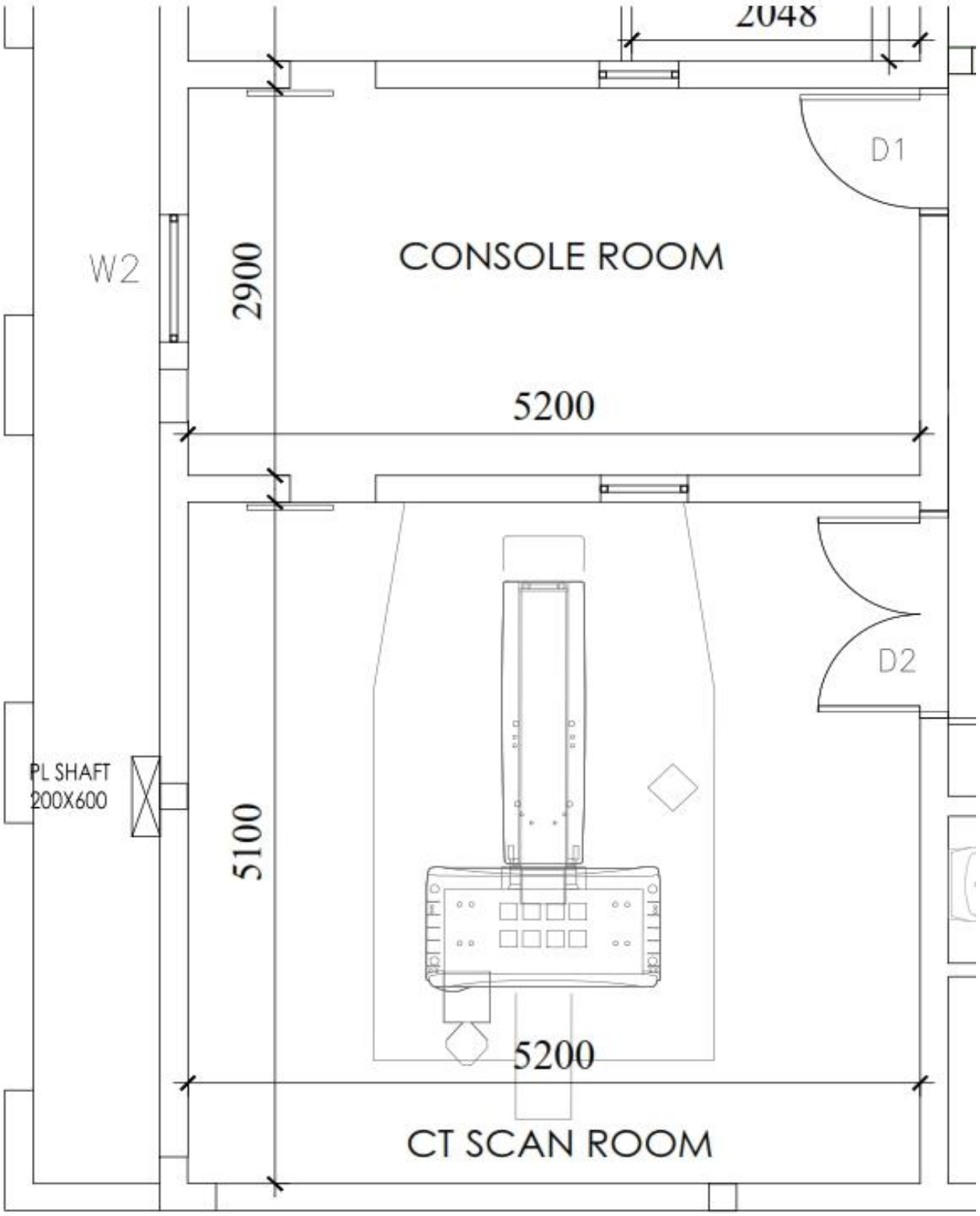
	Overlay of non-contrast images with contrast images to be possible.
	Should include radio frequency ablation generator with:
	1. Frequency at least 450KHz.
	2. To support multiprong electrode and capable of 7cm ablation in one sitting.
	3. Temperature range should be 15-125 deg C with steps of 1 deg C.
	4. RFA accessories- Intelliflow pump, RFA probes, multiprong electrodes and coaxial biopsy gun of 9cm and 15cm with 20cm throw.
11.	**Warranty:**
	a) One Year for Comprehensive warranty CT Scanner System including X ray tube and all accessories and turnkey works for which order is placed to be provided.
	b) 98% uptime should be maintained during the entire Warranty period. In case of downtime exceeding more than 2%, warranty will be extended double the down time period.
12.	**SERVICE**
	After warranty CMC for next three years for complete CT Scanner System including X ray tube and all accessories and turnkey works for which order is placed to be provided. During CMC period vendor shall have to maintain 98% uptime of the equipment. CMC will be extended by double the down time in excess of 2%.A clear cut undertaking to be given regarding acceptance of uptime clause by the principal/vendor
13.	**Training**
	Qualified personnel nominated by the deptt, should be given application training by the vendor at their cost at site for three months and as and when required.
14.	**Certifications:**
	I. Offered model should be European CE and US FDA approved. Copy of certifications should be submitted with bid.
	II. The quoted model should be RPA approved. Copy of RPA type approval should be submitted with bid.
	i. DUAL ENERGY APPLICATIONS to be provided as standard: Renal Calculi Characterization & Gout.
	ii. All other Dual Energy applications available with vendor should be listed as optional with price of each quoted separately.
	iii. Proof of availability of dual energy application must be supported with original datasheet.
	iv. Dual energy application must be possible on all workstation and all fields of view with minimum FOV 33cm.
	v. Also Specify if DUAL ENERGY APPLICATIONS like Metal Artifact Correction / Beam Hardening artifact Correction, Brain Haemorrhage are available in the system. Any other application for dual energy if present in future upgrades should be part of the system.
	Accessories:
	LED X-RAY FILM ILLUMINATOR WITH COLLIMATION – SINGLE PANEL (1 NOS.)
	Specifications:
●	LED X-Ray Film Illuminators with collimation and luminous density control.
●	Suitable for viewing one 14"X17" film.

•	It should have high luminous density and uniform light as per DIN 6856-1.
•	It should have LED lamps of latest design.
•	It should have fully electronic continuous brightness control, with adjustment range of approximately 90%.
•	It should have flicker free light.
•	Maximum Luminous density of more than 4.500 cd/sq.m^2.
•	It should have four extremely easy to move shutters for glare-free reading of any film format.
•	It should have thickness of not more than 70 mm.
	LED X-RAY FILM ILLUMINATOR WITH COLLIMATION – DOUBLE PANEL (2 NOS.)
	Specifications:
•	LED X-Ray Film Illuminators with collimation and luminous density control.
•	Suitable for viewing two 14"X17" films.
•	It should have high luminous density and uniform light as per DIN 6856-1.
•	It should have LED lamps of latest design.
•	It should have fully electronic continuous brightness control with adjustment range of approximately 90%.
•	It should have flicker free light.
•	Maximum Luminous density of more than 4.500 cd/sq.m^2.
•	It should have four extremely easy to move shutters for glare-free reading of any film format.
•	It should have thickness of not more than 70 mm.

	The Turnkey Scope of Work – CT
1	The Supplier should inspect the proposed site offered by the Consignee Institute in which the CT system has to be installed and they are required to submit the plan for the complete CT Scan Centre on a turnkey basis. The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and Fire fighting for the construction of CT Scan Centre.
2	While preparing the plan, the following aspects have to be addressed.
a)	Care should be taken to provide easy negotiation of the patient stretchers / trolleys through corridors and doors.
b)	Radiation shielding for doors, walls, windows etc.
c)	Furniture like desk, chairs, shelves etc.
d)	Patient stretcher and other furniture / accessory to make the scan centre
3.Civil work	
a)	Civil construction work including construction of brick wall if any, plastering, flooring as per the approved plan and equipment layout plan.
b)	Concrete bed at CT equipment area.
c)	Platform for unloading and shifting the CT should be provided if necessary.
d)	Cable tray, trench & channel – necessary trenches, cable tray and channels at required location would be provided.

e)	All the construction work to be done as per the final plan approved by the
f)	Active and passive room shielding for magnetic, fringe field should be provided as per the requirement of the equipment.
i)	Flooring
1	600 x 600 mm vitrified tiles with 100mm tile skirting to match in console room
2	50 mm thick cement concrete flooring with Vinyl flooring in CT equipment and
ii)	Painting
1	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in console room, UPS room,CT Gantry & Equipment room etc.
iii)	False Ceiling
1	Acoustical tile for ceiling with light weight insulating material of high quality supported on grid or finished seamless with support above ceiling. Finished with white paint or powder coated with white paint if metallic Ceiling height
4. Plumbing work	
1	All water pipes and fittings shall be of high density polythene of approved and standard make. The gratings shall be brass chrome plated. All plumbing accessories should be of standard make.
2	Hot water service to be provided if required.
5. Electrical work	
1	The supplier shall be required to specify the total load requirements for the CT scan centre including the load of air conditioning , room lighting and for the accessories if any. The supply line will be provided by the Institute up to one point within the CT Scan centre area. The distribution panel shall be provided by the vendor. Few lights in each room shall be connected to the UPS to provide emergency lighting.
2	The electrical work shall include the following:
a.	Wiring – All interior electrical wiring- with main distribution panel board, necessary MCBs, DB, joint box, switch box etc. the wires shall be of copper of different capacity as per the load and should be renowned make as
b.	Switches light and power points should be of modular type and of standard make as listed below.
c.	General lights – LED light fittings with 500 Lux Illumination
6	AIR CONDITIONING:
Ductable package air conditioners / split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning	
The outdoor units of AC should have grill coverings to prevent theft and	
Ventilation is required in toilet.	
2	Environment specifications:
a)	Relative Humidity range: To be maintained between 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.
b)	Temperature ranges: 22± 2° C in all areas except equipment room which shall be as per requirement of the equipment.

c)	Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the
Furniture:	
a)	Revolving chairs height adjustable, medium-back with hand-rest in the Control room, Radiologist room and viewing area. – 4 NO.S
b)	Chairs for patient waiting area – Three seater (chrome plated). - 10 NO.S
c)	Cupboard with laminate door shutters for storage of spare parts and accessories and records as per requirement. – 3 NO.S
d)	Drug trolleys for patient preparation area -1 NO.S
e)	Patient trolley with rubber foam mattress to be kept in the patient
f)	Name boards for all rooms
g)	Tables for Workstation and Radiologist - 2 NO.S
h)	Changing rooms should have change lockers and dressing table- 1 SET
i)	Dustbins: 10 no.s
j)	Room Signage- as per requirement
k)	Any other furniture item as per requirement.
All furniture items should be of standard make as mentioned in the table	
1	Cabling of Network (LAN) connectivity for camera system, console system, workstation and computers etc as required.
2	Broadband connection: for REMOTE SERVICE of CT system.
3	Fire extinguisher Dry CO2 type as required for the building safety as required


2048
D1
W2
2900
CONSOLE ROOM
5200
D2
PL SHAFT
200X600
5100
5200
CT SCAN ROOM

16. DIGITAL FLAT PANEL RADIOGRAPHY SYSTEM

Latest state of the art Fully digital radiography system. Mention the year of introduction of the quoted model in the International market.

The quoted model (and not the individual components) should be US FDA and CE approved. In the system 2 out of 3 major components (Tube, detector, and generator) should be manufactured by the quoting vendor themselves. Mention the manufacturer of the third component and provide the MoU with the other party for the same. Vendor should have experience of supplying and maintaining similar DR equipment in the last 5 years in major government hospitals. (Certificates of supply and satisfactory performance to be enclosed Other certificates are not acceptable).

A) The quoted model should have RPA type approval certificate. In case the model is being imported for the first time NOC from RPA must be available & RPA type approval certificate must be obtained within 8 weeks of installation by the vendor who receives the order.(Vendor must give undertaking for obtaining RPA type approval certificates with tender quotation.

Fully digital radiography system with two Flat panel detectors with Cesium Iodide Scintillator and with Automatic Exposure control (AEC) capable of performing exposure in vertical, horizontal and oblique positions to perform all skeletal body (Upright and Lying down) radiographs. The unit should be completely integrated along with auto features in quality control & performance, AEC, APR, fully automated positioning system with autotracking for horizontal table and for vertical stand studies.

B) Detailed Specification of X-Ray Flat Panel Detectors (Quote the latest model of flat panel detectors)

Note: **The Technical Specifications should be supported by compliance statement with page number of original Technical Data Sheet and any additional information from the manufacturer.**

1 Use of matrix flat panel imager (Radiography).
2 Name of the Detector model and manufacturer to be provided.
3 Assembling should be Monolithic panel/tiles.
4 Active Matrix Flat Panel detectors should be based on Indirect Conversion process
5 Scintillate material used for flat panel detector should be Thallium doped Cesium iodide (Csi:TI).
6. Semi Conductor material (Photodiode) should be Amorphous Silicon.
7. Charge Read Out should be Thin Film Transistor Array (TFT Array).
8. Detector Size should be 40 cm x 40 cm or more (more will be preferred).
9. Array Size be 2000x2000 pixel or more.
10. Pixel Pitch should be 0.2 mm or less.
11 Image depth should be 14 Bits or more.
12. Detector Quantum Efficiency (DQE) should be at least 65%
13. Tube assembly movements to be automatically synchronized with both the horizontal and vertical detectors movement.
14. **Two Digital flat panel detector systems with detector fixed & integrated into the Bucky table as well as wall stand.**
Due to extensive workload a sturdy system is necessary, therefore wireless or tethered detector is not acceptable. Wireless detector is also not acceptable due to risk of theft and damage.
15. Mention the weight of the detector.
16. System warm up time should be mentioned.

C) Specification of Acquisition Work station:

17. Monochrome LCD monitor with protect panel from dust and scratches.
18. Manufacturers name and model to be provided.
19. Viewing angles **(Horizontal & Vertical)**: 170 Deg. or more.
20. Size of Monitor (diagonal) 19" or more.
21. **Mouse control & touch screen display.**
22. Mention all the standard accessories to be supplied with the monitor.
23. **Hard disc storage: 4000 or more images**.
24. Post Acquisition, Image processing and Display: Mention the time.
25. The system should have auto protocol select.

D) X-Ray Table Specification :

26. **Four way motor driven floating horizontal table top of carbon fibre or its equivalent, compact bucky table with digital flat panel detector should be provided.**
27. Mention the range of vertical, horizontal and longitudinal movements of the table.
28. Removable grid for SID of 100 cms for horizontal table applications.
29. Maximum patient weight - 200 kgs or more.
30. Table Top length: 200 cm or more.
31. **Foot switches for – adjusting height, longitudinal movement side to side movements and for locking.**
32. Automatic detector alignment should be possible on the table.

E) Vertical Stand

33. Vertical movement: Motorized with foot switch facility.
34. The vertical movement to be servo coupled to the movement of the X-Ray tube (simultaneous movements).
35. **Provide two removable grids with Grid Ratio of 12:1 or more.**
36. **Motorized Tilting vertical detector facility should be available from (-20) to (+90) degrees)**.
37. Maximum height from the floor to the centre of detector should be more than 175 cm.

F) Ceiling Mounted X-Ray Tube

38. X-Ray tube suspended on a telescopic column.
39. The movement of X-Ray tube should be motorized and should be possible in all directions: Specify the travel range and angulations in degrees.
40. It should have capability of manual override.
41. **Provision for control panel on patient side.**
    It should have autopositioning and autotracking function.

G. X-Ray Generator

42 a)Invertors Type Constant Potential high Voltage Generator (High Frequency X-Ray Generator) ,Microprocessor controlled with constant output and low ripple frequency.
   b) Power: 80 KW or more.
   c) 1000mA at 80kv or more according to IEC standard.
   d) Automatic exposure control with 3 or 4 chambers.
   e) overloading protection should be available.
   f)minimum exposure time should be 1 milli sec or less.

H) X-Ray Tube

43) **Mention the make of the X-Ray tube.**
44) **A dual focus Rotating anode with high speed of 8000 rpm or more, compatible with the provided generator.**
Focal spots of following sizes-
   Large-1.2mm or less.
   Small 0.6 mm or less.
45. Anode Heat storage capacity 300 KHU or more.
46. Inherent filtration to be provided. Tube protection against overload should be available. Please specify tube rotation at vertical and horizontal axes.

I) Filter and collimator

a) It should have Inherent filtration.
b) Mention details of added filtration.
c) Square collimation –automatic type
d) Display of collimation.
e) Rotation of +/_ 45 degrees or more.

J) Advanced Clinical Application Facility :

47. Auto Image stitching / image pasting soft ware and necessary hardware on vertical and horizontal bucky, for complete spinal column, extra long leg image **& other long body parts, should be a standard feature in the machine.**

K) Two additional Workstations for Image viewing, Post Processing, reporting and documentation : Qty (2 Nos.)

- High Speed processor based workstation 2.4 GHz or higher processing speed with post processing capability. The workstation should have 8 GB RAM or more. It should have its independent memory & hard disk of at least 1 TB. It should have a high resolution medical grade 2 MP monitor of size 21" or more capable of simultaneously viewing or performing post processing functions. Both Workstations should be configurable with Digital X- Ray or Digital fluoroscopy System & all other Imaging equipments in New Emergency block of any make. Latest operating system should be available.

48. Addition of Anatomical markers.
49. Demographic Correction.
50. Image Annotation.
51. Window and Level adjustment.
52. Electronic Collimation.
53. Magnification, Image Rotation.
54. Application for comparison with standard (Look up) tables should be available. Should have CD and DVD writing facilities.
It should support storage of images on CD or DVD.
System should be DICOM 3 or higher version. It should have features to connectivity to any network in DICOM format.
Easy integration and networking should be possible with any other existing future networking including other modalities, HIS, RIS and PACS at no extra cost.

Accessories

55. Dry chemistry camera of 500 DPI or more should print at least 3 sizes of films at one time i.e. 10x8, 10x12, 10x14, 14x14, 14x17 inches. 500 films of 14x17 size should be supplied along with camera. **It should be capable of being networked with all modalities of all other Imaging equipments in New Emergency block of any make.**
56. Compression belt (Pediatric and adult) (2 each).
57. Patient hand grip.
58. Patient support bar for vertical stand to be provided.
59. Lead Glass 120 cm x 100 cm to be provided.
60. **Provide Voltage stabilizer for the entire system including both workstation.**
61. UPS of appropriate rating along with batteries (with half hour back up) for the acquisition workstation of reputed brand to be provided.
62. **Radiation protection equipment:**
a. light weight lead aprons -5,
b. gonad shields-4 (2 Adult, 2 Pediatric)
c. lead goggles-4
d. thyroid shield -4.
63. PA system for calling patient.
64. **lead aprons hanging unit – small size for 5 aprons.**
65.**Necessary furniture like table for operating console ,4 standard and two revolving office chairs, examination stool and foot step.**

L) Other Terms and Condition

66. Some specification which are not qualified, the buyer reserves the right to evaluate the specification based on the details given by the firm.
67. The equipment should be under comprehensive warranty for 1 year for all items for which order is placed including turnkey works from the date of successful installation and handing over with an uptime warranty of 98% and extension of warranty period by double the down time in excess of 2%.
68. Please quote Comprehensive maintenance Contract (Including X-Ray Tube and detector) and all other items for which order is placed including turnkey works for next 3 years after

successful completion of warranty with 98%uptime and extension of CMC period by double the down time in excess of 2%.

69. All software up-gradation will be provided free of cost to the institute as and when available
70. Operating manual & service manual along with schematic diagram to be provided
71. There will be an agreement between the buyer and seller for comprehensive maintenance contract at the time of finalization of purchase of equipment.
72. Only principal or their authorized principal agents should participate in the tender. Principal manufacturer will have to give an undertaking of availability of spares as well maintenance of services for 10 years in case there is any change of local agent.
73. Company should provide adequate application training of at least one month or as long as required to the Radiologists & Technical staff.
74. All the civil, Electrical alternation / fixation pertaining to the installation of the machine will be the responsibility of the firm.

L) Accreditation and Quality Certification

75. The quoted model should be RPA type approved and CE & US FDA certified. (as detailed in A of the Technical specification)
76. The Bidder must have been in business of Flat Panel Detector equipment for at least last five years with .supply/installation in major government hospitals. (enclose copies of supply order and satisfactory performance reports)

M) For Digital Flat Panel Radiography System

77. The new latest, amended layout plans (with dimensions) allocated has already been uploaded earlier. Air-conditioning of appropriate strength/capacity (tonnage) in the area as required shall be done. Additional standby split air conditioner(s) of appropriate strength/capacity (tonnage) to be fixed in the main equipment rooms..
78. Civil work: In the civil works Modifications/Renovations in the existing rooms by the supplier/vendor as shown in the layout plan after approval by the **(RPA)**

The walls of whole Complex should be finished acrylic/plastic emulsion and should be finished with vitrified tiles up to five feet height from the floor.
The flooring in the Fluoroscopy/DR complex should be as per **RPA regulations**. Flooring in all rooms shall be of vitrified tiles of 80 x 80cm size or other close appropriate size of reputed makes. Colour as approved by Purchaser/HSCC shall be provided.
Whole area of Complex as in the layout plan approved by the **RPA** shall be finished with fire resistant false ceiling material All the doors should be provided with necessary fittings with hydraulic type door closures and with Mortised locks
Main door of the complex in the corridor shall be in glazed aluminium powder coated with adequate thickness of glass with etching work wherever required. Colour of aluminium powder coating shall be got approved from Purchaser/HSCC before execution of works.
Lead Glass window of adequate size will be fixed as per **RPA guidelines** in the console room. Proper signage both external and internal to be done.
79. Electrical work: The firm is required to specify load requirement i.e. required for the unit, the air conditioning, room lighting and accessories, if any. The electrical works should be as per approved makes mentioned in
The electrical works should have minimum two separate earthing with copper plate to be provided for the each equipment and air-conditioning equipment as per equipment requirements. The use of earth leakage circuit breaker will be as required.

Turnkey for Digital Flat Panel Radiography System

The layout plans (with dimensions) allocated has already been uploaded earlier. Air-conditioning of appropriate strength/capacity (tonnage) in the area as required shall be done. Additional standby split air conditioner(s) of appropriate strength/capacity (tonnage) to be fixed in the main equipment rooms.

Civil work: In the civil works Modifications/Renovations in the existing rooms by the supplier/vendor as shown in the layout plan after approval by the Atomic Energy Regulatory Board (AERB)/equivalent Govt. of Mauritius Guidelines shall be executed.

The walls of whole Complex should be finished acrylic/plastic emulsion and should be finished with vitrified tiles ((approved makes) up to five feet height from the floor. Colour as approved by Purchaser/HSCC shall be provided.

The flooring in the Fluoroscopy/DR complex should be as per AERB regulations//equivalent Govt. of Mauritius Guidelines. Flooring in all rooms shall be of vitrified tiles of 80 x 80cm size or other close appropriate size of reputed makes. Colour as approved by Purchaser/HSCC shall be provided.

Whole area of Complex as in the layout plan approved by the AERB/equivalent Govt. of Mauritius
Guidelines shall be finished with fire resistant false ceiling
material.

All the doors should be provided with necessary fittings with hydraulic type door closures and with Mortised locks.

Main door of the complex in the corridor shall be in glazed aluminum poweder coated with adequate thickness of glass with etching work wherever required. Colour of aluminium powder coating shall be got approved from Purchaser/HSCC before execution of works.

Lead Glass window of adequate size will be fixed as per AERB guidelines/equivalent Govt. of Mauritius
Guidelines in the console room. Proper signage both external and internal to be
done.

Electrical work: The firm is required to specify load requirement i.e. required for the unit, the air conditioning, room lighting and accessories, if any. The electrical works should be as per approved makes. The electrical works should have minimum two separate Earthing with copper plate is to be provided for the each equipment and air-conditioning equipment as per equipment requirements. The use of earth leakage circuit breaker will be as required.

A distribution panel of appropriate capacity is to be provided by hospital. The load shall also be provided by the hospital. From the substation of the hospital to the distribution panel, cable of appropriate size shall be provided & fixed by the hospital. Vendor shall do cabling from distribution panel up to the equipment. The switch gears (MCBs / ACBs/ MCCBs), L.T. distribution board for MCBs etc.. Electrical wires should be of copper of different capacity as per the load.

For Telephone wiring cables (approved makes). Telephones to be provided in all rooms with EPABX system having control in office.

Modular range Switches / Sockets of approved makes should be provided and fixed as per requirement. LED lights of suitable illumination should be provided of Phillips/GE/ Crompton/Syska make.

Air conditioning:
Split Air conditioners of reputed make to be provided by the vendor in whole complex as per requirements (to maintain appropriate temperature in the main equipment room & other rooms) and as per regulations of AERB/equivalent Govt. of Mauritius Guidelines.

Standby additional split air conditioners of appropriate strength/capacity (tonnage) to be fixed in the main equipment room.

Hygrometer No.1 to be provided.

In-built or External De Humidifier in Equipment, Console and Examination rooms to be provided as per room layout.

Fire Protection
Non water based fire protection is to be integrated as per requirement. Fire extinguishers of appropriate
types should be fixed in different rooms as per requirement. Heat detectors/hooters/photoelectric/smoke detectors (approved makes) shall be provided in all the rooms and corridors as per requirements. In case the expiry date of fire extinguishers is before the completion of one year comprehensive warranty period, extra set(s) of fire extinguishers will be supplied by the vendor till the completion of the 1 year comprehensive warranty period. Besides, any works required as per local fire services statutory/Delhi Fire Services norms shall be executed by the vendor.

The vendor to also install the following:

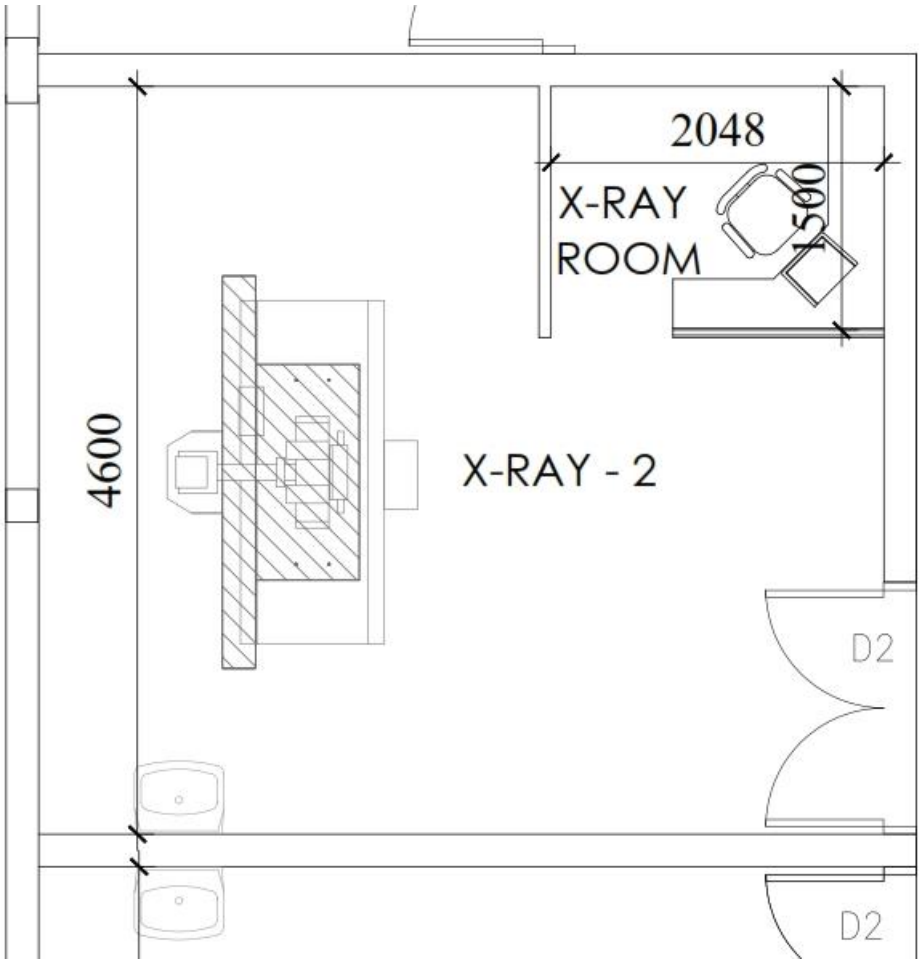
Audio visual Music systems for patient waiting areas.

Adequate Pest, insect and rodent control system to be provided and installed to ensure that area remains insect, pest and rodent free.

Music and Public Address system for calling/ informing the patients in the waiting areas.

Furniture:
-
Following furniture will be provided:

Chairs with castors and armrests	2 nos.
Overhead Storage(1.2x0.4x.6m) for CD storage	1 no.
Medicine Trolley	1 No.


2048
X-RAY
ROOM
1500
4600
X-RAY - 2
D2
D2

17.MOBILE X RAY MACHINE

High Frequency mobile x ray machine with output 100 mA or more. The mobile x ray equipment required to perform x ray studies in emergency and trauma centre and bedside in wards and ICU. The unit should be compact, light weight and easily transportable. It should have following specifications
1) The unit should be operative on mains voltage from single phase 170-260 v AC.
2) **Generator:**
i. Power : 4 kW or more ii kVp. Range : 40 – 100 Kvp
iii m AS Range : 200 m As or more. iv m A range : upto 100 maA
3) **X RAY Tube**: Stationary / Rotating Anode type. Please specify the focal spot size, anode RPM, filtration Provide by the tube.
4) **Tube stand** : The tube stand should be fully counter balanced or spring balanced with rotation in all directions.
5) **Collimator:** The Collimator available in the equipment should have high capacity lamp for clear visualization & auto shut off facility for lamp.
6) **Cassette storage box** : The equipment should have cassette storage box for minimum of 4 cassette.
7) **Ergonomics**: The unit should have small foot print. The height of the column stand should not be more than 150 cm for easy transportation in the lift etc. and areas with small height doors. The equipment should be light weight, not more than 160 kg.
8) **Breaking system**: The unit should have effective breaking system for parking.
9) **Certification:** System shall have valid RPA certificate and CE (Europe) of the quoted model..

18.MID END COLOR DOPPLER

1. The system must be latest and state of the art with fully digital technology equipment to incorporate the facility of 2D, M-Mode, CDI, PW Doppler, CW Doppler, Power Doppler, directional power angio, real time 3-D(4-D) Elastography imaging and **upgradable for contrast enhanced ultrasound (CEUS)**. The vendor should have at least 3 installations in Government Institution in India in last 5 years.
2. Machine should be USA FDA and CE certified
3. System should have 60,000 digital processing channels or more.
4. System should have dynamic range of 200dB or more.
5. System should be offered with a 2D frame rate of at least 630 or more frames/second.
6. Advanced measurements & calculation package for abdominal, obst./gynae, urology, vascular and Intracavitory intervention applications should be available.
7. System should have THI & should be able to work in combined mode of harmonic imaging and real time imaging to get excellent image quality. The system should offer Tissue Harmonic Imaging in Power Doppler mode for improved sensitivity.
8. **The system should be upgradable to Contrast Harmonic Imaging** and should have optimization settings to detect the Contrast Agents. Please specify other available advanced Technology to perform better Contrast Harmonic Imaging. **(The contrast package is to be quoted as optional and price will not be included for calculation of L1).**
9. Automatic real time & frozen tracing of instantaneous peak velocity & instantaneous mean velocity (or frequency) should be available. Triplex Imaging should be standard on the system.
10. Should be offered with Speckle reduction Imaging/artifact reduction technology.
11. System should be offered with a 19 inch or more high resolution flat panel medical grade display monitor with facility for position adjustments.
12. System should have at-least four universal active probe ports with electronic switching facility from key board without probe adapter.
13. Operating modes B-mode, M-Mode, B/M Mode, Doppler Mode, Color flow, Power Doppler, DCA/DPA, Contrast Imaging, B/Color flow, PW Doppler, Real time 3D (4-D imaging).
14. Probes should be of broad band type and system should support probes from 1-18 MHz frequency.
15. B mode & color-flow images should be simultaneously available side by side in real time. Digital zoom facility for region of interest in real time and frozen images (8 x).
16. Image storage facility on inbuilt hard disc or MOD/CD/DVD-RW facility should be available. Inbuilt hard disk or external storage with minimum capacity of 1 TB or more. System should have extensive image management capability including thumb nail review & Cineloop editing etc.
17. Cine loop as well as cine scroll facility in B mode with storage of 10,000 or more images should be available.
18. Should have Real Time Compound Imaging Technology with Multiple (Five or more) transmitted lines of sight in convex, linear and endocavitary probes.
19. System should be capable of scanning upto depth of 30cm or more
20. The system should be DICOM 3.0 (or higher version) ready (like send, receive, print, record on CD/DVD, acknowledge etc.) for connectivity to any network, PC/computer

etc. in DICOM format. Vendor will connect the machine to existing PACS with no extra cost.

21. The system should be DICOM ready. System should have capability of HIS and RIS connectivity and should also be connected to the dry chemistry printer. Should provide advanced DICOM connectivity to an enterprise data management system or PACS with advanced DICOM features: DICOM Store, Modality Work list, Performed Procedure Step and Structured Reporting. Please specify the advance DICOM features available on the quoted system.
23. The System should have Panoramic imaging / Sie-scape and extended field of view imaging.
24. The System should be quoted along with strain based Elastography Imaging as standard.
25. System should have high resolution 10 inch or more user interface touch panel.
26. On site demonstration is mandatory.

SYSTEM SHOULD BE OFFERED WITH THE FOLLOWING TRANSDUCERS (all probes should come with biopsy attachment)

1. 2–6 MHz or better Broadband Convex Transducer for General Imaging, Abdomen, Renal, OB/GYN imaging with capabilities of CEUS and strain elastography.
2. 3-9 MHz linear probe with strain elastography.
3. 5–17 MHz or better Linear Array Transducer for Vascular, breast, Musculoskeletal, small parts imaging.
4. 4–9 MHz or better Broadband endocavitary transducer with FOV of 135 degrees or more with CEUS and strain elastography capabilities.
5. 2-6 MHz or better Broadband Volume Transducer.
6. Pediatric probe 3-8 MHz.

Upgrading requirements

1. **Continuous free, comprehensive software upgrade (compatible with the existing platform) guarantee for 10 years (after installation) of the ultrasound unit must be provided**.
2. **The system should be upgradable to Contrast Harmonic Imaging** and should have optimization settings to detect the Contrast Agents. Please specify other available advanced Technology to perform better Contrast Harmonic Imaging. **(The contrast package is to be quoted as optional and price will not be included for calculation of L1).**

Accessories:

1. On-line UPS with capacity for at least one hour backup to support all functions of the equipment i.e. Performing Ultrasound procedure, exposure on to films or copy on a CD.
2. Servo Digital Voltage stabilizer
3. A Dry chemistry camera of 500 DPI or more with two active trays.
4. Essential furniture

Application Training:

Engineer should be a
vailable for one month continuously and for 5 months thereafter as and when required after date of installation.

Guarantee/Warranty

1. One Year comprehensive onsite warranty of entire system (Spares and labour), without exclusion, including all transducers, all other accessories and also UPS including batteries.
2. 95% uptime guarantee should be given. In case down time exceeds 5% penalty in the form of extended warrantee, double the number of days for the which the equipment goes out of service, will be applied.

General Instructions for the Vendor

1. Supplier must ensure availability of expertise service and maintenance at site of installation. Uninterrupted availability of spare parts and repair for next ten years must be assured.
2. Two bid system: vendor is required to make separate bids for technical and price components. These should be quoted in two separate sealed envelopes
3. Please note that all technical features, facilities and accessories mentioned in the tender document are standard requirements and hence, these should be offered as the standard feature. None of these should be offered as optional items **except for upgrade to contrast imaging for which price to be quoted separately**.
4. In price bid, cost of locally supplied items must be quoted separately in Indian currency
5. Please respond to each specification in the same format and order as mentioned in the tender document and specify/indicate the verification document form the product data sheet against each column.
6. When required, information other than those in the data sheets should be provided as separate document from the principals only and should refer to the specific sections being addressed. When standard vendor data sheet disagrees with the bid response (offer/compliance statement), clarification should accompany in the form of certificate from the principals only. In absence of this, the vendor data sheet will prevail for the purpose of evaluation and decision of the technical committee shall be final and binding on the supplier.
7. The vendor has to station one application specialist and service engineer at site for a period necessary to familiarize the medical and technical staff to the scanner protocols and enable them to achieve fast and efficient service.
8. Mention the number (with addresses, phone numbers, e-mails) of installations of the quoted unit in the Delhi and India.

DIAGNOSITC LABORATORIES

(Histolpathology & Immuno Chemistry)

19.FULLY AUTOMATIC CRYOSTAT

1. The instrument should be open top free standing instrument and fully automatic.
2. Should have heavy duty rotary Microtome bearing in stainless steel
3. Should be suitable for sectioning of all types of frozen tissues
4. Should have electronically controlled motorized coarse advance and manual section cutting via hand wheel. Should also have mechanical hand wheel lock
5. Chamber illumination should be through bright white light/UV having adjustable of chamber brightness to meet operator needs
6. Chamber cooling should be at -35 ± 3°C.
7. Should have integrated peltier fast freezing device that rapidly cools to -52 ±2 °C
8. Should have inbuilt cryobar storage positions at least 15 including at least 2 quick freeze locations.
9. Section thickness range should be 1 to 500 µm or more)
10. Trimming thickness range should be 5 to 100µm or more
11. Should have vertical stroke length of 60mm ±2
12. Should have automatic specimen retraction on return stroke
13. Horizontal feed range to 26 ±2
14. Specimen orientation should be XY direction with 360° z axis rotation
15. Should have the provision of automatic programmable defrost system for immediate defrosting
16. Should have universal blade holder suitable for high profile and low profile disposable blades.
17. Should have Inbuilt UV certified disinfection to protect against surface contamination.
18. Operable at 230V, 50Hz.
19. Equipment should be European CE and USFDA.
20. Demonstration of the instrument should be mandatory for the technical qualification
21. UPS with battery of 2 hours back up shall be supplied.
22. Shall be supplied with Split AC of 1.5 Tonnee.

20.TISSUE EMBEDDING STATION

Tissue embedding System:
• Should have symmetrical and unobstructed workspace
• Should haveEasy-to-open spacious trays for efficient access to cassettes and moulds
• Should have bright white LED for contrast and visibility of the most transparent samples.
• Should have Easy to clean metal frame and silicon coated wrist pads.
• Operating temperatures: 50 °C to 75 °C, adjustable in 1 °C increments
• Removable tray: approx. 100 cassettes
• Paraffin tank: Max. 4 L
• Illumination: LED White
• Display: 5.7 inch capacitive LCD touch screen
• Power supply:, 220-240 V AC,
• Power consumption: 1000 VA max
• Environmental operating temperature: +20 °C to +30 °C
Optional accessories:
• User-friendly magnifier
• Pre-filter for melted paraffin
• Foot switch
Heatable Forceps
Cold Plate:Operating temperature: -6 °C (self-regulating)Min. guaranteed workload capacity: 60 blocks solidified in 30minutes
Other Conditions :
Power supply: 220-240
Power consumption: 400 VA max
Environmental operating temperature range: +20 °C to +30 °C
• Should have CE certificate
• Should have minimum 10 installation in government institution.
• Should have factory trained engineer support for service. With past record of more than 95% on time service support.

21.AUTOMATED MICROWAVE TISSUE PROCESSOR

- Microwave- assisted tissue processor applicable for formalin fixation of tissue, tissue processing, accelerating decalcification, special staining and antigen retrieval for immunostaining.
- Intelligent touch screen control panel with programmable protocols and memory recall • Enhanced regent temperature control.
- Controlled processing temperature and continuous power output.
- Temperature and power control with adequate safety design regarding microwave leakage, prevent overheating and ventilation.
- Sample capacity minimum 45.
- Vacuum and low wattage facility.
- Designed for greater flexibility to meet growing workload demand
- Along with accessories: Glass air agitator tubing, organizer baskets, interior lamp, microwavable, specimen container, temperature probe and glass vacuum chamber
- Reagents: Decalcification fluid, special stains
- Guarantee & Warranty: the firm will be fully responsible for maintenance, servicing an operation of equipment during the warranty period 12 months from the date of satisfactory installation. The firm is responsible for import of spare parts, custom clearance including taxes and transportation to the department during the warranty without any additional payment by the department

22.FULLY AUTOMATIC COVER SLIPPING WORKSTATION

Cover slipper
1. Should produce slides with superior optical quality for reliable long-term storage
2. It should allow for each single glass slide separately and without bubbles
3. It should have active carbon filters for safety.
4. Should be capable of cover slipping 300-400 slides per hour
5. Should be able to handle slide racks of various manufacturers and should be adaptable to individual laboratory requirements
6. Should be used with common range of mounting media including mounting with wet mountants. Should dispense adequate amount of mountant for coverslipping each slide.
7. Should be equally useful for histopathology and cytopathology slides
8. Should be highly reliable, cause minimum wastage and form a fully automated walk-away system
9. The equipment should be USA- FDA and CE
10. Instrument should have an operating voltage suitable for Indian plugs.
11. Voltage supply 230 V-50/60 Hz.
12. UPS with battery of 2 hours backup shall be supplied.

23.FULLY AUTOMATIC IHC STAINER

Automated immuno histichemion Prosser (Stanior)
AUTOSTAINER FOR 1HC AND ISH Fully automated
1. Should independently benchmarked clones.
2. Preserve morphology and integrity of precious tissue.
3. Should dispense reagent in a highly controlled and more consistent manner.
4. Should have immediate reagent access with realtime measurement.
5. Computer and suitable UPS with warranty

24.FULLY AUTOMATED HIGH THROUGHPUT MULTI STRAINER

1. High throughput system should be with multiple protocols.
2. System should be capable for running H&E, PAP and other special staining protocols
3. Should be capable to Load multiple slides racks/basket
4. The Intuitive software to perform separate protocols simultaneously with multiple baskets in process should be available
5. Provides all the information required for routine operation from a single screen shall be tthere
6. Shall have USB connectivity to allow rapid access to data and protocols
7. Units shall have 4/5 independently-heated positions for drying slides
8. Shall have Complete with 6-8 water stations, 26-28 reagent stations, and a total of 4-6 configurable doors for loading and unloading
9. With the touch of a single button, the software shall schedules runs, allocates reagents, optimizes the reagent plan and calculates the most efficient route for each protocol
10. System should be capable to easily modify suggested staining protocols
11. Shall have Edit capabilities for up to 8-10 active protocols.
12. The equipment should be European CE and USA-FDA
13. Demonstration of the equipment will be required
14. System shall be supplied with UPS of 2 hours battery backup & AC of 2 ton split with stabilizer.

25.AUTOMATIC TISSUE PROCESSOR

The equipment should be carousel type with 12 stations of 4 litre each; 9 reagent stations and 3 wax baths. The system should have inbuilt vaccume with fume control.
Metal tissue basket shall have less base diameter compare to upper diameter to avoid sticking of basket and capacity of 180 or more cassettes.
Audible alarm, error message and warning codes should be available.
Shall have ergonomic control panel with full protected keyboard and LCD should be available.
System shall have easy editing and changing of programs, even during a processing run.
Auto restart function should be available.
Infiltration time separately programmable for each station should be available.
The equipment should have freely selectable programs.
Drain time should not exceed 60 sec.
Possibility of interrupting an automatic process for reloading or removing cassettes for special applications before the end of a run should be available.
Basket should automatically immerse in a station during the power failure.
5KVA online UPS support with minimum 6 hours power back up should be available.
The equipment should be USA-FDA /European-CE/ BIS Approved

26.GROSSING STATION WITH FUME HOOD

GROSSING STATION WITH FUME HOOD
1. Minimum 58-65 inches long.
2. Heavy duty stainless steel seamless construction with polish.
3. Single compartment sink.
4. Chrome plated hot and cold water taps with swivel neck.
5. Foot operated faucet control for hot and cold water.
6. Magnetic instrument holder.
7. Top mounted fluorescent lights.
8. Thermoplastic cutting board.
9. Magnifier (3-4x) with light source.
10. Halogen light mounted on swivel lamp.
11. Formalin dispensing system with minimum 4-5 liter capacity.
12. Adjustable shelves.
13. Digital platform scale, 2 kg capacity.
14. Dissection boards.
15. Spray hose assembly with hand control.
16. Small specimen rinse basket with stainless steel holder/strainer.
17. Dissecting area rinse to provide a constant flow of water to work area.
18. Three side rinse or end rinse to provide a constant flow of water to the work surface.
19. Self -contained ventilation system with replaceable filters.
20. Dictation equipment with foot control or voice operation.
21. Camera mount facilities for use of a digital or 35mm SLR camera.
22. Eyewash assembly.
23. Pull-out drawer and Pull-out writing platform.
24. Stainless steel c-fold paper towel holder and Removable measuring rule in cm/in.
25. Power requirement: ac 220 ± 155,50-60hz
26. After sales service in Delhi/NCR.
27. System should have facility for UV light disinfection and protected.
28. Should be USFDA / European CE certified.

27.CYTOSPIN SPECIFICATION

1) Bench top cytocentrifuge for cytology specimens and should be capable of thin layer cell preparation for retrieving from various body fluids and preserving their morphology.
2) Should have a capacity to process 12 specimens at a time.
3) Should be provided with standard accessories such as cytoclips to hold the re-usable sample chamber against microscopic slides for preparation.
4) Clips should be autoclavable and re-usable of stainless steel.
5) Should be resistant to fluid spillage on the electronic components.
6) Re usable sample compartment / chambers.
7) Safety alarms for any abnormal operation should be available.
8) Microprocessor based controls and programming for time and speed.
9) Lid lock system with view port on the lid.
10) Should be compliant with international standards for electrical equipment requirements for laboratory use.
11) Power input : 220 volt, 50 Hz.
12) Speed capacity – 500 – 2000 PPM at least.
Note: Should perform calibration as the equipment every six months during warranty and free service period. Testing and measuring equipment used should be traceable to SI units through national / international standard.

28.TRINOCULAR MICRO SCOPE WITH CAMERA WITH COMBINED VIDEO DISPLAY AND IMAGE ANALYZER

Trinocular Micro scope with camera with combined video display and image analyzer
• Trinocular Microscope with Digital Camera Attachment
Viewing Head- Seidentopf Type Trinocular Head Inclined Adjustment at 30° and360° rotatable Interpupillary Adjustable distance is 48mm – 75mm Diopter
Adjustable range ± 5° Anti – fungal system
Objectives- Infinity Plan Achromatic objectives for excellent image : 4x, 10x, 40x (Spring), 100x (Spring, oil) Anti-fungal, Parfocal, Parcentric& color-coded, paired wide field eyepieces 10x (F.N.20), Highpoint paired eyepieces (F.N.20), Abbe condenser with high performance aspheric lenses for bright & uniform illumination throughout the field of view, Window in arm for convenient carrying & Ergonomic design for user convenience
Stage- Double layer Reckless mechanical stage for user safety and comfort, Double Slide holder Graphite Coated Surface, Anti-corrosive & anti-friction Stage Size: 216mm x 150mm Moving range: 75mm x 55mm Controlled with a long right hand stage handle, specimen stage focus-lock, computer and LCD
Connectivity SMPS power supply for flicker free illumination, manufactured license from company
Warranty-
Three Years on materials and workmanship.
Demo is must for system.
BHU User Customer List
Customer working & service certificate from atleast three places manufactured license from company
MICROSCOPE Digital Camera - Imaging System Compatibility for Any Kind of Microscope for Bright Field Microscopy:
Technical features:
Scientific Camera for fast color real-time live imaging
Full view of live image on the monitor
Resolution of 3.0 megapixel in standard mode
Pixel size: 3.2 micron x 3.2 micron active pixel
Several user selectable image size
Still Images (Manually & Time-Lapse) and Videos can be captured with a click.
Image can be stored in computer directly and if desired can be transferred onto the media card from the computer. Compatible with all kind – Monocular, Binocular &Trinocular Microscopes and any make of Compound Upright, Inverted and Stereo Microscopes. Image analysis and processing Software is compatible with Windows XP, Vista, and Windows 7 & 8.Micrometry – all kind of measurements possible, with software complete processing of image is possible.

29.FLUORESCENCE MICRO SCOPE DOUBLE HEAD

1. Upright, Epi-Fluorescence microscope
2. With long life Transmitted LED illumination having long life of more than 40,000 hours.
3. Applications: Light and Fluorescence Microscopy of Cells and tissue sections.
4. Eyepiece: 10X
5. Nosepiece: 6x revolving nosepiece (capable of accommodating up to 6 objectives) mounted on ball bearing with highly precise click stops and should have slots for upgradation for DIC.
6. Objective: infinity corrected fluorescence grade objective with PLAN flatness correction 20X, 40X, 63X (oil immersion) and 100X (oil immersion) with correction collar.
7. Microscope should have LED fluorescence illumination (life time – Approx. 25000 or better) suitable for DAPI, GFP/FITC, TRITC, TXR, Cy3 and Cy5.
8. Microscope should have 5/6 position filter turret along with Fluorescence Bandpass filters for DAPI, GFP/FITC, TRITC/Rhodamine.
9. Camera: Peltier cooled (-20 below ambient) CCD/CMOS camera having dual mode Mono &Colour with true 5 MP resolution. Exposure time - 1 msec – 600 second or better, Pixel size of approx.3.4µm x3.4µm.
10. Software for image capture and analysis should be compatible with Windows OS.
11. Software to control the fluorescence LED illumination and camera to acquire the images with control of all the camera features like exposure, gain, binning, gamma, region of interest. Software should able to do Multi- Channel imaging/ Image overlay, Automatic recording of experimental parameters for reference or reloading for subsequent experiments, annotations, image gallery and image comparison, Merge, crop and image arithmetic, Intensity, length and area measurements, Measurement of area
intensities through image stacks, Online measurement whilst displaying a live image
12. Exported formats: JPEG, TIFF, BMP, PNG (image), CSV (raw data)
13. The software, camera and the microscope should be from the same manufacturer for ideal control of the system.
14. Computer:
i. Processor: 3.2GHz 6M (with i5 processor) and 8 GB RAM,
ii. Memory: 500 GB HDD
iii. 1GB Graphic card
iv. 4 USB Ports and an Inbuilt Removable disc drive: DVD RW Drive
v. Interface of PC: at least 24 inch TFT Monitor with Keyboard and Mouse
vi. Operating System: Window 7 Professional (64 bit)
vii. 1KVA online UPS should be provided.
15. Miscellaneous: - Dust cover, all wires, cords, connector and standard accessories needed for proper functioning of the microscope
16. UPS: - At least 01-hour power backup for both Microscope and Computer.
17. Training and Demonstration: - Training of students / staff/ faculty in equipment maintenance by the certified company engineer and the specifications quoted should be demonstrated on site at the time of
installation.
18. Installation, commissioning, training etc. free of cost. One additional training session to be done during the three years of warranty period. This training session is in addition to the first training done after installation.
The training must demonstrate all the techniques mentioned in the specification or additional if applicable.
19. The manufacturer has to guarantee relocation of the system once the permanent

department building gets ready (1-2 years) for operation which will be conveyed at the time by the institute. The dismantling, packing, insurance, transport, material handling, system support, unpacking, reinstallation and commissioning of the system with test running and its conformity must be for free of cost.	12

30.EMBEDDING STATION WITH HOT & COLD TABLE & PARAFFIN DISPENSER

The equipment should meet the following specifications:
1. Microprocessor controlled bench top unit with high specimen throughput.
2. Paraffin reservoir capacity should be a minimum of 3 liter
3. Paraffin reservoir temperature setting range from 45°C to 70 °C with +/- 1°C steps
4. Paraffin Wax level indication on display should be available.
5. Ample cold plate to accommodate at least up to 60 blocks.
6. Refrigerated spot integrated in cold plate to assist tissue orientation
7. Cassette bath to store at least up to 100 cassettes
8. Cassette tray should have the capacity to contain at least 6-8 cassettes
9. Mold warmer temperature programmable from 35°C to 70°C with +/- 1°C steps
10. Work surface temperature programmable from 45°C to 70°C with +/- 1°C steps
11. Paraffin reservoir, cassette bath, mold warmer and work surface temperature should be individually temperature adjustable.
12. Instrument should be programmable for work-days, work starting time, work end time, real time and day of the week for Automatic switch on/off of the instrument.
13. 1-way paraffin flow rate adjustment must be available up to 100% flow.
14. Illuminated workspace for clear visibility of the processing.
15. Activation of paraffin flow via foot switch or using the pressure clip should be available.
16. Spacious paraffin collection tray to collect excess paraffin from work surface should be available.
17. Separately heated paraffin dispenser with temperature 45°C to 70°C depending up on the paraffin reservoir should be available.
18. Suppliers should have a good number of installation base with efficient after sales support with proven track record.
19. The equipment should be USA- FDA/European- CE approved model.

31.DEEP FREEZER (-20)

Capacity : 600-700 litre
Inner shelf: 6-9
Refrigerant: CFC free
Temperature control: Micro-processor controlled, Digital display with temperature resolution of 0.1°C
Alarms: Low/high temperature, power failure
Door closing and locking: Adjustment: self closing door with key door lock
Adjustable leveling feet standard (optional casters)
Power supply: 210-240V/50-60 Hz
5. System must be energy efficient refrigeration system. Compressor should be capable to run any voltage between 210-250V. freezer must ISO 9001 standerd quality test requirements and IEC61010 Electrical safety European CE & UL certified and WEEE directives.

32.DEEP FREEZER (-80)

80 DEGREE FREEZER
1. Upright ultra-low temperature freezer (-80 degree cent.), Model should be between 400-450 litters capacity. Freezer should have 5 compartments with five inner doors with stainless steel interior to prevent scratches, rust and oxidation. Construction should be of polyurethane foam 125-130mm thick insulation.
2. Freezer should have programmable operating temperature from -50 to 80 degree cent. With 1 degree cent increment along with programmable microprocessor controlled with membrane keypad and eye level control panel.
3. It should have heated air vent or vacuum release port and front mounted filter.
4. Freezer should have security key locks on the outer doors. System should have diagnostic software to identify any fault. System should have adjustable audible and visible alarms for temperature, power failure, system failure, battery low etc. it also should have an option for remote alarm port. System must use CFC-FREE, HCFC-FREE nonflammable refrigerants and refrigeration.
5. System must be energy efficient refrigeration system. Compressor should be capable to run any voltage between 210-250V. freezer must ISO 9001 standerd quality test requirements and IEC61010 Electrical safety European CE & UL certified and WEEE directives.
6. Freezer should have efficient power consumption not more than 13.6KW/day, preferably in the range of 10 to 13 kWh/day.
7. Freezer should be able to hold at least 15 racks and 240-boxes of 2" height vials. System should have the sample (2"vials) capacity of 24000 or more.
8. System should have single condenser fan reducing energy consumtion and made of recyclable material. Freezer should have electric supply of 230v/50Hz, 10 amps, and single phase.
9. Deleted

HAEMATOLOGY AND FLOW CYTOMETRY

33. FULLY AUTOMATIC BLOOD COUNT ANALYZER (5-PART)

Tender Specification
1 Automated Blood Cell Counter is used to count various types of blood cells in the blood.
2 Automatic blood cell counter that measures 26 parameters including 5part differential of WBC is required complete with printer.
3 Parameters to be measured are -WBC, LYM%, LYM, MON%, MON, GRA%, GRA, RBC, HGB, HCT, MCV, MCH, MCHC, RDW, PLT, MPV, PCT, PDW. Retic, Retic% NE, NE% L4, L4%, MO, MO%, EO, EO%, BA, BA%, Should be reportable parameter
4 Histogram WBC 5-part diff distribution, RBC distribution, PLT distribution. WBC Seatogram
5 Measurement Principle Electrical impedance method (WBC, RBC, HCT, PLT) Cyanmethemoglobin colorimetric method (HGB) /Hydro Dynmic Focusing (DC Detection), flow cytometer method (using a semiconductor laser) Cyanide free SLS hemoglobin method.
6 Low Sample Volume less than 250 µL
7 Throughput > 70 samples per hour.
8 Linearity Ranges WBC 0 -80.0 * 10^3/µL RBC 0.20-7.50 * 10 /µL HGB 2.0-25.0 g/dL HCT 10.0%-70.0% PLT 10-999 * 10^3/µL
9 Reproducibility (CV) WBC RBC
HGB HCT PLT LYM% MON% GRA%
10 The sampling probe should be automatically cleaned off, so that any blood stack doesn't occur.
Various sensors should check the condition of the instrument. If any abnormality is detected, an error message be displayed so that occurrence of trouble is prevented
13 External Printer.
14 System as specified-
15 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
16 The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of
80%.
17 Power input to be 220-240VAC, 50Hz fitted with Indian plug
18 Resettable over current breaker shall be fitted for protection 19 • Suitable voltage
corrector/stabilizer
20 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.
21 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.
22 Should be compliant with IEC 61010-1:covering safety requirements for electrical equipment for measurement control and laboratory use.
23 Should be US FDA or European CE from notified body approved product.

34. PENTA HEAD MICROSCOPE

Should have Teaching Head for five persons(Including the main observer) FOV20mm in all Heads. Should have dual color built in LED Pointer
Should have Infinity corrected optical system upgradable to DIC and Fluorescence
Microscope should have ergonomic stand with atleast 12V50W Halogen Illumination or LED. System should have blue day light filter
Should have Wide Field Trinocular Observation tube with FOV 20mm & inclined at 30 degree or less. Provided with paired WideField Eyepieces, System should have at least 2 position 1X& 2X intermediate magnification changer to achieve total magnification of 2000X
Eyepiece Lens shall be 10X or higher/20mmFOV or higher with diopter adjustment facility in both
Shall have Quintuple Revolving Nosepiece.
Shall have the Objectives of 4X, 10X,20X,40X,100XO Plan Achromats
The mechanical stage with double sliding holding capacity shall be ceramic coated
The Condenser shall be have bright Field Applications with NA 1.1 or better
Image Analysis System shall be - Digital HD Scientific Grade Camera (CMOS/CCD) 5 MpIX OR higher resolution Frame rate 5FPS at Full Resolution, Binning 2x2, 4x4,USB /Fire Wire interface with imaging software having features like image Stitching, measurement, extended depth of field, segmentation & count, image stacking, Time lapse Imaging, auto exposure & white balance
The Computer Work Station shall be Core i3 Processor with 320GB HDD or higher, 2GB or higher RAM, DVD
R/W, 52" or higher LED Color Monitor/TV, UPS, Windows 7 or 8 OS, Optical Keyboard& Mouse
Product must be **USFDA** and documents shall be enclosed in the technical bid
It shall be supplied with all covers, accessories, furniture to keep it at visualized height in order to be functional at the time of installation

35. FLUORESCENCE MICRO SCOPE DOUBLE HEAD

1. Upright, Epi-Fluorescence microscope
2. With long life Transmitted LED illumination having long life of more than 40,000 hours.
3. Applications: Light and Fluorescence Microscopy of Cells and tissue sections.
4. Eyepiece: 10X
5. Nosepiece: 6x revolving nosepiece (capable of accommodating up to 6 objectives) mounted on ball bearing with highly precise click stops and should have slots for upgradation for DIC.
6. Objective: infinity corrected fluorescence grade objective with PLAN flatness correction 20X, 40X, 63X (oil immersion) and 100X (oil immersion) with correction collar.
7. Microscope should have LED fluorescence illumination (life time – Approx. 25000 or better) suitable for DAPI, GFP/FITC, TRITC, TXR, Cy3 and Cy5.
8. Microscope should have 5/6 position filter turret along with Fluorescence Bandpass filters for DAPI, GFP/FITC, TRITC/Rhodamine.
9. Camera: Peltier cooled (-20 below ambient) CCD/CMOS camera having dual mode Mono &Colour with true 5 MP resolution. Exposure time - 1 msec – 600 second or better, Pixel size of approx.3.4µm x3.4µm.
10. Software for image capture and analysis should be compatible with Windows OS.
11. Software to control the fluorescence LED illumination and camera to acquire the images with control of all the camera features like exposure, gain, binning, gamma, region of interest. Software should able to do Multi- Channel imaging/ Image overlay, Automatic recording of experimental parameters for reference or reloading for subsequent experiments, annotations, image gallery and image comparison, Merge, crop and image arithmetic, Intensity, length and area measurements, Measurement of area
intensities through image stacks, Online measurement whilst displaying a live image
12. Exported formats: JPEG, TIFF, BMP, PNG (image), CSV (raw data)
13. The software, camera and the microscope should be from the same manufacturer for ideal control of the system.
14. Computer:
i. Processor: 3.2GHz 6M (with i5 processor) and 8 GB RAM,
ii. Memory: 500 GB HDD
iii. 1GB Graphic card
iv. 4 USB Ports and an Inbuilt Removable disc drive: DVD RW Drive
v. Interface of PC: at least 24 inch TFT Monitor with Keyboard and Mouse
vi. Operating System: Window 7 Professional (64 bit)
vii. 1KVA online UPS should be provided.
15. Miscellaneous: - Dust cover, all wires, cords, connector and standard accessories needed for proper functioning of the microscope
16. UPS: - At least 01-hour power backup for both Microscope and Computer.
17. Training and Demonstration: - Training of students / staff/ faculty in equipment maintenance by the certified company engineer and the specifications quoted should be demonstrated on site at the time of
installation.
18. Installation, commissioning, training etc. free of cost. One additional training session to be done during the warranty period. This training session is in addition to the first training done after installation.
The training must demonstrate all the techniques mentioned in the specification or additional if applicable.

36. AUTOMATIC URINE ANALYZER

Should be able to test minimum of specific gravity, pH, Glucose, Protein, Ketone bodies, Bilirubin, Blood, Nitrates, Leukocytes and urobilinogen, microalbumin, Albumin:Cratinine ratio.
Should be able to test at least 500 samples per hour.
Should have CE\FDA(US) certification.
Should have the capacity of reading strips below ten parameters which must include microalbumin, and Albumin:Cratinine ratio.
Should have LCD screen with soft key panel for sample processing as well as
Should have an inbuilt printer to generate printed out reports. Facilities for connection to external printer should also be available.
Should have a memory of at least 1000 results.
Should be able to communicate to the LIS. Dataoutput in the form of CSV file or any other mode which can be handled by the end user should also be
Should work on 220V 50Hz power supply.
Various urine strip pack size and the rates should be quoted and fixed for a
Start up kit of 3000 strips of 10 parameters needs to be provided along with the

37. FULLY AUTOMATED COAGULOMETER

Fully automated stand along coagulometer.
Should be a BENCHTOP analyser thereby minimizing space requirements.
Should be able to perform clotting, chromogenric and immunoglogical tests.
High throughput and rapid processing of STAT samples without the need to interrupt the analyser.
Should be a random, continuous analyser with continuous loading of samples.
Storage of calibration and their curves.
Windows compatible software.
Should be a touch screen analyser.
More than 70-100 samples on board.
n average throughput 40-60 test/hour
sutiable number of racks of smaple
More than 20 reagents on board.
In built Barcode for samples.
External Barcode for reagents.
The analyser should have US capability.
Should have more than 250 cuvettes on board capacity.
Should have patient data base capacity of at least 900 samples.
Patient results archiving.
System should have electronic security.
In built maintenance program should be present.
Following facility of storage of patient curves, a) Facility of storage of patient curves.
b) Should have automatic rerun and reflex programmes.
c) Should have an option for running parallelism for inhibitor studies.
Equipment should be able to perform following parameters:
PT, APTT, Fibrinogen, Free protein s, Protein C Chromogenic, Heparin LMWH and UFH, AT III, Plasminogen, Anit Plasmin, vWF Activity, DwRT Screen & Confirm, Silica Based LA, D Dimer (FDA for VTE Exclusion), APCR V, Homocystine.
Should provide calibration certificate for the hardware traceable to National or international calibration agency.
Consumables for running of 2000 tests f PT, APTT to be provided along with the analyser.
Compatible UPS with a 30 min supply backup to be supplied along with the equipment.
1 year warranty and after warranty 3 year CMC which will be included in the price comparison.
Manufacturer/supplier should have ISO Certification for quality standards.Should be DA, CE, UL or BIS approved products.
User/ Technical .Maintenance manual to be supplied in English.
Certificate of calibration and inspection from factory.
List of important spares and accessories with their part number and costing.
Penalty Clause: Down time penalty clause. If the equipment is not repaired within 04 days of informing the company. 2% of the total cost will be charged as penalty for every 07 days.

38.CYTO CENTRIFUGE

• The equipment should be a Bench-top centrifuge for cytology specimens
• The equipment should be capable of thin-layer cell preparation for retrieving cells from various body fluids especially paucicellular fluids and preserving their morphology
• Cell preparation system, compact and slim.
• Totally sealed head which could be autoclaved.
• Programme speed from 100 to 4000rpm.
• Run time from 1 to 99 minutes with specimen safety alarm.
• Silent in operation.
• Totally sealed environment during operation.
• Built-in brake for immediate sample retrieval.
• Unique chamber assembly of 3 elements: Stainless steel slide clips, Microslide and Sample chamber with filter cord attached.
• Disposable sample chamber for high risk specimen.
• System functions only when lid is locked.
• Alarms for over speed and out of balance position.
• Should run at least up to 24 samples at a time.
• Concentrates cells as 6 mm diameter monolayered.
• Display of the speed and time left to complete the cycle.
• Should be complete with all accessories and consumables and instruction manual.
• To work at 220-240 volt.
• Documents supporting track record & satisfactory performance from Institutions of National importance
(Minimum of One Institute) should be provided.
• USFDA and / or European CE certified

39.AUTOMETER ESR ANALYZER

Automated ESR analyzer based on the modified Westergren method
• ESR results auto-corrected at 18 °C
• Reliable and accurate results in 30 minutes
• Excellent correlation to the standard 1 hour Westergren method
• Useful for creating Safe and Healthy Environment for the user
• Maintenance free
Technical Specifications
• Application area: Blood Sedimentation Rate Analysis
• ESR tubes: 9/120mm, 1.6ml Vacuum/Non-vacuum ESR
• Loading Capacity: Maximum 10 samples
• Loading Pattern: Random Access
• Throughput: 20 samples per hour
• Analysis time: 30 minutes
• Results: In Westergren mm/hour (by interpolation)
• Test Tube: 1.1ml -1.28 ml blood (Non-vacuum ESR tube)
• Temperature correction: Results autocorrected to 18 C (Manley Table)
• Measurement principle: Infrared (IR) detection, transmission reading at start and during 30 minutes of sedimentation
• Reading resolution: +/- 0.2 mm; Result resolution: +/- 1 mm
• Measurement range: 1 – 140 mm/hr*; Reproducibility: C.V < 5%
• Display: LCD with backlight
• Interface: LPT for printer
• Standard Operating Temperature: 15 °C to 30 °C
• Dimensions (w x h x d): 22 cm x 21.6 cm x 17.5 cm
• Weight: 2.5 kg
• Power Requirements, External power supply : 110-220V AC

40.HPLC Electrophoresis Machine

A. **Horizontal electrophoresis system**
1. Horizontal electrophoresis systems should be able to run the gel sizes of 7 x 10cm, 7 X 7 cm, and 15 X 10,
15 X15 cm in two different units and the gel trays should be supplied along with the Gel tank with safety lid.
2. The supplied gel trays should be UV proof and the trays can be directly kept on the UV Transilluminator and should have a integrated fluorescent ruler in the tray. The ruler should get illuminated on exposure to UV Light for easy and safe calculation of the band movements.
3. A system should include tape free gel casting module for leak free operations.
4. A system should include two 1.5mm combs, 15- & 20-well fixed height combs each.
5. A system should have the option for adjustable height combs with comb holders.
6. Migration rate of Bromophenol Blue dye should be similar to 4.5cm/hr(at 75 V).
7. A system should have a lid with the safety Jacks, which breaks the circuit when the lid is running.
8. Should be provided with a bubble leveler for even gel casting.
9. The gel caster should have height adjustable screws for balancing the uneven platforms for uniform gel casting.
10. The electrodes should be color coded
11. The Lid should have a safety option so that the lid cannot be closed in the wrong orientation.
12. The Lid should have a integrated cables to connect it to the power pac directly.
13. A system should be capable to run precast ready agarose gels and Hand Cast gels.
14. The PreCast Gels should be quoted from the same supplier and should be quoted in the options.
B. **Vertical Electrophoresis Unit**
Mini Unit
The system should be capable of accommodating & simultaneously running 1 to 4 mini gels in less than an hour.
• The system should include a casting stand and glass plates with permanently bonded gel spacers for leak proof
casting of gels
• The system should be capable of accommodating interchangeable modules for tank transfer, 2-D electrophoresis
& electro-elution.
• The system should come with molded, one-piece buffer dam when running (only) one or three gels.
• The system should come with color coded electrodes
• The system should be capable of accommodating 5 well, 8/9 well, 10 well, 15/16 well & Prep/2D combs for sample volumes ranging from 20-150 µl or better.
• System should be supplied with a starter kit of acrylamide solution with dissolved fluorescence dye such that the
PAGE gel after running does not require any staining for visualizing proteins in gel.
• The system should be capable of accommodating Gel size (W x L) approximate 8.0 x 7.5 to 10X 10 cm maximum.
• The system should have buffer volume approximate 800ml or less. Should have EN61010 safety

C. Power Pack for running Horizontal & Vertical Gel Electrophoresis
The system should have:
1. Output specifications - 500 V, approximate 2.0 A or more, 500 W
2. Type of output - Constant voltage, constant current, or constant power with automatic crossover
3. Output terminals - 4 pair recessed banana jacks floating in parallel
4. Timer control shall be fully adjustable
5. Certification EN61010-1
D. Western Blotting Specification
Wet Blotting Module-
It should be compatible with the Mini SDS-PAGE Unit.
It should be capable of doing the western blotting of the mini gels.
It should be able run minimum 2 blots simultaneously
It should have a cooling pack and blotting cassettes to blot two gels simultaneously.
Compulsory accessories: Gel rocker shaker for staining of gel and Adjustable tip spacing electronic pipette 5-125ul for gel loading and sample handling.

41.AUTOMATIC SLIDE STAINER

Automatic slide stainer
Autostainer XL- H & E stainer
Compact, space saving Imported H&E stainer for routine applications
• High specimen throughput
• Simultaneous realization of various different staining protocols
• Exact incubation times
• Continuous slide unload / reload function without having to interrupt a staining cycle or open the lid
• Simple, menu-driven programming
• Incubation times and sequence of use of reagent stations freely programmable
• Integrated oven for optimal slide drying
• Reagent containers can be exchanged quickly and easily
• Integrated fume extraction system with activated charcoal filter
• Minimized user exposure to hazardous reagent fumes
• Easy-to-clean and resistant surfaces made out of polyester epoxy resin and stainless steel.
Specimen slide throughput: at least 200 specimen
Should have following features:
Slides per hour(depending on the selected program –up to 600 slides per hour)
Loading capacity: 11 slide racks
Loading capacity per slide rack: 30 specimen slides
Total number of processing stations: 26
Reagent stations: at least 18
Reagent container volume: 450 ml
Number of wash stations: max. 5
Oven: 1
Oven chamber temperature: off or 30 °C to 65 °C
Incubation time setting: from 0 sec. up to 99 min, 59 sec.
Load / unload stations: 1 each
Permanent memory capacity: 15 programs, up to
25 program steps each
Voltages: 220 V - 240 V
Other Conditions :
• Should have CE certificate
• Should have minimum 10 installation in government institution.
• Should have factory trained engineer support for service. With past record of more than 95% on time service support.

42. LASER FLOW CYTOMETER

Specifications:
1. System with minimum four lasers- 488 nm, 640 nm, 405 nm and 355nm lasers
2. Capability to simultaneously image minimum eight colours .
3. Should be able to use minimum sheath fluid capped at maximum of 1 litre per hour.
4. Should have the capacity to vortex the sample before analysis.
5. Should have autocleaning function of the injector.
6. Should have the ability to use variable sample volume from 25microlitre to 4ml.
7.Sample flow rate: 25–100 µL/minute plus automated flow rate to acquire 35,000 to 70000 events/second or more i.e Should have low, medium and high flow rates
8. Computer with Suitable UPS
9. System maintenance: Automated startup & calibration, cleaning cycles, and shutdown
10. System Should be US FDA / European CE

43. SPECTROPHOTOMETER

1 Description of Function
1.1 UV/Vis spectroscopy is routinely used in the quantitative determination of solutions of transition metal ions and highly conjugated organic compounds.The instrument used in ultraviolet-visible spectroscopy is called a UV/vis spectrophotometer. It measures the intensity of light passing through a sample.
2 Operational Requirements
2.1 System should provide for analysis of Protein, DNA / RNA & Enzyme kinetics etc.
2.2 Microprocessor controlled Double beam spectrophotometer with scanning, kinetic and multi wave length facility ,Self check & self diagnostic facility and Auto wavelength calibration facility
3 Technical Specifications
3.1 Spectral: Wavelength Range 190-1100 nm Wavelength Accuracy:+/- 0.8 nm for full range Bandwidth < 2.0 nm Wavelength Reproducability:+/- 0.5 nm
3.2 Photometric: Photometric Accuracy + 0.006A at 1A Photometric Reproducibility + 0.002A at 1A Stability <
0.001A/nm Absorbance Range -3.000 to 3.000 Scanning Speed 6000 nm/min or better Stray light < 0.1% at 340 nm
3.3 Light Source : Xenon/Halogen/Duterium Lamp
3.4 Dual Detector: Photo Diode/Grafting based detector
3.5 Detection Mode %, Transmission & Absorbance
3.6 Large LCD display to view complete graphics /PC controlled
3.7 Advance version of compatible computer & printer
3.8 Monochromator: Min. 1000 lines/mm grating.
4 System Configuration Accessories, spares and consumables
3.5 ml. Cuvette – 1 pair
5 Environmental factors
5.1 Shall meet IEC-60601-1-2 :200(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 Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less
than 70%
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 30 minutes backup for the entire system
7 Standards, Safety and Training
7.1 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.2 Should be USFDA or European CE approved product
7.3 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.

44. AUTOMATIC SEMEN ANALYZER

The system should be able to analyze Semen.
The system should be able to analyze the semen in natural and non diluted condition.
It should have WHO paramaters for analysis like:
o Total Sperm Count o % Motility
o % Normal Morphology
It should give other parameters like
o TFSC - TOTAL FUNCTIONAL SPERM COUNT. o SMI - SPERM MOTALITY INDEX.
o MSC - MOTILE SPERM CONCENTRATION
The Instrument should be able to display all these parameters on screen.
The Instrument should be able to analyze the semen in less than 1 minute.
The instrument should have in built printer for the ease of result print out
Should have USFDA/European CE certified.

45. GLASSWARE

Measuring Cylinders
50 ml-----10
100 ml----10
500 ml------10
Pipettes
1ml to 5 ml-----20 each
Conical Flask
100ml to 1000ml----50 each
Reagent Bottles
100ml----100
500ml-----100
1000ml----100
Beakers
100ml------30
250ml-----30
500ml------30
Glassrods for staining rack- 60
Staining Trough-----60
Funnel
Small-15
Medium- 15
Large-15
Khom Tube---200
Test Tubes
Size
10x75-------1000
12x75------1000
16x100-----1000
The glassware should be of high quality BOROSIL Make for using in the laboratory.

CLINICAL BIO-CHEMISTRY

46. FULLY AUTOMATIC CLINICAL CHEMISTRY ANALYSER

A. MAIN CHEMISTRY ANALYZER UNIT
1. Fully automated, Discreet, Multi-channel, Random access clinical chemistry analyzer with ISE.
2. Assay modes: photometric end point, kinetic, indirect ISE, bichromatic and immunoturbidimetric.
3 Throughput: at least 250 or more tests per hour with ISE out of which at least 400 be photometric tests.
4 Sample type- plasma, serum, urine, CSF and other fluids analysis facility.
5. Sample loading: Atleast 60 sample positions with continuous loading.
6. Onboard parameter test: Minimum 40 onboard photometric parameters.
7. The system should have the facility of adding immunochemistry module.
8. The system should be able to take samples from primary / secondary tubes, sample cups.
9. System should have minimum 10 open channels.
10. The system should have facility for automatic rerun, automatic reflex testing and have facility for continuous loading of stat samples without interrupting the routine run .It should have capacity to detect bubble, viscosity check, hemolysis and low sample volume.
11. Photometer: multi-wavelength diffraction grating photometric system with wavelengths ranging from
300-800 nm.
12. The system should have menu for therapeutic drugs and drugs of abuse.
13. Lamp source: halogen/xenon lamp with life of atleast 800 hours. One extra lamp should be provided free of cost with the equipment besides the normal standard accessories.
14. Bar Code Reading facility for samples and reagents.
15. Sample and reagent probe: single/Separate probes for sample and reagents .
16. Sample probe: probe must have liquid level detector/sensor and independent washing facility. Also probe crash detection and sample clot detection facility should be there. It should use <25µl sample in
0.1µl increment.
17.Reagent probe: probe must have liquid level detector/sensor and independent washing facility with probe crash detection facility.
18. Reagent compartment should be refrigerated with temperature 4-8oC or better and humidity control.
19. Cuvettes: Permanent hard glass / quartz cuvettes/plastic cuvettes with onboard washing facility or disposable cuvettes.
20. Should have pre-& post- auto dilution of samples and re-run capability for out of range samples. Also there should be facility for serial dilutions in multipoint calibration.
B) Computer system
21. Personal computer having windows XP , Pentium IV processor, DVD –RAM , with monitor, keyboard and printer compatible with normal A-4 size paper.
22. Quality control: real time, individual and cumulative quality control with automatic programming with L-J graphs. Printout of QC charts & reports.
23. Software: i) Compatible, programmable windows based user friendly software with comprehensive data processing and management system. ii) Graphical user interface software for unidirectional and bidirectional communication. iii) LIS and HIS capability. Full technical support to link it to HIMS should be provided. It

should also be able to link to company's teleservice functioning for QC data / calibrators data downloading. iv) Complete backup of the database for calibration, control and patients sample result. v) At least 10,000 patient result storage and multitasking facility on computer.
C) Water purification unit:
24. All vendors should supply the compatible water treatment plant for the instrument based on RO or any latest technology, along with necessary plumbing and adequate size storage tank if required by the
equipment. They will have to check the hospital's water quality before supplying water plant. It would be the responsibility of the vendor to maintain the water quality for the equipment irrespective of the quality of the feed water. The vendor should also give separate prefilteration unit if required.
25. All related plumbing for whole instrument with suitable diameter pipes for input as well as drain water should be done by the company. Also suitable stand for water purification system and storage tank should be provided.
D) UPS
26. Equipment should be supplied with compatible online UPS for entire machine with atleast 60 min battery backup.
E) Other General Conditions
27. Should have US FDA /European CE from notified body approved.
28. On-site training: Comprehensive and full training of all users by suppliers for operating the equipment on site.
29. The manufacturer should provide 2 spare printer cartridges free of cost. Printer should be such that
it's cartridges are easily available.
30. Models quoted should be latest on production line of manufacturer and manufacturer's certificate for
this should be provided.
31. Logbook 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.
32. Complete circuit diagram and service manual and operating manual must be provided. User/technical/maintenance manuals to be supplied in English. Supplier must provide original documentary proof of the date and place of manufacturing of supplied equipment.
33. Certificate of Traceability for calibrators, traceable to national/international reference standards to be submitted by the firm.
34. Manufactures should also be manufacturing the reagents/kits needed for the machine.However, quality control sera may be of third party.
35. Assured supply of spares and consumables for 10 years at least.
36. Comprehensive warranty includes replacement of all parts which might require replacement even due to wear/tear which may affect the routine functioning of the equipment) for first one year. CMC rates for next 3 years after warranty (including accessories and RO system + UPS with batteries + computer system) to be quoted at the time of tender only. If due to some reason company is not able to repair the equipment, the equipment of similar specification and same throughput should be installed free of cost at the same term and conditions till the period is completed.
37. Cumulative cost (including cost of the equipment including 1 year warranty, and

CMC for next 3 years i.e. from second to fourth year and Price of the reagants/consumables/Solutions/Accessories etc for
3 years as per the mentioned workload) will be taken into consideration for evaluation of price. Price bid evaluation document attached in Annexure 1.
38. Where-ever applicable, the reagent wastage cost due to mechanical error of the equipment should be compensated free of cost by the bidder.
39. Based on the workload provided by the user department, the bidder shall have to quote all other items and their quantities which are likely to be consumed daily for the tests listed in the bidder quote document. Anything which is not quoted by the bidder in the technical and price bid document shall have to be supplied free of cost for the entire validity period.
40. Maximum down time for both equipments at a stretch should not be more than 48 hrs.
41. Installation and satisfactory functioning reports of atleast last 3 years.
42. Should be capable of up gradation and/or onsite integration if required.
43. Site preparation while installation including plumbing etc. to be done by the firm.
44. Compliance Report Performa (Mandatory) : Compliance report to be submitted in a tabulated and point wise manner clearly saying 'Yes/No' in the Compliance Proforma. The compliance report should be signed by Authorized signatory of the Manufacturer / Supplier.
ANNEXURE -1 Bidder quote for the Bio-chemistry autoanalyser 16 channel (1000 throughput)
• The bidder whose bid is lowest as per the total of amounts in A, B and C will be considered as L1 i.e. The sum total of Cost of the equipment(including 1 year warranty), 3 years CMC charges after warranty and Price of the Reagents/Consumables/ Solutions/ Accessories etc. for 3 years as per the mentioned workload
• The bidder must also quote the following in a tabulated PDF form. The rates quoted in this table shall remain fixed for first five years from date of installation.
A. Cost of the equipment (including 1 Year Warranty) B. 3 Yrs. CMC charges after warranty (CMC will be paid annually).
A. Cost of the equipment (including 1 Year Warranty)
C. TABLE – The Price of the following reagents should be quoted at the time of tender. These rate shall remain fixed for 5 Years from the date of award of contract-

S.No.	Name of Assay	Approx. No. Of Tests required for the Assay (Monthly)	Kits	Rate	No. Of Kits likely to be consumed (to the next higher digit if calculation leads to fractionsl no.	Cost of Kits (yearly consump - tion)	Cost of Kits (5 years consump-tion)
1	Glucose	6000					
2	Urea	6000					
3	Creatinine	6000					
4	T.Bilirubin	6000					
5	D.Bilirubin	750					
6	SGOT	6000					
7	SGPT	6000					

8	ALP	6000					
9	Amylase	750					
10	CK	750					
11	CK-MB	750					
12	LDH	750					
13	Sodium	6000					
14	Potassium	6000					
15	Multi Calibeator / specific calibrator	Usage according to specified frequenc					
16	Quality Control Sera	Usage according to					
	normal & abnormal	specified frequenc y					
17	Any other consumabl e viz. Lamp, disposable s, wash	Usage according to specified frequenc y					

•

The Rates of all consumable/accessories like tips, lamp, electrodes, disposables, buffer solutions, wash solutions or any other reagent for the day to day running of the equipment should be included at the time of tender and should be quoted in the table C on the basis of the above projected work load.
• CMC charges will be paid annually after expiry of warranty. Any amount quoted in table C shall be
paid at the time of actual purchase of the kits and consumables.
• The Price of the reagents for other tests not mentioned in the above table but which are available on the equipment shall be quoted at the time of bid only (If needed to be started in future).these rates will also be frozen for five years. However, rates for these parameters will not be used for price bid evaluation.
• Onboard stability of reagents should be at least 30 days for the parameters frequently used and at least
45 days for the less frequently used parameters and shelf life of reagents should be at least 6 months.
• The system must be supplied with necessary pre-requisites and start up kits for installation and training free of cost as per the mentioned workload for 2 months for all the parameters mentioned in table (Annexure 1).
Calibrators and Controls (normal and abnormal) for all the above tests in suitable

volume for above mentioned workload and any other liquid consumables /buffer solutions/wash solutions/accessories for the above mentioned workload must also be provided free of cost.
• Any consumable not quoted in this table but essential for performing the above listed tests shall have to be supplied free of cost for the entire workload during the validity of the contract.

47. FULLY AUTOMATIC CHEMILUMENESCENCE IMMUNOASSAY ANALYZER

1. Fully Automated immunodiagnostic system based on latest Chemiluminescence technology.
2. Continuous loading facility of minimum 50 samples.
3. Can accommodate multiple sample tube size / sample cups.
4. Universal barcode reader should be able to read multiple barcode type.
5. Capability to do the assay in continuous, random, batch & stat mode.
6. Facility to process various body fluids like serum, plasma, urine etc.
7. Throughput of up to or more than 200 tests per hour with random access.
8. Facility for detection of clot, bubble, viscosity and inadequate sample.
9. Sample volume should be 10 to 200 µl depending upon the analyte.
10. Facility for onboard dilution and reflex dilution for high and abnormal samples.
11. Should have disposable tip sampling system / effective wash technique to prevent carryover.
12. At least 40 different parameters should be available on board and 15- 20 parameters must be done at one time.
13. The reagent should be ready to use.
14. Continuous access to loading and unloading reagents is possible.
15. Inbuilt refrigeration system with controlled temperature and humidity.
16. Capability of inbuilt inventory management system for reagent.
17. Calibration stability should be at least 2-4 weeks depending upon parameters.
18. Capability of bar-coded stored master curve with two point calibration.
19. Inbuilt QC system to monitor the quality of result obtained.
20. Should have the self-diagnosis and error recovery system with on board operation guides for efficient trouble shooting purpose.
21. Patient result should be available both test wise / patient wise with storage of at least 5000 results.
22. Online status for worksheet, sample, reagent, tips, quality controls.
23. Compatible to the laboratory information system for online computerization of patient report.
24. Should have the facility to collect both liquid and solid waste for disposal.
25. Should be European CE and USFDA approved.

48. REFRIGERATED CENTRIFUGE

Design and operation:
• Stable, sturdy all-steel design with stainless steel rotor chamber, should be easy to clean corrosion resistant paintings.
• Provision of both drain and condensed water collection container.
• Microprocessor controlled.
• Programmable memory with temper proof program saving facility, with parallel saving of at least 30 programs.
• CFC free refrigerant.
• Various formats of Swing-out rotors with metal buckets and with wind shields that should be able to accommodate at least the following:
➢ Sixteen 350ml and/or 450ml single, double, triple, quadruple/quintuple blood bags with SAGM bag and empty satellite bags with In Line filter system
• Removable plastic adapters to hold single/ double/triple/ quadruple blood bags with partition in every bucket.
• Insert with hook adapter to spin buffy coat or small volume of blood and balancing weights for inserts.
• Automatic lid lock.
Speed and force:
• Maximum speed at least 4,000 rpm to 4500 rpm
• Maximum RCF (Relative Centrifugal force) for blood bags: 6000g-65000g.
• Acceleration and deceleration profiles should be independently adjustable with at least nine brake levels and option for free coasting
• Speed variation: microprocessor controlled rotor speed to within 10 rpm of set value.
• Temperature control
➢ Range at least: -20°C to +40°C.
➢ Adjustable in 1°C intervals
➢ Microprocessor controlled rotor temperature within 1°C of set temperature regardless of centrifuge speed.
• Programmable centrifugation time: 0min-99hr with minimum resolution of 1 minute.
• Digital display for time should have display resolution of at least 2 digits, speed/RCF display resolution of 4 digits and time display resolution of 3 digits.
• Should incorporate alarms for imbalance detection, lid interlock, over temperature, rotor over speed.
• Motor imbalance detection: automatic shutdown of centrifuge if rotor load is out of balance with appropriate indicator.
• Power requirement: 220/240 volts, 50 Hz. Single phase AC supply.
The equipment shall be suitable for operation from 0 to 40°C at 90% relative humidity. Electronic circuitry shall be tropicalized for this ambient condition.
• Noise level within 60 decibels.
• The equipment should come with customized castor for changing location.
• Protection of data: in event of power interruption or complete failure, data should remain stored indefinitely.
• Should have a provision for external connectivity.
• It shall have a security lock to prevent unintentional switch off and also unauthorized opening of the equipment.
• Automatic line voltage corrector/voltage stabilizer.
• A line voltage corrector of appropriate rating (10 KVA or as per the requirement of equipment) should form part of standard configuration.

• Copper wound single phase automatic line voltage corrector conforming to IS: 9815(PLI)/94 with latest amendments or equivalent international standards fitted with a voltmeter and switch to indicate output/input voltage.
• Input voltage: 140-280 V, 50 Hz, output voltage: 220 V±10%.
• Input output voltmeter and amperemeter. Protection for high low voltage cut off, overload and short circuit protection.
• Equipment should be supplied with 2 meter cord at input and fitted with plugs of appropriate rating.
• Make of the line voltage corrector shall be indicated.
• Certifications:
➢ Product certification: European CE Class II A or US FDA certified.
➢ Quality certification: ISO 9001
➢ Electrical safety: Equipment meets electrical safety specifications such as that of IEC/EN 61010-1"
• Additional requirements:
➢ All equipment should specify qualifications for design, installation, operation and performance.
➢ Validation and calibration reports should have traceability to applicable national and international standards.
➢ Complete with comprehensive set of spare parts and accessories including: Double pan balance, Balancing weights and plates, plastic inserts and spacers and hooks for adjusting to different types and
➢ sizes of bag/tubing/filter designs, and a suitable capacity voltage stabilizer and a suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied free of cost with the
➢ system.
➢ Vendor will be responsible for IQ-OQ-PQ of the equipment.
➢ The make, rating, model, description, specifications, price quantity of each item should be furnished separately.
➢ Necessary catalogues, technical write up in English, should be attached with the offer both in hard and electronic copies.
➢ Performance, efficiency, other factors as applicable should be furnished.
➢ Should provide a set of equipment's for calibration (eg. tachometer) and routine Preventive Maintenance as per manufacturer documentation in service/technical manual.
➢ Should provide 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.

49. LAB REFRIGERATORSWith 3 to 5 Sleves
Capacity range 300-380L.
Temperature 2-8^{O}C
Preferably roller mounted
Adjustable shelves
Battery backup
Durable rust free exterior
Durable unbreakable interior
Control panel with temperature alarm, on/off switch and digital thermometer,
Interior lighting, Drip tray and defrosting arrangement .
Adequate circulation of air to ensure even cooling by DUCT system
Door with lock. Inside of door provided with racks. Door hinges and latches should be chromium plated.
Control panel with temperature alarm, ON /OFF switch with power on indicator, digital thermometer, temperature display.
Electronic automatic temperature control,
Operable at 220 V, 50 Hz, single phase AC supply.
Compressor unit to be hermetically sealed with guarantee for at least five years.
Training of laboratory staff for the purchased equipment
Availability of spares/ disposables for at least 10 years.
All consumables required for installation and standardization of system to be given free of cost.
List of users and satisfactory report of quoted model from reputed institute preferably
Government institute/ hospitals
Should have all the accessories required for the functioning of the equipment.
CE / ISI mark or other equivalent quality certification.
All electrical peripherals required for smoothes functioning e.g. voltage stabilizer provided with the equipment
There should be provision for demonstration before final approval of equipment.

50. COLD ROOM

Walk in cooler must be efficient and have high quality of insulation preferable polyurethane foam thickness 60 mm with 0.5 mm Stainless Steel 304 on outer and inner covering of walls/sealing having low thermal conductivity between 0.019 to 0.022 W/M° C.
Prefabricated PUF Panels to prepare a external room of size (L x W x H) 10 ft x 10ft x 9ft
Cold Room temperature +2 to +8 Deg. C.
Pre fabricated PUF panels for floor with GI Antiskid flooring.
Supply of 1 No. flush type door along with door closer with 180 degree open facility.
Walk in cooler must be such that it may be shifted to different place easily without any major loss of room and cooling unit. Preferably made up of good quality cam locking system with metallic plunger should be provided to interlock each panels without using rivets or nails or any other fastening material. The Cyclopentane puf panels should be self extinguishing under ASTM: 1692 and the density of panels should be 40 +/- 2° 1g/m3. Corner panels should be provided for preparing neat and clean compact room
Heat Load: Please indicate the Heat Load in BTUH, minimum heat load shall be 10000. Air cooled condensing unit shall comprise of compressor. Condensing & evaporating unit shall be Quantity 2
Evaporator unit matching with condensing unit complete with coil section and suitable defrosting arrangement (Euro vent standard). Evaporating unit casing should be of SS-304. Quantity 2 Nos. (1 Working + 1 Stand by). Refrigerant R-404a/ R-22. Split type unit with
Refrigeration units shall be automatic without any operator
Safety equipment's shall be incorporated
HP/LP cut out & Thermostat controlled unit.
Shall have Safety release lever to open the cold room from inside in case some person is locked inside the cold
Shall be Design at ambient temperature of 45 Deg C
Shall have Ozone friendly Cyclopentane blown foam at ± 2 Kgs. / Cubic Mtr.
High 90-95% closed cells.
Refrigerant piping shall be with cooper pipes, Drain piping and Suction Line Insulation.
Refrigerant controls shall includes
Thermostatic expansion valve.
Liquid line and filter drier.
HP/LP switches
Protection by thermostat
Electrical digital temperature indicator cum controller for auto cutoff system.
With vapor proof lighting in the room.
Heat load calculation should be submitted along with the tender documents.
Suitable stabilizer should also be supplied with both the unit.
Service center should be based at Jaipur/Rajasthan. Service Center to attend the
Firm should be liable to provide the breakdown service within 24 hours to prevent the
Firm should submit the list of users along with 10 performance certificate from the
Firm will be responsible for complete installations.

51. COLORIMETER (COMPUTERIZED)

Wave length – 400 to 700nm with 8 optical filters
Filters peak wave length (typical) – 420, 440, 490, 520, 540, 570, 600, 700 nm. Measuring modes - %T, Abs., Conc. And K-Factor
Photometric resolution – 0.1%T to 0.001Abs up to 1.999Abs (O.D.) Display – 2 line 16 character LCD
K-Factor – 0 to 1999
Concentration – 0 to 2 times of the absorbance
Memory – data can be stored in memory
Sample volume – 1 ml to 4 ml test tube / cuvette
Source – LED
Detector – Hermetically sealed photo-diode Printer – printing through standard laser printer Power - 230±10%Volt, 50 Hz
Accessories – four test tubes and two glass cuvettes
The supplier should be ISO certified for quality standards. Should be FDA/CE or BIS approved product

52. DIGITAL CONTROLLED FULLY AUTOMATIC ELECTROPHORESIS SYSTEM WITH INBUILT POWER PACK FOR HAEMOGLOBIN, SERUM PROTEIN ELECTROPHORESIS AND IMMUNO FIXATION

ELECTROPHORESIS:
Microprocessor controlled fully automatic walkaway/automated electrophoresis system with computerized printout for quantification of different types of haemoglobin serum proteins, Immunofixation/Immunotyping on whole blood and serum.
The unit should be equipped with all essentials and accessories (automated pipette) hardware and software for processing the samples to give printout results of curves, graphs & quantified values.
The equipment should be supplied along with UPS for 3 hours All the consumables including printout papers for 100 Haemoglobin (500 and 100 serum proteins should be supplied at the time of installation.
The rates of all the kits including controls, antisera, calibrater for the electrophoresis and serum protein electrophoresis must be coated that shall be binding for two years.
The system should be able to receive minimum of one to two samples at one time.
There should be provision for integrated barcode reader, interface with hospital. Information
System
The printer should include reference ranges and data storage upto 100 tests. The rates of all the consumable must be quoted separately also.
The offer must include detailed product catalogue, compliance certificate with NIT, authority letter from manufacturer, list of installation with satisfactory user certificate copies of latest supply order for rate reasonability.
Installation must include demonstration and training to the satisfaction of users.

53.Fixed Volume Micropipettes with Tips (1000/Pack) 5ul, 10 ul, 25ul, 50ul, 100ul, 200ul

54. BLOOD GAS ANALYSER

1. Fully automatic, upgradeable, fast electrolyte & Blood gas analyzer.
2. Essential Measured parameters; pH, pCO2, pO2, SaO2 with co-oximetry (optional), Hb, Lactates, BUN, Glucose, Na+, K+, Ca++, Cl-. All these parameters should be measured simultaneously.
3. Calculated parameters should include BE, BE ecf, HCO3, Anion Gap etc.
4. Sample volume-less than 150 micro liter.
5. Fast analysis time – less than 120 sec.
6. Maintenance free electrodes with individual electrodes ON/OFF facility.
7. Fully automatic liquid calibration of all parameters at user-defined intervals without the use of Gas calibrated reagents, external gas cylinders in case reagent based system
8. Continuous reagent level monitoring with graphic display/alarm in case reagent based system.
9. Data display on well-illuminated, adequate size screen display.
10. Data print out on built in thermal printer
11. Built in auto Quality control facility.
12. Suitable UPS with at least 30 min backup.
13. Cost of all consumables (including reagents, Cartridge, paper, electrode if applicable) to be quoted for comparative evaluation. Consumables for five year @ at least 200 samples/day for all tests should be quoted and it will be taken for price comparison.
14. Stand by blood gas cum electrolyte analyzer in case of breakdown.
15. Should have local service facility
16. Guarantee to supply spares for minimum 10 years
17. It must be UF-FDA /European CE with four digit notified body number approved / BIS approved certificate to be submitted.
18. Compliance Report to be submitted in a tabulated and point wise manner clearly

mentioning the page/para number of original catalogue/data sheet.

BOQ			
1	ABG Machine as per specification	Unit Cost (Per samples for all tests)	1 No. No. of samples
2	All consumables (including reagents, Cartridge, paper, electrode if applicable) per samples for all tests for first years (365 X 200 X 1)		73,000 samples

Important Note:
Any reagent or any consumable required for performing tests, Calibration, quality control, cleaning the equipment, if not quoted should be provided free of cost by the bidder during the validity of the contract.

BLOOD BANK

55. BLOOD BANK REFRIGERATOR

Clinical Purpose: A refrigerator for storing whole blood or red cell packs in a blood bank.
Technical characteristics:-
Construction:-
Compressor type refrigerator that uses CFC free refrigerant gas
Internal: Stainless steel (min 22g).
External: Solid outer corrosion resistant (atleast 1mm thickness)
Drawers: Roil out type, Stainless steel scratch resistant material. The separators if provided in the drawers should e such that blood bags are held in a vertical position with the label side visible.
Glass door does not project at side when opened. Insulation and gasket should be of silicon or polyurethane,
Polyurethane/Silicon insulation should be minimum 80mm thickness. Door opening audio and visual display alarm.
Door locks should be available. Interior lighting or illumination, auto defrosting.
Temperature Range: 2 Deg C to 6 Deg C and adjustable with setting accuracy of +/- 0.1
Deg C with set temperature of 4 Deg C. user parameter settings. Set point high alarm point low alarm point , buzzer off time.
Internal Temperature control: Electronic temperature control range +2Deg c to +16 Deg C
with setting accuracy of +/- Deg C whatever the load, Fan air cooling.
External Ambient Temperature: Performance in an ambient temperature of 10Deg C to 40
Deg C.
Hold over time; A full load of blood packs 4 Deg C (+/- 1 Deg C) takes at least 30 minutes to rise to above +6Deg C. internal temperature hold over time in case of power failure should be at least 1.5hrs.
Temperature monitoring: Digital temperature (LED) display with 0.1 Deg C graduations.
Temperature recording device. Microprocessor control for operation with integrated audio visual temperature alarm function with digital monitoring display. Independent safety thermostat to avoid negative temperatures. Atleast 2 temperatures sensors. Sensor for temperature monitoring shown on front display. Sensor for managing use of compressor.
Temperature recording device: Battery backup for alarm system indicating unsafe temperatures (Should be in temp monitoring section). Seven days graphic temperature recorder with range of -0Deg C to +20 Deg C with supply of free charts for a period of one year Alarm systems . Should have door open alarm and power off alarm.
Capacity: 600 ltrs.
Settings: Manual
User's Interface: Manual.
Software and/or standard of communication: Built in
Physical Characteristics:-

Power Requirements: Input voltage 220V/240V 50Hz along with a line voltage corrector of appropriate rating.
Protection: A line voltage corrector of appropriate rating will form part of standard configuration.
Accessories & Spare Parts: Complete with comprehensive set of spare parts and suitable capacity voltage stabilizer. The make, rating, model, description, specifications, price, qty of each item shall be furnished.
Environmental & Departmental considerations
Atmosphere: Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%. Capable of operating continuously in ambient temperature of 10 to 40 Deg C and relative humidity of 15 to 90%.
Additional Requirements: All equipments should specify Design qualifications, installation qualifications. Operational qualifications and performance qualifications, validation and calibration report should have traceability towards applicable national/international standards. Performance efficiency, other factors such as distortion etc. as applicable be also furnished. Complete construction, details in respect of material specification thickness, finish etc are to be furnished.
Standard & Safety
Product Certifications: CE class II A or US FDA certified.
Quality Certifications: ISO Certified.
Electrical safety: Equipment meets electrical safety specifications such as tat of IEC (Class I)
Training of staff: training of users in operation and basic maintenance shall be provided.
Warranty and Maintenance
Maintenance tasks: 3 years AMC/CAMC.
Service contract clauses, including prices: Downtime-48 hours or after penalty clause will be active. Local clinical staff/authorized officer on behalf of purchaser to affirm completion of installation.
Documentation:
Operating manuals service manuals, other manuals: Necessary catalogues, technical write up in English shall be attached with the offer both in hard and soft copies.
Other accompanying documents: list of provided of important spares and accessories with their part numbers and cost certificate of calibration and inspection to be provided.
Service support contact details: Should be provided.
Recommendations of warnings: Any recommended for best use and supplementary warning for safety should be declared

56. DEEP FREEZER (-40C)

General
Clinical Purpose: To freeze and store plasma.
Technical
Technical Characteristics
Compression freezer with CFC free refrigerant
Construction:
Internal stainless steel (min 22g) (SS V2A-1.4301)
External Solid outer Corrosion Resistant (atleast 1mm thickness), CFC free insulation
Design Upright type. Mounted on lockable castor wheels
Door does not project at side when opened. The door should have minimum 100mm
Polyurethane/Silicon insulation with heated glass ware.
Insulin and gasket should be Polyurethane/Silicon insulation should be minimum of
80mm.
Internal temperature control: Electronic temperature control, Operating temperature reachable lowest up to-45Deg C with setting accuracy of +/-1 Deg C whatever the load. Fan air cooling, Automatic defrost within safe temperature range. Casing & door should have insulation panel with polyurethane/silicon > 80mm thickness.
Refrigeration: Heavy duty hermetically sealed compressor air cooled cascaded refrigeration system maintains inner temperature below -40C. Refrigerant CFC free/green gas.
External Ambient temperature: Performs in a ambient temperature of +10 Deg C to
+40 Deg C.
Hold over time: 2 hrs ambient temperature.
Cooling Down time: A full load of plasma packs at -25 Deg C takes a maximum of 5 hrs for all the packs to reach below -5 Deg C.
Temperature Monitoring: Digital temperature (LED) display with 0.1 Deg C graduation, Temperature recording device. Microprocessor control for operation with integrated audio visual temperature alarm function with digital monitoring display. There should be a method to check alarm system. Seven days graphic temperature recorder with range of 0 Deg C to -50Deg C with supply of free charts for a period of warranty Battery backup for alarm and temperature recording device.
Alarm systems: Should have door open alarm high temp alarm low temp alarm and power off alarm.
Capacity: 400plsma bags of 200ml each.
Settings: Manual.
User's Interface: Manual.
Software and/or standard of communication: Built in.
Physical Characteristics
Noise (in dBA): Noise factor should not exceed 60dB.
Energy Source
Power Requirements: Input voltage 220/240V, 50Hz along with a line

voltage corrector of appropriate rating.
Battery operated: UPS
Accessories spare parts consumables
Accessories & Spare parts: Complete with comprehensive set of spare parts and a suitable capacity voltage stabilizer. The make rating model, description, specifications, price, quantity of each item shall be furnished separately, ISO/ISI certified.
Environmental and Departmental considerations
Atmosphere/Ambience: Capable of being stored continuously in ambient temperature
0-50 Deg C and relative humidity of 15 to 90% capable of operating continuously in ambient temperature of 10 to 40 Deg C and relative humidity of 15 to 90%.
Additional requirements: All equipments should specify Design Qualifications.
Installation qualifications. Operational qualifications and performance qualifications, validation and calibration reports should have traceability towards applicable national/international standards. Performance efficiency other factors such as distortion etc as applicable be also furnished. Complete construction details in respect of material specification thickness, finish etc are to be furnished.
User's care, Cleaning, Disinfections & Sterility issues. Specified in the manual.
Standards & Safety
Product certifications: CE Class II A or US FDA Certified.
Quality Certification: ISO certified.
Electrical safety: Equipment electrical safety specifications such as that o IEC (Class I).
Training & Installation
Training of staff: Training of users in operation and basic maintenance shall be provided.
Warranty & Maintenance
Maintenance tasks: 5 years AMC/CAMC
Service contract clauses, including prices: Downtime: 48 hours or after penalty clause will be active. Local clinical staff/authorized officer on behalf of purchaser to affirm completion of installation.
Documentation
Operating manuals, service manuals, other manuals: Necessary catalogues, technical write up in English shall be attached with the offer both in hard and soft copies.
Other accompanying documents: List to be provided of important spares and accessories, with their part numbers and cost. Certificate of calibration and inspection to be provided.
Notes
Service Support contact details: Should be provided
Recommendations or warnings: Any recommendations for best use and supplementary warning for safety should be declared.

57. REFRIGERATED CENTRIFUGE

Design and operation:
• Stable, sturdy all-steel design with stainless steel rotor chamber, should be easy to clean corrosion resistant paintings.
• Provision of both drain and condensed water collection container.
• Microprocessor controlled.
• Programmable memory with temper proof program saving facility, with parallel saving of at least 30 programs.
• CFC free refrigerant.
• Various formats of Swing-out rotors with metal buckets and with wind shields that should be able to accommodate at least the following:
➢ Sixteen 350ml and/or 450ml single, double, triple, quadruple/quintuple blood bags with SAGM bag and empty satellite bags with In Line filter system
➢ Deleted
• Removable plastic adapters to hold single/ double/triple/ quadruple blood bags with partition in every bucket.
• Insert with hook adapter to spin buffy coat or small volume of blood and balancing weights for inserts.
• Automatic lid lock.
Speed and force:
• Maximum speed at least 4,000 rpm to 4500 rpm
• Maximum RCF (Relative Centrifugal force) for blood bags: 6000g-65000g.
• Acceleration and deceleration profiles should be independently adjustable with at least nine brake levels and option for free coasting
• Speed variation: microprocessor controlled rotor speed to within 10 rpm of set value.
• Temperature control
➢ Range at least: -20°C to +40°C.
➢ Adjustable in 1°C intervals
➢ Microprocessor controlled rotor temperature within 1°C of set temperature regardless of centrifuge speed.
• Programmable centrifugation time: 0min-99hr with minimum resolution of 1 minute.
• Digital display for time should have display resolution of at least 2 digits, speed/RCF display resolution of 4 digits and time display resolution of 3 digits.
• Should incorporate alarms for imbalance detection, lid interlock, over temperature, rotor over speed.

58. CELL SEPARATOR

1. Continuous Flow Blood Cell Separator.
2. Single/Dual Needle operation. (Optional accessory required for Single Needle)
3. Built in automated protocols for at least the below procedures, which all should be US-FDA approved
a. Leukoreduced Plasma Collection (single or double unit)
b. Single or doubleRBC collection
c. Leukoreduced platelet collection (single or double or triple)
4. Automatic Pump Loading & Priming of disposables sets.
5. Automated Self test to ensure maximum Donor Safety.
6. Built in Leukoreduction (<5 x 10^6) for Platelets & Plasma using elutriation (eg LRS chamber) or other patented technology which is NOT based on leuko-adsorption filter.
7. Automatic Leukoreduction validation of platelets and plasma atthe end of procedure.
8. Adjustable product concentration.
9. End of procedure summary screen showing Donor post Counts
10. Safety check to prevent Platelets count and hematocrit droppingbelow safety level for Donor.
11. Configurable maximum volume depletion levels either by weight or percentage of Total Blood Volume.
12. Configurable Product Volume, HCT & Platelet Concentration
13. Extracorporeal volume less than 250 ml.
14. Built in Access & Return Pressure sensor.
15. Built in air detectors to prevent air embolism.
16. Built in ACD Detector.
17. Built in contamination monitor for monitoring & preventing RBC contaminations in platelet collection and plasma exchange.
18. Audio visual alarms.
19. Built-in Colour Graphic LCD Screen
20. Periodic Instrument Calibration certificate for the various parameters and QC of the products should be provided/maintained by the vendor
21. European CE or US-FDA approved.
22. Additional accessories to be provided
a. 30 disposables kits should be provided with equipment
b. Blood Donor Couch(electrically operated)-01
c. All consumables required for installation and standardization of system to be given free of cost.
23. Literature of specification details for design, installation, operation and performance. The make, rating, model, description, specifications, price quantity of each item should be furnished separately. Performance, efficiency, other factors as applicable should be furnished.
24. Complete with comprehensive set of spare parts and a suitable capacity voltage stabilizer and Suitable UPS with maintenance free batteries for minimum one-hour back-up for should be supplied with the system.
26. Necessary catalogues, technical write up in English, should be attached with the offer both in hard and electronic copies.
27. Should provide electronic and hard copies of User Manual (English), Service manual (English).
28. Should provide a toolkit for providing routine Preventive Maintenance as per manufacturer documentation inservice/technical manual.
29. Should provide 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.

TECHNICAL SPECIFICATIONS

LOW VAULE ITEMS

ITEMS 59 & 60

ITEM NO. 59

SUCTION MACHINE

Weight 5- 6 Kg
Vacuum Range – 25 to 550 mm Hg
Sound level less than 60 db
Heavy duty regulator
Flow rate : greater than 30 LPM at open flow
Easy access on off switch
Water resistant
Sold base with suction cup to keep the unit stationary while in use
Hydrophobic filter
Aspirator stand with shelf and drawer provided
Should be European CE or USA FDA or BIS Approved

12 CHANNEL ECG MACHINE

1. Twelve channels 5.7" or more LCD display for all 12 leads along with on screen details.
2. Recording for 12 channels simultaneously and have option for user selectable any lead as Rhythm lead. Can able to print ECG at A4 size paper through inbuilt printer.
3. Recording speed selection of 5, 10/ 12.5, 25 and 50 mm/sec.
4 Sensitivity of 2.5,5,10,20 mm /mV. It should also have AGC (Automatic Gain Control)
5 Facility to enter patient information (Patient ID, Name, Age, Sex, Hospital's name) which get updated in system and is recorded on the recorder A4 paper
6 Patient memory function 20 patients or more
7 Waveforms can be recorded.
8 Interpretation software.
9 Mains and in built rechargeable battery backup atleast 2 hrs/ 30 ECG
10 Should have USB port/SD card (to be supplied by the bidder)/ equivalent port to send the data in the Computer.
11. ECG Paper for 500 patients.
12. Equipment should be European CE with four digit notified body number or US FDA approved or BIS Approved certificate to be submitted.

CUFF PRESSURE MANOMETER WITH INFLATION BULB

HAND HELD DOPPLER

1. Should have Frequency probes of 6, 8 MHz, 10 MHz and 20 MHz
2. Bi Directional Doppler with printer in real time or numerical data
3. Host built-in memory to store waveform and data of minimum of 20 patients
4. Approved by US FDA/CE European/BIS
5. Can set probe direction, mode, frequency, language, time scale, waveform data ,etc
6. Should have rechargeable batteries with back up time of minimum of 3-6 hours
7. 300 or more mw speaker output with volume control
8. Should have feature of automatic shut off if not used
9. Should Includes carry case, battery, conducting gel and headphones

INTUBATING LMA

OPHTHALMOSCOPE

Consist of cancave mirror with a hole in centre
Martonopthalmoscope three mirror 2 concave mirror 1 large and other is small
Plane mirror for retiniscopy
Three mirror attached that central hole come in same place
Series of lenses
Series of hole arranged to measure diameter of pupil
Source light of light on back side

FOGGER MACHINE

Body & Tank: 304 Grade Stainless Steel Used Liquid Tank Capacity: 4 Litre Of Chemical Storage Motor: 20000 RPM Motor

CUFF PRESSURE GUAGE

GLUCOMETER

1. Should be a hand held meter
2. Should require no routine maintenance
3. Should have reading range/linearity from 20 to 600 mg/dl
4. Should have a maximum reading time of less than 10 seconds
5. Should use electrochemical technology
6. Should use a minimum blood sample less than 1.5µl
7. Should have a LCD display
8. Should have measuring unit in mg/dl.
9. Should have wide operating temperature
10. Should have a minimum memory of 50
11. Should have life time replacement offer
12. Should have easy code entry technique
13. Battery should be replaceable without using any tools.
14. Should have facility to ensure accuracy of measurements.
15. Should be supplied with three types of control solutions of each at least 20 ml
16. Should have safety certificate from a competent authority European CE / US FDA / BIS Approved Product.

GLUCOSE STRIPS GLUCOSE STRIPS

1. Should be able to use capillary blood samples.
2. Should have a minimum 4 months shelf life after opening the strip vial.
3. All strips should have at least one year expiry date from the date of supply.
4. 50 strips should be supplied along with the equipment.
5. Strips should be available in the local market.

MANUAL BP APPARATUS (MERCURY BASED INSTRUMENTS TO BE REPLACED WITH SUITABLE ALTERNATIVE)

FLASH AUTOCLAVE

1. Should be a table top autoclave for Dental and ophthalmic applications.

2. Two automatic programmes approx. at 2.2 bar at 134 degrees C and 1.1 bar at 121 degree C. The equipment should have automatic pressure control switch / automatic water control device to ensure that the equipment does not run dry.

3. Should have flash cycle for rapid sterilization and should have an option for liquid cycle.

4. Should have Air Pump for closed door drying.

5. Should have rapid warm up facility. Built in reservoir to store water required to produce steam, and used water separately, for easy decantation.

6. The system should be equipped with required safety features. The door should have double locking safety feature and should open only with atmospheric pressure in the chamber.

7. Should have automatic cut-off to prevent overheating and cut-off for insufficient water, the machine should not start without sufficient water.

8. Should have a minimum chamber capacity of 19 litres or above.

9. Should have pressure display and temperature display.

10.Unit should function with 200-240Vac, 50/60 Hz input power supply.

11.The system should comply with National quality certification or International standards for sterilization safety.

12.Following accessories should be supplied along with the equipment. • 1 set of 3 removable shelves – stainless steel. • 1 instrument basket – stainless steel. • 1 set of 2 Drum for sterilization – stainless steel. • 1 Roll of sterilization indicator. • 1 box paper sheet 100 nos crepe for sterilization packs. • 2 spare silicone gaskets. • 1 sets of spare fuses.

13.Equipment should be provided with a line cord (power cord) of acceptable durability, quality, length and current carrying capacity and should be compatible with Indian standard power socket.

14.Controls should be visible and clearly defined.

15.Labels and markings should be clear and visible.

16.Should have safety certificate from a competent authority European CE / FDA (US) / BIS approved .

17.Should have air filters.

18.Gaskets should be replaced at free of cost whenever required in the comprehensive Warranty and CMC period.

EQUIPMENT SPECIFICATIONS FOR AMBU BAG

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	An Ambu Bag (also known as a Bag Valve Mask or BVM or Ambu bag) is a hand-held device used to provide ventilation to a patient who is not breathing or who is breathing inadequately		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Ambu bag must be autoclavable		
2.2	Should be adaptable to all type of face masks.		
2.3	Ambu bag should be self inflatable and should have pop up valve, attachment for oxygen tube & oxygen reservoir		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	1.Bag should be made up of Silicon, latex free double layered rubber and should retain sensivity and should be resistant to rough use. 2.Inlet end of the bag should have separate port for Oxygen supplement. 3.Outer port should be such that re-breathing valve or non return valve can be attached. 4.Should be supplied with Oxygen reservoir bag and should deliver tidal volumes of 250/500/750 and 1000 mL.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	Adult – 2 Nos Paediatric – 2 Nos Nenoate – 2 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 -40 deg C and relative humidity of 15-90%

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be FDA , CE,UL or BIS approved product		
7.2	Manufacturer should be ISO certfied for quality standards.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of important spare parts and accessories with their part number and costing.		
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

Laryngoscope with Blades (0,1,2,3,4,5) One Set
Magill's Forceps
Adult
Paediatric
Nenonate
Trupti Blade
No 2
No 3
No 4
Medium O2 Cylinder
Laryngeal Mask Airways No 1,0
No. 1.5

No. 2.0
No. 2.5
No. 3.0
No. 4.0
Stethoscope
Weighing Machine
Fogger
Recovery Kit

BLOOD & FLUID WARMER

1 Should be able to warm fluid /blood at a temperature range of 37-41 deg C.

2 Should be able to maintain or warm the fluid/blood when at a flow rate of 2L/hr.

3 Should have digital temperature display of fluid.

4 Disposable tubing set for Fluid/Blood-500 Nos for fluid amd 100 nos for blood.(price to be quoted separately)

5 Should have over temp alarm

6 Should have US FDA or European CE with four digit notified body number certificate or BIS approved certificate to be submitted.

7 Should have Clamp for mounting on the IV stand

PORTABLE VENTILATOR (PEDIATRIC)

1. Should be suitable for pediatric and infant patient use.

2. Should be a portable unit suitable for transport and hospital use and not of home care type. 3. Should be easily portable and not to weigh more than 7kgs.

4. Should have inbuilt Turbine to generate Air Flow internally.

5. Should have inbuilt Air-oxygen blending mechanism to set Fio2 from 21% to 100%.

6. Should be capable of both Invasive and Non-Invasive ventilation.

7. Should have ventilation modes like Control, Assist/Control, SIMV, CPAP and NIPPV.

8. Should have breath types like Volume Control, Pressure Control, Pressure support and Spontaneous.

9. Should have Apnea Backup Ventilation.

10.Should have provision to accept both High pressure and low flow oxygen supply.
11.Should work on AC mains with built in Rechargeable battery backup.

12.Should have Pressure control and pressure support variable rise time.

13.Should have pressure control and pressure support variable flow termination criteria. 14.Should have pressure support variable time termination.

15.Should have leak compensation.

16.Should have panel lock facility.

17.Should have proximal flow sensor to measure exhaled volumes.

18.Should have inbuilt monitoring and audio visual alarms.

19.Should have international safety / quality standards like European CE / US FDA etc.,

(Certificates to be enclosed). Note: Bidders shall furnish technical compliance statement for the model quoted , details of manufacturer including deviations if any. Technical catalogue /data sheet shall also be furnished in support of technical compliance statement with out fail.

PULSE OXIMETER

SN	Technical Specification of Pulse Oximeter		
1	Compact portable bedside pulse oximeter with Colour LCD/TFT display.		
2	Continuous monitoring of SpO2 (arterial blood oxygen saturation) , pulse rate and signal		
3	Measuring range :		
a	Spo2 : 10 to 100% minimal graduation 1%		
b	Pulse rate : Pulse rate : 20 to 240 bpm, minimal graduation 1 bpm		
4	**Accuracy SpO2 : 50 to 69% (± 3%), 70 to 100 % (±3%)**		
5	**Display shows: SpO2(%), PR, Plethymograph & perfusion bar/blip bar**		
6	The motion artifact should be minimal		
7	**Large bright display (4 inch or more) readable from more than 6 feet distance**		
8	User preset of high/low alarms on SpO2 and pulse rate monitoring		
9	Audio visual alarm for SpO2 and pulse rate in case measurements are outside preset		
10	Silencing feature for audio alarm		
11	Display reports system errors, probe failure and built in battery status		
12	Automatic switch from mains to batteries in case of power failure		
13	Power requirements : 220 V/ 50Hz and internal re-chargeable battery (autonomy at least. 2 hrs,		
14	**Device is produced by ISO 9001/ISO 13485 certified manufacturer (Certificate to be**		
15	It should be European CE with a four digit notified body number/ US FDA/BIS approved		
16	It must show spo2 value for low perfusion patients.		
17	**Should have RS 232C port or equivalent port for data transmission.**		
18	**Automatic Signal averaging time 4 to 12 sec**		
19	Submitted with:		
a	2 x reusable SpO2 sensors neonate, clip-on type.		
b	Patient extension cable -2 Nos.		
c	2 x reusable SpO2 sensors(finger type) for children and adolescents		
d	2 x spare set of fuses		
	To be Quoted in Price Bid	**Qty**	**UOM**
1	Pulse Oximeter as per specification	1	No
2	Reusable SpO2 sensors neonate, clip-on type.	2	Nos
3	Patient extension cable	2	Nos
4	Reusable SpO2 sensors(finger type) for children and adults	2	Nos each
5	spare set of fuses	2	Nos

PULSE OXIMETER TECHNICAL SPECIFICATION

1) Compact portable bedside pulse oximeter with LCD display.

2) Continuous monitoring of SpO2 (arterial blood oxygen saturation) , pulse rate and signal strength (nellcor/masimo technology)

3) Measuring range : a. Spo2 : 10 to 100% minimal graduation 1% b. Pulse rate : Pulse rate : 20 to 240 bpm, minimal graduation 1 bpm

4) Accuracy SpO2 : 70 to 100 % (±3%)

5) Display shows: SpO2(%), PR, add Plethysmograph & perfusion bar and signal wave

6) The motion artefact should be minimal

7) Large bright TFT display (6 inch or more) readable from more than 6 feet distance

8) User preset of high/low alarms on SpO2 and pulse rate monitoring

9) Audio visual alarm for SpO2 and pulse rate in case measurements are outside preset range

10) Silencing feature for audio alarm

11) Display reports system errors, probe failure and built in battery status

12) Automatic switch from mains to batteries in case of power failure

13) Power requirements : 220 V/ 50Hz and internal re-chargeable battery (autonomy at least. 2 hrs, automatic recharge)-

14) Device is produced by ISO 9001/ISO 13485 certified manufacturer (Certificate to be submitted)

16) Equipment should have US FDA or European CE certificate with four digit notified body number.

17) It must show spo2 value for low perfusion patients.

18) Signal averaging time 4 to 12 sec.

Submitted with:

- 2 x reusable SpO2 sensors neonate, clip-on type. Probe Adult & Pediatric)
- Patient extension cable -2 Nos.

· 2 x reusable SpO2 sensors(finger type) for children and adolescents ·

5 x spare set of fuses

INFUSION PUMP (VOLUMETRIC)

SN	Technical Specification of Infusion Pump (Volumetric)
1	**Description of Function**
1.1	Volumetric Infusion Pump is a medical device that delivers intravenous fluids and
	patients in hospitals, outpatient surgical centres, hospices, nursing homes, and in
2	**Operational Requirements**
2.1	Programmable volumetric infusion pump is required
3	**Technical Specifications**
3.1	**Battery back-up operating time 4 hours.**
3.2	LCD programming display
3.3	**Deleted**
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 800 ml/hr. (1ml**
3.8	Volume to be infused 0.1 to 99.9 ml (o.1ml increments) and 1 to 9999 ml(1 ml
3.9	Both flow rates and volume to be infused should be configured to limit the maximum allowable
3.10	Accuracy ±5%.
3.11	Pump Database: Events of 24 hours with real time.
4	**System Configuration Accessories, spares and consumables**
4.1	"Compatible with any standard (PVC) infusion sets available in local Indian market."
4.2	10 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
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and
6	**Power Supply**
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
7	**Standards, Safety and Training**
7.1	Should have US – FDA/European CE with four digit notified body number certificate for the product and certificate to be submitted.
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 Equipment available for providing calibration and routine Preventive Maintenance

	BOQ	Qty	UOM
1	Infusion Pump as per specification	1	No
2	Infusion Set	10	No
3	Mounting Clamp	1	No

ITEM NO. 60

LABORATORY

ROTARY MICROTOME MOTORIZED FULLY AUTOMATIC

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.

2. Precise Micrometer feed system via stepper motor permits precision sectioning selectable at least from 2.0-40/60 micron in 0.5 micron increments.

3. Trimming section selectable from 2 micron onwards.

4. The vertical specimen stroke length of 70mm larger specimen can be sectioned. The specimen holder should be clamp type and hold 60 mm size block.

5. Suitable Knife holder for high profile and low profile should be provided.

6. The specimen refraction should occur on return stroke.

7. Knife angle position locking facility should be provided. 8. Cold light source

9. Precise specimen orientation with zero point indication, with an orientation 8 X, Y axis helps in making perfect orientation of the sample for sectioning.

10. Motorized coarse feed in two speeds 30 micron/sec. and 90 micron/sec. Variable sectioning speed adjustable from 0.5 to 420 mm/sec.

11. Disposable blades 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.

12. Knife holder should be vibration free.

13. Integrated section waste tray.

Essential Accessories should be each quoted separately.

2. Microtome disposable blades (High profile coated) - 20 packets (50 blades/pack) (1000 nos.)

3. Microtome disposable blades (Low profile coated) - 20 packets (50 blades/pack) (1000 Nos.)

4. C type Knife 16 cm - 3 Nos. 5. Cold plate (Dry Type)

BINOCULAR RESEARCH MICROSCOPE WITH CAMERA ATTACHMENT

Technical Specifications:

1 Optical System – Universal Infinity Corrected Optical System

2 Observation Tube - Siedentopf Trinocular, 30 deg inclined 360 deg rotatable. IPD range 52-75mm

3 Eyepiece - Focusable WF 10x (18mm/ 20mm).

4 Revolving Quadruple nose piece

5 Objectives - Infinity Corrected Plan Achromatic 4X, 10X, 40X (Spring Loaded), 100X (Spring Loaded, Oil Immersion)

6 Illumination - 6V 20 WHalogen Lamp with 5 spare lamps with filters/equivalent LED illumination.

7 Abbe condenser, Iris diaphragm

8 Phase contrast attachment should be available

9. Image Device - 2/3" CCD Camera - Resolution 1.4MP or better with suitable mount

10.Light Sensitivity for camera - 1 Lux .

11 Interface – USB

12 Software - Image Analysis Software

13 System Requirements – Suitable PC having 19" Colour LCD/TFT Monitor, CPU: RAM: 4 GB or more, Hard Disk Space: 500 GB or more, CD/DVD-ROM drive and USB port 3.0. Power adapters/ cables etc for projection and LAN transmission.

14 Should be supplied with compatible laser colour printer.

15 Manufactures/Supplier should have ISO certificate to Quality Standard.

16 Should be US FDA/ European CE/ BIS approved product.

17 Equipment should be installed and demonstrated.

18 Training should be given to atleast two faculty members

MICROTOME KNIFE SHARPENER

1.Easy Operation

2.Automatic reversing

3.Eliminates the need for resurfacing the glass plate as the knife execution.

4.Full diameter of the rotating plate.

5.Easy cleaning & Maintenance.

6.Easily sharpened.

7.Micro coarse & fine Abrasive (set of two bottles of 200 gm. each)

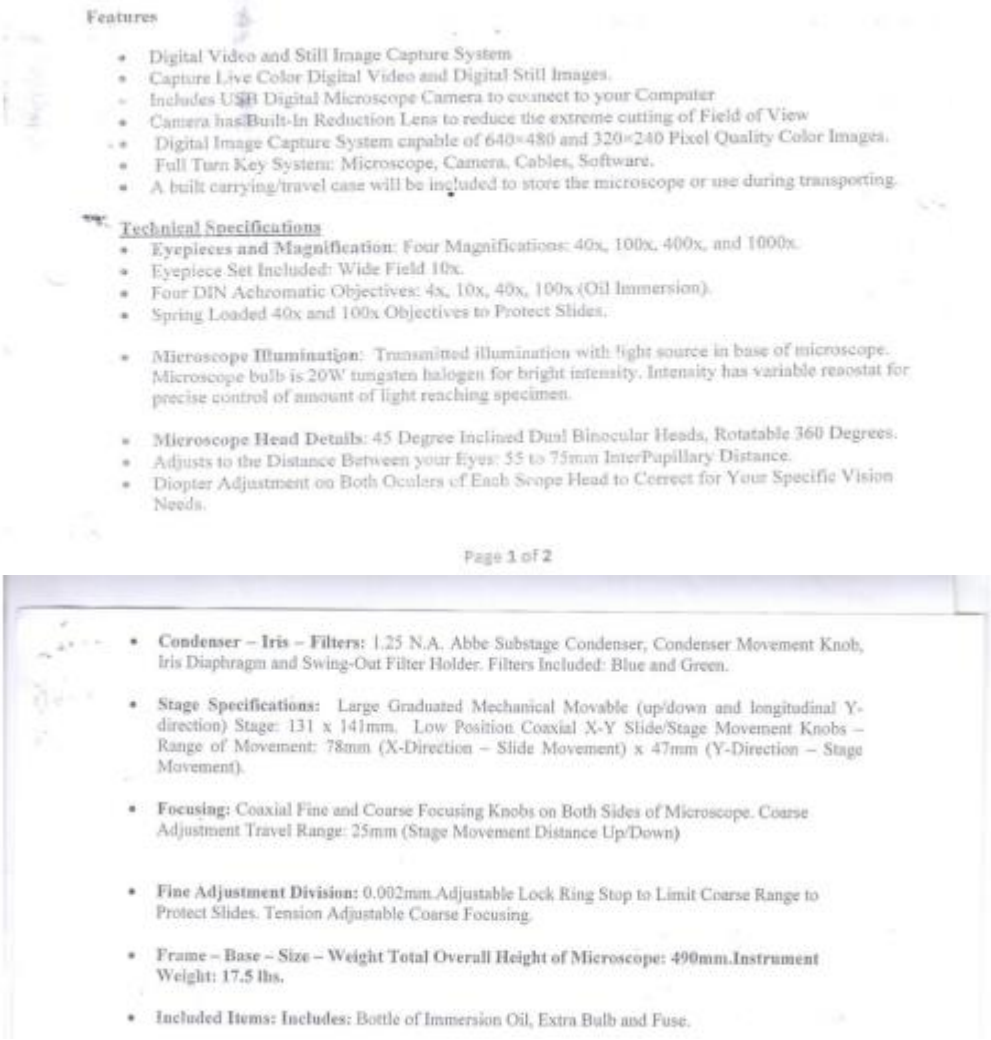
8.Spare glass plate.

9.Spare knife holder.

10.Motor rotate ground glass plate 500mm Diax12mm thick at constant speed.

1. Cost of consumables to be fixed for warranty period.

MICROSCOPE BINOCULAR DUAL VIEWING SYSTEM



Features

- Digital Video and Still Image Capture System
- Capture Live Color Digital Video and Digital Still Images.
- Includes USB Digital Microscope Camera to connect to your Computer
- Camera has Built-In Reduction Lens to reduce the extreme cutting of Field of View
- Digital Image Capture System capable of 640×480 and 320×240 Pixel Quality Color Images.
- Full Turn Key System: Microscope, Camera, Cables, Software.
- A built carrying/travel case will be included to store the microscope or use during transporting.

Technical Specifications

- **Eyepieces and Magnification**: Four Magnifications: 40x, 100x, 400x, and 1000x.
- Eyepiece Set Included: Wide Field 10x.
- Four DIN Achromatic Objectives: 4x, 10x, 40x, 100x (Oil Immersion).
- Spring Loaded 40x and 100x Objectives to Protect Slides.

- **Microscope Illumination**: Transmitted illumination with light source in base of microscope. Microscope bulb is 20W tungsten halogen for bright intensity. Intensity has variable reostat for precise control of amount of light reaching specimen.

- **Microscope Head Details**: 45 Degree Inclined Dual Binocular Heads, Rotatable 360 Degrees.
- Adjusts to the Distance Between your Eyes: 55 to 75mm InterPupillary Distance.
- Diopter Adjustment on Both Oculers of Each Scope Head to Correct for Your Specific Vision Needs.

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- **Condenser – Iris – Filters:** 1.25 N.A. Abbe Substage Condenser, Condenser Movement Knob, Iris Diaphragm and Swing-Out Filter Holder. Filters Included: Blue and Green.

- **Stage Specifications:** Large Graduated Mechanical Movable (up/down and longitudinal Y-direction) Stage: 131 x 141mm. Low Position Coaxial X-Y Slide/Stage Movement Knobs – Range of Movement: 78mm (X-Direction – Slide Movement) x 47mm (Y-Direction – Stage Movement).

- **Focusing:** Coaxial Fine and Coarse Focusing Knobs on Both Sides of Microscope. Coarse Adjustment Travel Range: 25mm (Stage Movement Distance Up/Down)

- **Fine Adjustment Division:** 0.002mm.Adjustable Lock Ring Stop to Limit Coarse Range to Protect Slides. Tension Adjustable Coarse Focusing.

- **Frame – Base – Size – Weight Total Overall Height of Microscope: 490mm.Instrument Weight: 17.5 lbs.**

- **Included Items: Includes:** Bottle of Immersion Oil, Extra Bulb and Fuse.

PARAFFIN EMBEDDING SYSTEM

S.I.No	PARAFFIN EMBEDDING SYSTEM
A	**Technical Specifications**
1	Should have single module design.
2	Electronically controlled for dependability and performance.
3	The heating function should be controlled by accurate digital thermostat
4	Low and flat work-surface to facilitate operator efficiency.
5	User friendly membrane switches.
6	4-liter capacity paraffin reservoir which minimizes refilling frequency.
7	Forceps warmer and illuminated paraffin dispenser.
8	Warming oven with removable shelf and double hinged lid for convenient access to preheated base mold.
9	Wax bath complete with drainage shelf, debris screen, and hinged lid.
10	Heated work area which provides a flat working surface with the excess paraffin draining under the surface into the wax bath; complete with a hand and foot switch for activating the dispensing head.
11	Bright illumination for convenient working.
12	The cold plate should have 170 sq. in. (1100cm2) of efficient refrigerated cooled working surface with removable stainless steel drainage tray beneath.
13	Tactile membrane touch-pad for easy temperature setting and monitoring.
14	Height of Work Surface: Work stage 2.75"(7cm) above countertop
15	Wax Reservoir Dimension (approx): .75"(L)x4.75"(W)x4"(D) (19.5x12x9.5cm)
16	Wax Bath Dimension (Approx): 10.25"(L)x8.5"(W)x1.75"(D) (26x21.5x4cm)
17	Warming Oven Dimension (approx): 6.5"(L)x7.5"(W) x min 2.5" max 6" (14 - 16.5cm)
18	Cold Plate Dimension (Approx): 11.75"(L)x14.5"(W) (29.5x36.6cm)
	Temp Ranges:
19	Wax Reservoir: 40° - 70°C +/-2°C
20	Work Surface: 40° - 70°C +/-5°C
21	Wax Bath: 40° - 70°C +/-2°C
22	Cold Plate working surface : ambient to -5°C
B	**Accessories, spares and consumables**

1	Spare Bulb
2	Thermostat
3	Power input to be 220-240VAC, 50Hz
C	**Standards, Safety and Training**
	BIS approved product or equivalent

TISSUE FLOTATION BATH

Instruments precise control of different samples at constant

- temperature Ideal for tissue ,tissue section processing
- Chamber made up of aluminum, inside black and outer surface
- finished with wide enough rim for drying the wet slides.

Temperature control by Imported make capillary type thermostat from ambient to 70 c with an accuracy of +-2c suitable to work on 220v , single phase , 50Hz AC Chamber size : Dia x Depth X Rim : 230x75x45v All standard accessories applicable for smooth full functioning of equipments

SLIDE WARMER

For heating slides to a uniform temperature just below the melting

- Point of wax To provide maximum flattening without damaging the section
- Top plate should be mounted by insulated metal frame
- Fitted with imported thermostat to control surface temperature from
- ambient to 70 c – 80 c Pilot light , cord and plug
- Voltage 220 v single phase ,50Hz, AC
- Power cord 5 – 8 fit.
- All standard accessories applicable for smooth full functioning of equipments

GROSSING INSTRUMENTS SET

HOT AIR OVEN

1. Instrument should be based on Convection technology - Gravity convection.

2. Chamber volume should be L / cu. Ft. 160 Liters / 6.0 or more.

3. Instrument should have stainless-steel interior for easy clean and corrosion resistant (steel quality AISI 304 or better). Exterior should also be superior quality stainless steel.

4. Instrument should have facility to turn on or off at pre-set times.

5. Instrument should have door lock to prevent disruption, tampering or accidental opening.

6. Instrument should have facility of door alarm to notify the operator when door is left open accidentally.

7. Instrument should have standard over-temperature alarm and an additional under-temperature alarm to ensure that the samples are kept at the correct temperature.

8. Instrument should have temperatures range: +50°C to 330°C or better.

9. Spatial temperature deviation should be at 150 °C: ± 2.7 °C or better.

10. Temperature deviation over time should be at 150 °C: ± 0.4 °C or better.

11. Number of shelves supplied should be 4 or more.

12. Max. shelf load kg should be 22 kg or more.

13. Rated voltage / frequency should be: V / Hz 230 / 50/60.

14. Rated power / max. current should be: W / A 3100 / 13.8.

15. Energy consumption at 150° C should be W: 430 or better.

16. Instrument should have programmable controller for temperature ramps and dwells.

17. Instrument should have facility to save up to 10 programs or more.

18. Instrument should have electronically controlled fan speed and damper position facility. 19. Instrument should have facility that programs can be repeated automatically.

20. Instrument should have access ports to allow the introduction of sensors for independent data monitoring.

21. Instrument should have simple calibration routine, to ensures temperature accuracy over time.

22. Instrument should have function that enables rapid heating.

23. The system should comply with European CE or US FDA or BIS approved.

24. The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.

25. Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.

26. Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

INCUBATOR

1. Should have Dual convection for versatility of application: fan speed adjustable from 0 to 100%

2. Should have advanced digital timer for daily or weekly on / off cycles.

3. Should have Stainless steel interior (1.4301) is easy to clean and corrosion resistant

4. Should be Stainless steel exterior

5. Should have Broad temperatures range from 5 °C above ambient to 105 °C – even suitable for drying application

6. Should have Temperature uniformity as good as ± 0.2 °C.

7. Should have Temperature stability at ± 0.1 °C.

8. Turn the unit off at specific time – can be used to interrupt cell growth at specified time: Choose from real time or hour settings

9. Unit is switched on and off at specified time – no need to waste energy when unit is not inuse!

10. Convection technology: Dual Convection

11. Temperature range: ambient +5 °C to 105 °C

12. Spatial temperature deviation1 at 37 °C: ± 0.6 °C

13. Temperature deviation over time at 37 °C: ± 0.1 °C

14. Footprint m2 / sqft: 0.47 / 5.1

15. Chamber volume L / cuft: 178 / 6.3

16. Dimensions chamber, mm / in (W x H x D): 464 x 708 x 543 / 18.3 x 27.9 x 21.4

17. Number of shelves supplied / max: 2 / 19

18. Max. shelf load kg / lb: 25 / 55

19. Rated voltage / frequency V / Hz: 230 / 60

20. Rated power / max. current: 1300 / 5.7

21. Weight kg / lb: 70 / 154

22. Energy consumption at 37 °C: 36W.

23. The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.

24. After Sale, Service should be available promptly.

25. Should provide yearly calibration certificate including temperature calibration verification test, temperature nonuniformity test and performance diagnostic test within warranty as well as in CMC.

26. Should be CE or FDA or BIS approved product

27. Appropriate work bench/ stand should be provided with the instrument.

28. Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests to be provided by the company.

REFRIGERATOR 300 LITRE

1. Should be a Frost free refrigerator

2. Should have a Capacity of 300 Litres or above.

3. Shelves shall be of Toughened glass type.

4. Should have EEC 4 star rating or above

5. Should have inbuilt protection for voltage fluctuation or to be supplied with external stabilizer of adequate KVA capacity.

WEIGHING BALANCE (1MG-10MG)

SINGLE PAN BALANCE

1. Readability : 0.01 mg in the range of 40 to 60 gm and 0.1 mg up to at least 200 gm.

2. Weighing range : 60 gm for 0.01 mg and 200 gm for 0.1 mg.

3. Tarring Facility : Entire Range

4. Reproducibility : 0.015 mg up to 60 gm, less than 0.05 mg up to 200 gm for 0.1 mg accuracy weighing.

5. Sensitivity drift : Max. ± 1ppm / 0C

6. Display : LCD

7. Calibration adjustment : Internal, fully automatic adjustment

8. Power supply : 230 ± 10 Volts, 50 Hz, Single phase AC with sufficient power Chord.

9. Other requirement : Provision to neutralize interference from electrostatic charges.

10. Optional : Standard Weight Box of E2 Class traceable to National / International Standards

11. The digital balance –Single pan should be supplied with instruction/operation/Maintenance anual and proper dust cover. Calibration Certificate from NIST certified or Equivalent laboratory should accompany the analytical balance.

PH METER

1. Microprocessor based for fast and accurate pH measurement with soft touch control panel (3 point)

2. pH range (0 – 14)

3. Auto-calibration with atleast 3 standard buffers.

4. Built-in-Auto buffer recognition

5. pH and Temperature display

6. Refillable Triode 3-in-1 epoxy body combination pH electrode

7. Power 220-240 V: 50/60 Hz, Automatic temperature

8. Compensation (0-100°C)

9. CE, ISO 9001, ISO 13485 Marked or equivalent marked.

10. Standard buffers 4,7,10 pH 250 ml each

11. . Electrode 1 set Extra

12. Original literature should be attached

13. Users list with satisfactory report should be attached

14. Firm will have to supply the stabilizer if required along with the equipment free of cost. 15. Original literature of equipment should be submitted.

16. Users list should be attached with satisfactory report for the last three years from three users with contact details.

17. Demonstration of performance of equipment is compulsory in nearby area failing to which will be disqualification.

18. Electrical: The equipment should be able to run on the existing electrical provision with neccesary adaptors.

19. 3.3 M KCl should be provided with appropiate container for keeping the electrode dipped in while not in use.

LABORATORY AUTOCLAVE (VERTICAL)

1 Should be suitable for hospital dressings, linen, surgical instruments, glasswares, culture media and laboratory ware etc.

2 Capacity should be 100 - 150 litre

3 Should be single door high pressure steam sterilizer with double/triple walled steam jacket and separate boiler.

4 Material of construction: Sterilizer chamber SS 304; Door SS 304; Jacket MS; Loading carriage SS 316; Transfer trolley: MS, painted; Door Gasket: Silicon or better; Insulation: fibre glass resin bonded wool or better; Insulation cover: SS sheets. Lid made of heavy gauge lid with foot lifting arrangement to open lid

5 Lid should be made of heavy gauge lid with foot lifting arrangement to open the lid.

6 Operating temperature should be 105°C to 137°C and pressure 1.1 to 2.2 kg/cm^2 of steam pressure.

7 Sterilizer should be provided with steam generator with built-in Steam Generator Safety

8 Should be equipped with spring loaded safety valves and automatic vacuum breaker for jacket.

9 Removable plug screen should be present for chamber drain.

10 Should have SS baffle for even steam distribution in the chamber.

11 Should have saftey valve protection against poor pressure.

12 Safety lock fro door: pressure lock safety device.

13 Low water level alarm and cut off / Sensor open alarm should be present

14 multi-color display for easier reading

15 Should be programmable

16 Accessories: Perforated carriers made up of SS 316 (3-4 Nos.) should be provided along with the instrument.

17 Environmental factors: Shall meet IEC 601010-2-040 (Or equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

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

19 Company should have ISO certification for this instrument.

S.I.No	SLIDE CABINET
1.1	To store slides safely.
2.1	Should be rust proof and break proof.
2.2	It should be moulded plastic for storage of microscope slides.
2.3	Should have slots(to accommodate 1000 standard slides)and hinged lid.
2.4	Slides should be held in numbered slots and there should be an index inside the lid.

HEMATOLOGY & FLOW CYTOMETER

BINOCULAR RESEARCH MICROSCOPE WITH CAMERA ATTACHMENT

Technical Specifications:

1 Optical System – Universal Infinity Corrected Optical System

2 Observation Tube - Siedentopf Trinocular, 30 deg inclined 360 deg rotatable. IPD range 52-75mm

3 Eyepiece - Focusable WF 10x (18mm/ 20mm).

4 Revolving Quadruple nose piece

9 Objectives - Infinity Corrected Plan Achromatic 4X, 10X, 40X (Spring Loaded), 100X (Spring Loaded, Oil Immersion)

10 Illumination - 6V 20 WHalogen Lamp with 5 spare lamps with filters/equivalent LED illumination.

11 Abbe condenser, Iris diaphragm

12 Phase contrast attachment should be available

9. Image Device - 2/3" CCD Camera - Resolution 1.4MP or better with suitable mount

10.Light Sensitivity for camera - 1 Lux .

11 Interface – USB

12 Software - Image Analysis Software

13 System Requirements – Suitable PC having 19" Colour LCD/TFT Monitor, CPU: RAM: 4 GB or more, Hard Disk Space: 500 GB or more, CD/DVD-ROM drive and USB port 3.0. Power adapters/ cables etc for projection and LAN transmission.

14 Should be supplied with compatible laser colour printer.

15 Manufactures/Supplier should have ISO certificate to Quality Standard.

16 Should be US FDA/ European CE/ BIS approved product.

17 Equipment should be installed and demonstrated.

18 Training should be given to atleast two faculty membe

LABORATORY CENTRIFUGE

1 Speed range : 4000-6000 rpm

2 Automatic rotor identification.

3 Heavy duty brushless induction motor for low vibration and noise < 65 dB

4 Presetting of speed and time and 0-99 minutes digital timer

5 Safety lid interlock

6 Digital speed indication

7 Digital indicator cum controller

8 Dynamic break and imbalance detector with cutoff

9 Rotor for 8 x (5-15 ml tubes) with appropriate tube adapters

10 Rust proof stainless steel inner chamber

11 To work on 220 volts AC, 50 cycles

12 To be supplied with suitable servo controlled stabilizer

13 Should be US FDA or European CE approved product

HOT AIR OVEN

. Instrument should be based on Convection technology - Gravity convection.

2. Chamber volume should be L / cu. Ft. 160 Liters / 6.0 or more.

3. Instrument should have stainless-steel interior for easy clean and corrosion resistant (steel quality AISI 304 or better). Exterior should also be superior quality stainless steel.

4. Instrument should have facility to turn on or off at pre-set times.

5. Instrument should have door lock to prevent disruption, tampering or accidental opening.

6. Instrument should have facility of door alarm to notify the operator when door is left open accidentally.

7. Instrument should have standard over-temperature alarm and an additional under-temperature alarm to ensure that the samples are kept at the correct temperature.

8. Instrument should have temperatures range: +50°C to 330°C or better.

9. Spatial temperature deviation should be at 150 °C: ± 2.7 °C or better.

10. Temperature deviation over time should be at 150 °C: ± 0.4 °C or better.

11. Number of shelves supplied should be 4 or more.

12. Max. shelf load kg should be 22 kg or more.

13. Rated voltage / frequency should be: V / Hz 230 / 50/60.

14. Rated power / max. current should be: W / A 3100 / 13.8.

15. Energy consumption at 150° C should be W: 430 or better.

16. Instrument should have programmable controller for temperature ramps and dwells.

17. Instrument should have facility to save up to 10 programs or more.

18. Instrument should have electronically controlled fan speed and damper position facility. 19. Instrument should have facility that programs can be repeated automatically.

20. Instrument should have access ports to allow the introduction of sensors for independent data monitoring.

21. Instrument should have simple calibration routine, to ensures temperature accuracy over time.

22. Instrument should have function that enables rapid heating.

23. The system should comply with European CE or US FDA or BIS approved.

24. The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.

25. Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.

26. Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

WATER BATH

1 Should be rugged, high performance water bath, should maintain water temperature from ambient to 100°C.

2 Should have over-temperature safety circuitry designed to prevent thermal runaway, while auto-on and auto-off timers allow to optimize operation schedules.

3 Should be chemical and corrosion resistant, with epoxy powder-coated exterior, and easy cleaning of the chamber with seamless stainless-steel interior.

4 Should have smaller footprint for bench top use.

5 Should have advanced microprocessor controller designed for extended functionality.

6 Should protect work with audible alarms.

7 Should conveniently save commonly used settings with four temperature presets.

8 Bath should come with clear polycarbonate gable cover, diffuser tray, drain hose and rubber duck.

9 Chamber capacity should be approx. 20 Liter.

10 Temperature range should be ambient to 100°C.

11 Should be a precision water bath with temperature stability/ uniformity @ 70°C: ±0.1°C / ±0.2°C.

12 Work area measurement should be around (L x W x H): 11.7 x 19.7 x 5.9 in. (297 x 500 x 150 mm).

13 Should be able to work on global voltage: 100-115V/200-230V, 50/60Hz.

14 Heater output should be approx. 1200W.

15 Should be offered with stainless steel test tube rack& concentric ring cover.

16 Should be UL Listed.

17 Should have European CE or US FDA certification or BIS approved.

18 The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.

19 Should be provided with 3 KVA servo stabilizer for high and low voltage protection.

20 Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.

21 Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

DIGITAL MAGNETIC STIRRER WITH HOT PLATE

1) Temperature range: 50 to 500°C

2) Load: greater than 10 kg

3) Stirring Speed: 100 to 1000 rpm or more

4) Stirring Capacity: 5 Litre

5) Electrical: 240 V, 50 Hz

6) Digital display and control for temperature and stirring rate.

MICRO PIPETTE ADJUSTABLE 1 – 2.5 ML, 0.5 – 10 ML, 2-20UL, 10-100UL, 20 – 200 ML, 100- 1000UL CAPACITY (MANUAL) SPECIFICATIONS:

1 Fully autoclavable

2 Accuracy in measurement

3 Ejector should ensure safe eject contaminated tips, positioned for perfect ergonomics

4 Precision in control, spring loaded tip cone

5 One-button operation for aspiration, dispensing and tip ejection

6 Volume setting automatically locks

7 Chemically resistant

8 4-digit display

9 Accuracy: +/- 1% for all

10 Calibration certificate should be provided with the supply.

11 Disposable tips 5000 each volume.

12 Should be supplied with tips holder rack & pipettes stand

13 Should be US FDA/ European CE approved.

14 Perfect piston system made of Fortron.

15 Spring loaded tip cone for connecting tips very tightly

SLIDE WARMER

For heating slides to a uniform temperature just below the melting

- Point of wax To provide maximum flattening without damaging the section
- Top plate should be mounted by insulated metal frame
- Fitted with imported thermostat to control surface temperature from
- ambient to 70 c – 80 c Pilot light , cord and plug
- Voltage 220 v single phase ,50Hz, AC
- Power cord 5 – 8 fit.
- All standard accessories applicable for smooth full functioning of equipments

ELECTRONIC WEIGHING MACHINE

DISTIILLED WATER PLANT

1	**Output**
	3.5 to 5 litres/hr through horizontal glass boiler, table top model
	Should have a single distillation unit
2	Main body should have a mild steel powder coating
3	**Safety Controls :**
	Safety valve to prevent water wastage
	Flow switch for boiler safety
	Thermostat for overheat protection
	Fuse for voltage fluctuation and short circuit
4	Should have a boroilicate glass
5	Should have an efficient condenser for distilled output
6	Distillate quality :
	Pyrogen free single distilled water
7	Distillage temperature should be from 65 to 70°C
8	Heating material should be ceramic with spiral elemnt
9	Power supply - 100-240VAC, 50-60Hz
10	Should be CSA or CE marked
11	Should perform calibration of the equipment yearly during warranty and free service period. Testing & measuring equipments used should be traceable to SI units through National/International Standards (as per NABL norms)
12	Please specify list of consumables/consumable spares (i.e. spares need to be replaced at regular intervals, may be quarterly / half yearly / yearly such as annual maintenance kit etc.) if any.
13	Please specify list of consumables/consumable spares (i.e. spares need to be replaced at regular intervals, may be quarterly / half yearly / yearly such as annual maintenance kit etc.) if any.
14	Please specify footprint size and its weight
	Back to back assurance to be taken by the supplier from OEM to supply spares for minimum 10 years and to be submitted to HOSPITAL.

PH METER, INCUBATOR and Refrigerator (Refer Specification mentioned in Histopathology & Immuno Chemistry Lab)

CLINICAL LABORATORY

CENTRIFUGE HIGH SPEED WITH TACHOMETER

1. Should be able to separate various components of blood and any other liquid sample for analysis

2. Should be vibration free

3. Should be table top version

4. Tube Capacity : No. 24 – 36 : Size: 5 – 15 ml

5. Should have a digital timer

6. Body should be made of strong fabricated & corrosion resistant steel

7. Control panel – for start/stop switch, dynamic brakes, step less speed regulator with zero start switch & speed indicator with timer and protective fuses.

8. Should have door interlock facility

9. Maintenance-free brushless drive motor with exact speed pre selection and display.

10. Speed range 100 to 6000 rpm and above, accuracy 1 rpm.

11. RPM : Up to 6500-7000 System Configuration Accessories, spares and consumables

1. Centrifuge complete with Swig and basic rotors and four buckets- 01 set.

2. Tube Holders as appropriate

Power Supply

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

2. Input 160-260 V and output 220-240 V and 50 Hz Standards, Safety and Training

1. The supplier should be ISO certified for quality standards. 2. Should be FDA/CE or BIS approved product

HOT AIR OVEN

. Instrument should be based on Convection technology - Gravity convection.

2. Chamber volume should be L / cu. Ft. 160 Liters / 6.0 or more.

3. Instrument should have stainless-steel interior for easy clean and corrosion resistant (steel quality AISI 304 or better). Exterior should also be superior quality stainless steel.

4. Instrument should have facility to turn on or off at pre-set times.

5. Instrument should have door lock to prevent disruption, tampering or accidental opening.

6. Instrument should have facility of door alarm to notify the operator when door is left open accidentally.

7. Instrument should have standard over-temperature alarm and an additional under-temperature alarm to ensure that the samples are kept at the correct temperature.

8. Instrument should have temperatures range: +50°C to 330°C or better.

9. Spatial temperature deviation should be at 150 °C: ± 2.7 °C or better.

10. Temperature deviation over time should be at 150 °C: ± 0.4 °C or better.

11. Number of shelves supplied should be 4 or more.

12. Max. shelf load kg should be 22 kg or more.

13. Rated voltage / frequency should be: V / Hz 230 / 50/60.

14. Rated power / max. current should be: W / A 3100 / 13.8.

15. Energy consumption at 150° C should be W: 430 or better.

16. Instrument should have programmable controller for temperature ramps and dwells.

17. Instrument should have facility to save up to 10 programs or more.

18. Instrument should have electronically controlled fan speed and damper position facility. 19. Instrument should have facility that programs can be repeated automatically.

20. Instrument should have access ports to allow the introduction of sensors for independent data monitoring.

21. Instrument should have simple calibration routine, to ensures temperature accuracy over time.

22. Instrument should have function that enables rapid heating.

23. The system should comply with European CE or US FDA or BIS approved.

24. The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.

25. Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.

26. Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company

BOD INCUBATOR

1 The equipment should have Microprocessor controlled temperature.

2 The system should have a temperature control range from +5C to 60C accuracy +/- 1 Deg C.

3 Hermitically sealed compressor with CFC free refrigerant.

4 The heat transfer to environment at 37C should be 40 W/h.

5 The equipment should have inner chamber volume of 300-350 Litres.

6 Should have lockable castor wheels for movement.

7 The system should have a temperature deviation of+ 0.2C at 37C

8 The system should have heating up time of less than 45 min to achieve 37C.

9 The equipment should have temperature recovery time of 10 min at 37C.

10 The equipment should have rounded edges and corners for easy cleaning.

11 Equipment should have interface for the documentation of temperature during incubation.

12 Should work on 220 volts, 50 Hz. 13 Should be USFDA or European CE approved product

ELECTRONIC BALANCE (1 mg – 10mg)

PH METER (Refer Specification mentioned in Histopathology & Immuno Chemistry Lab)

WATER BATH

1 Should be rugged, high performance water bath, should maintain water temperature from ambient to 100°C.

2 Should have over-temperature safety circuitry designed to prevent thermal runaway, while auto-on and auto-off timers allow to optimize operation schedules.

3 Should be chemical and corrosion resistant, with epoxy powder-coated exterior, and easy cleaning of the chamber with seamless stainless-steel interior.

4 Should have smaller footprint for bench top use.

5 Should have advanced microprocessor controller designed for extended functionality.

6 Should protect work with audible alarms.

7 Should conveniently save commonly used settings with four temperature presets.

8 Bath should come with clear polycarbonate gable cover, diffuser tray, drain hose and rubber duck.

9 Chamber capacity should be approx. 20 Liter.

10 Temperature range should be ambient to 100°C.

11 Should be a precision water bath with temperature stability/ uniformity @ 70°C: ±0.1°C / ±0.2°C.

12 Work area measurement should be around (L x W x H): 11.7 x 19.7 x 5.9 in. (297 x 500 x 150 mm).

13 Should be able to work on global voltage: 100-115V/200-230V, 50/60Hz.

14 Heater output should be approx. 1200W.

15 Should be offered with stainless steel test tube rack& concentric ring cover.

16 Should be UL Listed.

17 Should have European CE or US FDA certification or BIS approved.

18 The calibration, IQ, OQ and PQ of the instrument should be performed at the time of installation and certificates should be provided.

19 Should be provided with 3 KVA servo stabilizer for high and low voltage protection.

20 Document supporting track record and satisfactory performance from institutes of national importance (minimum one) should be provided.

21 Support for induction and follow up training of technical staff, on-site standardization and troubleshooting of procedures/ tests should be provided by the company.

BLOOD BANK

ELECTRONIC BALANCE – CHEMICAL

PLASMA SEPARATION STAND

MICROPIPETTER SETS

MULTICHANNEL PIPETTES

1. Premium pipette with Quick and secure volume setting, volume lock with single button operation.

2. Adjustment window for adjusting pipette to a specific liquid type.

3. Control Button with very low operating force, Colour indication for pipette volume.

4. Volume Display: 4 Digits with magnifier.

5. To provide thermal, mechanical and chemical stability piston should be madeofFortron/steel material Serial number is printed on multiple components of the pipette. 6. Very easy removable lower part for cleaning pipette.

7. Fully Autoclavable.

8. No discoloration upon UV irradiation.

9. Pipettes should have advanced Radio-Frequency Identification device (RFID chip) to enter all relevant data regarding the pipette (serial no., Certificate of Conformity, article no. etc.).

10. Optional software for read and write in RFID chip.

VDRL Shaker

1 Body should be made of thick steel and finished with powder coating.

2 Should have rotation in horizontal plane.

3 Platform size should be minimum 12” x 12” for keeping reaction trays.

4 Should have Digital display with digital countdown timer of minimum 0- 15 minutes time. 5 Should have built in speed regulator with maximum speed upto 250 rpm.

6 Workable on 220- 240 volts AC supply, 50 Hz Single phase.

7 Demonstration of performance of equipment is compulsory in nearby area failing to which will be disqualification.

9 Electrical: The equipment should be able to run on the existing electrical provision 10 Should be BIS/CE/FDA/ISO approved product.

HEMOGLOBINOMETER

1 Should be able to measure the Hb using blood from finger prick (Should be based on Azide methohemoglobin method).
2 Should be capable of displaying results within 1 minute
3 Accuracy ± 1 %
4 Disposable cuvettes. Cost of consumables to be quoted along with this tender as it will be considered for financial comparison.
5 Should be portable and should have the battery backup for 8 hours or more with provision of electric operations.
6 Factory calibrated and calibration should be verified automatically time when the instrument is turned on.
7 Should have the memory to store at least 500 results with date and time and should be able to transfer the results to PC.
8 Should be US FDA or European CE
9 Original literature of equipment should be submitted.
10 Should be able to do turbidity correction by using double wave length method
11 User"s list should be attached with satisfactory report for the last three years from three users with contact details.
12 Demonstration for performance of equipment is compulsory in nearby area failing to which will be disqualification.
13 Electrical: The equipment should be able to run on the existing electrical provision

Specification for the consumables for Haemoglobinometer

1 Consumable should be compatible with the above mentioned system
2 System should be calibrated against the reference ICSH. Method
3 Should be able to use venous. Arterial or capillary blood
4 Price of the consumable should be quoted.
5 The system must be US FDA or European CE

COLORIMETER

Filter : Seven Glass filter

Photometric Range : 0-100%T(Transmittance) 0- 2.0Abs(Absorbance)

Should be with digital readout

Sample Container : Square cuvette 10x10x45(mm)

Round cuvette 10(ID),12(OD),105(L)mm

Should work on 230V,50 Hz

Accessories

Filter case-1 pc

Filter-7 Pc

Analog output cable-1 Pc

Power cord-1 Pc

Operation manual -1 copy

Bulbs-3 nos

Extra Cuvettes -10 nos

The supplier should be ISO certified for quality standards.

Should be FDA/CE or BIS approved product

BINOCULAR RESEARCH MICROSCOPE WITH CAMERA ATTACHMENT

Technical Specifications:

1 Optical System – Universal Infinity Corrected Optical System

2 Observation Tube - Siedentopf Trinocular, 30 deg inclined 360 deg rotatable. IPD range 52-75mm

3 Eyepiece - Focusable WF 10x (18mm/ 20mm).

4 Revolving Quadruple nose piece

13 Objectives - Infinity Corrected Plan Achromatic 4X, 10X, 40X (Spring Loaded), 100X (Spring Loaded, Oil Immersion)

14 Illumination - 6V 20 WHalogen Lamp with 5 spare lamps with filters/equivalent LED illumination.

15 Abbe condenser, Iris diaphragm

16 Phase contrast attachment should be available

9. Image Device - 2/3" CCD Camera - Resolution 1.4MP or better with suitable mount

10.Light Sensitivity for camera - 1 Lux .

11 Interface – USB

12 Software - Image Analysis Software

13 System Requirements – Suitable PC having 19" Colour LCD/TFT Monitor, CPU: RAM: 4 GB or more, Hard Disk Space: 500 GB or more, CD/DVD-ROM drive and USB port 3.0. Power adapters/ cables etc for projection and LAN transmission.

14 Should be supplied with compatible laser colour printer.

15 Manufactures/Supplier should have ISO certificate to Quality Standard.

16 Should be US FDA/ European CE/ BIS approved product.

17 Equipment should be installed and demonstrated.

18 Training should be given to atleast two faculty membe

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. b skilled
- c. c unskilled

Signature and seal of the Tenderer

Section – IX
Qualification Criteria

For Items 1 to 58 :

1. The tenderer must be a manufacturer or it's authorized Agent. They may authorise their agent as per proforma of Manufacturer authorization form as given in the tender enquiry document to quote and enter into a contractual obligation.

2. (a) The Manufacturer should have supplied and installed in last Five years from the date of Tender Opening, at least **33%** of the quoted quantity of the similar equipment meeting major parameters of technical specification which is functioning satisfactorily.

2 (b). The Tenderer quoting as authorized representative of the manufacturer meeting the above criteria 2 (a) should have executed at least one contract in the last five years from the date of tender opening of similar equipment meeting major parameters of Technical specification which is functioning satisfactorily, anywhere in the World of the same manufacturer.

For Items 59 & 60 (Low Value) :

The Tenderer must be a medical equipment / Hospital supplier with an average annual turnover of **MUR 1 Cr.** in last three years from the date of tender opening.

Note

1. The tenderer shall give an affidavit as per Section-XIX of the TE document.

2. In support of 2(a) & 2(b), the Tenderer shall furnish Performance statement in the enclosed Proforma 'A'.

   The manufacturer/Agent as Tenderer shall furnish Satisfactory Performance Certificate/Installation Reports in respect of above, duly notarized in the country of origin, along with the tender.

   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. Tender shall submit audited balance sheets for the last three years. Annual Turnover statements should be certified by chartered accountant bearing their membership No.

5. The Purchaser reserves the right to ask for a free demonstration of the quoted equipment at a pre determined place acceptable to the purchaser for technical acceptability as per the tender specifications, before the opening of the Price Tender.

PROFORMA 'A'

PROFORMA FOR PERFORMANCE STATEMENT

(For the period of last five years)

Tender Reference No. : _____

Date of opening : _____

Time : _____

Name and address of the Tenderer : _____

Name and address of the manufacturer : _____

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

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

Signature and seal of the Tenderer

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

Section – X
TENDER FORM

Date_____

To

Senior Chief Executive,
Ministry of Health & Quality of Life,
Govt. Of Republic of Mauritius, Mauritius.

Ref. Your TE document No. _____dated _____

We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. _____, dated _____, 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 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 MAURITIUS

1	2	3	4	5					6
Schedule	Brief Description of Goods	Country of Origin	Quantity (Nos.)	Price per unit (Rs.)					
				Ex - factory/ Ex - warehouse /Ex-showroom /Off - the shelf (a)	Taxes & Duties if Applicable (b)	Inland Transportation, Insurance for a period including 3 months beyond date of delivery, loading/ unloading and Incidental costs till consignee's site (c)	Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site (d)	Unit Price (at Consignee Site) basis (MUR) (e) =a+b+c+d	Total Price (at Consignee Site) basis (MUR) 4 x 5(e)

Total Tender price in MUR: _____

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. Government of Mauritius exempts payment of VAT, Local Taxes Levies etc.
4. Government of Mauritius shall provide exemption of Custom Duty and other fees payable to Custom Office.

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 Tender price: CIP Port of destination + Extended Insurance+ local transportation and storage at consignee site) 4X 5 (f)
				FOB/FCA price at port/ airport of Lading (a)	Carriage & Insurance (port of loading to port of destination) and other Incidental costs (b)	CIP Price (Mauritius) (c)	Loading & unloading at name place/port of entry + local transportation and storage to the consignee site + Extended Insurance for a period including 3 months beyond date of delivery (d)	Incidental Services (including installation, commissioning, supervision, demonstration & training) at consignee's site (e)	Unit Price on CIP Port of destination + Extended Insurance+ local transportation and storage at consignee site) (f)=c+d+e	

Total Tender Price in words: _____

Bidder must specify Applicable Custom Duty : .....

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 destination (consignee site) in good condition as per CIP at Consignee's site
4. Government of Mauritius shall provide exemption of Custom Duty and other fees payable to Custom Office.

Agency Commission - __% of FOB/FCA.

Name_____
Business Address_____
Signature of Tenderer_____
Seal of the Tenderer_____

Place: _____
Date: _____

SECTION – XI PRICE SCHEDULE (TO BE QUOTED IN MAURITIUS LOCAL CURRENCY)

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*(MUR)**			**Total Annual Comprehensive Maintenance Contract Cost for 3 Years (MUR) [3 x (4a+4b+4c)]**
			1st	**2nd**	**3rd**	
			a	**b**	**c**	

*** 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 3 years on yearly basis for complete equipment and Turnkey (if any).
3. Government of Mauritius exempts payment of VAT, Local Taxes, Levies etc.
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_____
Signature of Tenderer_____
Seal of the Tenderer_____

Place: _____
Date: _____

SECTION XI– PRICE SCHEDULE
D) PRICE SCHEDULE FOR TURNKEY

Schedule No.	BRIEF TURNKEY DESCRIPTION OF GOODS	CONSIGNEE	Turnkey price (MUR)

Note: -

1. The cost of Turnkey as per Technical Specification (Section VII) may be quoted on lump sum. Government of Mauritius exempts payment of VAT, Local Taxes, Levies etc.
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 XI - Price Schedule

E -Price Schedule for Optional items /Spare Parts/ Consumables

Name of Bidder		Name of Manufacturer	
Item no.		Equipment Model no.	
Name of Item		IFB No.	

Sr no.	Name of item	Name of Part	Qty	Unit cost (Rs.)	GST		Unit cost included	Total cost
					%	Amount		
			a	b		c	d=	d X a
1			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
2			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
3			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
4			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
5			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
6			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
7			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
8			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
9			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
10			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
11			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
12			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
13			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
14			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
15			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
16			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
17			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
18			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00
19			0	₹ 0.00	0.00%	₹ 0.00	₹ 0.00	₹ 0.00

1. Bidder shall mentioned present rate of GST, failing which it will presumed that the same is inclusive in the total price and nothing will

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 (FOR ALL ITEMS EXCEPT LOW VALUE ITEMS 59 & 60)

MANUFACTURER'S AUTHORISATION FORM

To

Senior Chief Executive,
Ministry of Health & Quality of Life,
Govt. Of Republic of Mauritius, Mauritius.

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 to legally bind the manufacturer.
2. Original letter may be sent.

SECTION – XV

BANK GUARANTEE FORM FOR PERFORMANCE SECURITY/ CMC SECURITY

To
Senior Chief Executive,
Ministry of Health & Quality of Life,
Govt. Of Republic of Mauritius, Mauritius.

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 _____ (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)]**
			1st	**2nd**	**3rd**	
			a	**b**	**c**	

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 3 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 Mauritian currency.

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 No.

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:

i.He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to 'Technical Specification'.

ii.He has supervised the commissioning of the equipment(s)/plant(s) in time, i.e. within the time specified in the contract from date of intimation by the Purchaser/Consignee in respect of the installation of the equipment(s)/plant(s).

iii.Training of personnel has been done by the supplier as specified in the contract

iv.In the event of documents/drawings having not been supplied or installation and commissioning of the equipment(s)/plant(s) having been delayed on account of the supplier, the extent of delay should always be mentioned in clear terms.

SECTION – XIX
AFFIDAVIT/UNDERTAKING

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

Date:

(Signature of the bidder)
NAME & ADDRESS OF THE BIDDER

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

SECTION – XX
CHECKLIST
Name of Tenderer:
Name of Manufacturer:

Sl No.	Activity	Yes/ No/ NA	Page No. in the TE 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. 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?			
4. a.	Have you submitted satisfactory performance certificate/ Installation Reports 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 TE document	Remarks
b.	Have you submitted copy of the order(s) and end user certificate/ Installation Reports?			
5.	Have you submitted manufacturer's authorization as per Section XIV?			
6.	Have you submitted prices of goods, turnkey (if any), CMC etc. in the Price Schedule as per Section XI?			
7.	Have you kept validity of 120 days from the Techno Commercial Tender Opening date as per the TE document?			
8.	Have you intimated the name an full address of your Banker (s) along with your Account Number			
9.	Have you fully accepted payment terms as per TE document?			
10.	Have you fully accepted delivery period as per TE document?			
11.	Have you submitted the certificate of incorporation?			
12.	Have you accepted the warranty as per TE document?			
13.	Have you accepted terms and conditions of TE document?			
14.	Have you furnished documents establishing your eligibility & qualification criteria as per TE documents?			

Sl No.	Activity	Yes/ No/ NA	Page No. in the TE document	Remarks
15.	Have you furnished Annual Report (Balance Sheet and Profit & Loss Account) for last three years prior to the date of Tender opening duly certified by chartered accountant bearing their membership no.?			
16.	Have you enclosed the Affidavit as per Section XIX of the TE Document?			

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.
2. 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

Medical Institutions/Consignee	Purchaser Contact Address.
Cancer Hospital Solferino, Mauritius	Senior Chief Executive, Ministry of Health & Quality of Life, Govt. Of Republic of Mauritius, Mauritius.

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