GOVT. OF INDIA
MINISTRY OF EXTERNAL AFFAIRS
SOUTH BLOCK, NEW DELHI

BID DOCUMENT

INVITATION FOR BIDS FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING
OF
MEDICAL EQUIPMENT, INSTRUMENTS, AMBULANCE, MISC. ITEMS
FOR
DISTRICT GENERAL HOSPITAL
AT
DICKOYA/HATTON, SRI LANKA

INTERNATIONAL COMPETITIVE BIDDING

Tender Enquiry No HSCC/PUR/MEA/SriLanka/2013 dated: 03.3.2013

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SECTION I

NOTICE INVITING TENDERS (NIT)

MINISTRY OF EXTERNAL AFFAIRS
GOVT. OF INDIA

INVITATION FOR BIDS FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF MEDICAL EQUIPMENT, INSTRUMENTS, AMBULANCE, MISC. ITEMS, ANCILLARY SERVICES VIZ. KITCHEN, LAUNDRY, CSSD, MEDICAL GASES MANIFOLD SYSTEM, BIO-MEDICAL WASTE MANAGEMENT SYSTEM & FURNITURE

Tender Enquiry No.: HSCC/PUR/MEA/SriLanka/2013 Dated: 03.03.2013

Joint Secretary (DPA-III), Ministry of External Affairs, Govt. of India on behalf of the President of India through HSCC (India) Ltd., Noida invites sealed bids in Single Stage Two Bid System for supply, installation, testing & commissioning of **Medical Equipment, Instruments, Ambulance, Misc. Items, Ancillary Services viz. Kitchen, Laundry, CSSD, Medical Gases Manifold System, Bio-medical Waste Management System & Furniture for District General Hospital at Dickoya/Hatton, Sri Lanka**.

For detailed IFB and downloading of bidding documents please long on to http://www.hsccltd.co.in, http://www.mea.gov.in or http://www.eprocure.gov.in. The bidding documents can be downloaded from 04.03.2013 to 02.04.2013. The complete set of bidding document in English may also be purchased as per the schedule specified in the detailed IFB by any interested bidder from 1000 hrs. IST to 1630 hrs. IST on all working days on the submission of a written request to HSCC (India) Ltd., E-6A, Sector-1, Noida-201301 (U.P.). The schedule of sale of bidding documents, date of submission and opening of bids has been given in the bidding documents.

The detailed IFB, corrigendum/modification/amendment if any, will only appear on websites http://www.hsccltd.co.in, http://www.mea.gov.in or http://www.eprocure.gov.in.

Joint Secretary (DPA-III)

SECTION I

NOTICE INVITING TENDERS (NIT)

MINISTRY OF EXTERNAL AFFAIRS
GOVT. OF INDIA

INVITATION FOR BIDS FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF MEDICAL EQUIPMENT, INSTRUMENTS, AMBULANCE, MISC. ITEMS

Tender Enquiry No.: HSCC/PUR/MEA/SriLanka/2013 Dated: 03.03.2013

Joint Secretary (DPA-III), Ministry of External Affairs, Govt. of India on behalf of the President of India through HSCC (India) Ltd., Noida invites sealed bids in Single Stage Two Bid System for supply, installation, testing & commissioning of Medical Equipment, Instruments, Ambulance, Misc Items for **District General Hospital at Dickoya/Hatton, Sri Lanka**.

S.No.	Name of Equipment	Qty.
	Medicine	
1	Biphasic Defibrillator, monitor & recorder	1
2	Multi channel ECG machine (12-channel)	2
3	ECG monitor and pulse-oximeter	2
4	Multi-parameter with capnometer	2
A.	**B. OPD**	
5	Infant weighing machine	1
6	Infant meter	1
7	Infant stadiometer	1
C.	**D. Nursery**	
8	Baby basinet	4
9	Open care system	2
10	Phototherapy unit	2
11	Baby warmer unit	2
12	Digital infusion set	2
13	Aponea monitor	1
14	Bilirubinometer	1
15	ABG Analyser	1
16	Resuscitation kit	1
E.	**F. Neo-natal ICU**	
17	Open care system	3
18	Basic monitors -Resp., Temp. - pulse, SpO_2	3
19	Infant ventilator	1
20	Pulse oximeter	2
21	Incubator	1
	Respiratory Laboratory	
22	Biphasic Defibrillator-cum-monitor-cum-recorder	1
23	Pulse Oximeter	1
24	Computerized spirometer system (PFT)	1
25	Oxygen concentrator	1
26	Bronchoscope (Rigid) with accessories with light source	1
27	Ultrasonic nebulizer	3

28	Digital infusion set	2
29	Suction machine	1
30	Ventilator adult & paediatric	1
31	Blood gas with electrolyte analyser	1
	Surgery	
32	Video Gestroscope (1No.), Videocolonoscope(1No.), Videoduodenoscope (1No.), with Processor, Halogen light source, 15" Medical Grade Sony Monitor, Software for reporting, Colour printer, Trolley	1
33	Laproscopic cholecystectomy set	1
34	Set of general orthopaedic instruments	1
	Burns Unit (2 Bed)	
35	Pharmaceutical fridge with uniform 4 deg. Temperature	1
36	Instruments for skin graft 4 Electric dermatome ii. Zimmer mesher iii. Watson skin graft knives	 1 1 1
37	Wash Tub	1
38	Mobile Trolley	2
39	Plastic Surgery Instrument set	1
40	SRL Digital camera with printer	1 set
41	ICU (2 Bed) with AIR fluidised mattress	2
42	Multiparameter Monitor	2
	OBGY – A. OPD	
43	Gynae Exam. Table	2
44	Spot light for gynae exam.	2
45	Instrument trolley	5
46	Vaginal speculum Dual	3
47	Dressing Drums	6
	B. Delivery Suite	
48	Delivery beds	2
49	Delivery tables (Labour)	3
50	Obstetric forceps – Wringles	2
51	Obstetric forceps – Ferguson	1
52	Bowel SS for placenta	2
53	Basin SS on stand	2
54	Douche can SS	2
55	Bed Pans SS	10
56	Baby Cradles	4
57	Foetoscope (Ultrasound) & Foetoscope (Pinnard)	1each
58	Craniotomy set	1
59	Vacuum extractor	1
60	Sim's speculum	4
61	Instrument Tray with cover	1
62	Instrument Trolley	1
63	Instrument cabinet	2
64	Trolley for Oxygen transport with O_2 cylinder	8
65	**Resuscitation Unit consisting of** - O_2 therapy unit -Ambu Bag -Laryngoscope -Endotracheal DG Tube	2 nos
G.	H. **Gynae OT**	
66	Hysteroscope Set & Resectoscope Set	1
67	CTG	1
	Ophthalmology – Ophthalmic OPD Unit	
68	Ophthalmic unit (chair unit)	1Unit
69	Motorised drum (Snell's)	1

70	Doctors stool	1
71	Trial Set	1
72	Slit lamp	2
73	Keratometer	1
74	Lensometer	1
75	AB-Scan sonomed	1
76	Operating microscope	1
77	Tonometers (Non-Contact)	2
78	Ophthalmoscope	2
79	**ENT Diagnostic and Treatment Unit**	1Unit
80	Pure Tone Audiometer-Clinical	1
81	Impedance Audiometer	1
82	**Dental Chair Unit**	1Unit
	OPD Equipment	
83	Diagnostic Set (Stethoscope, Blood Pressure Apparatus, Thermometer, Hammer, Tuning fork, Tape etc.)	22
84	Weighing Machine	22
85	ECG machine (6 channel)	2
86	Minor OT instrument set (Surgical & Gyane)	2
87	Minor OT table	2
88	Side light	2
89	Single step stool	2
90	Minor OT Ceiling Light	2
91	Surgical Drums	6
92	Dressing trolley	2
93	X-ray View Box (Single)	22
	Operation Theatre (5Nos.)	
94	A closed loop anaesthesia equipment complete with vaporizer & circle absorber (Anaesthesia work station)	5
95	Ventilator (Adult/Child)	2
96	Operation tables, 5 section hydraulic	4
97	Operation tables, 5 section hydraulic-For orthopaedic	1
98	Operation theatre ceiling light (Halogen)	5
99	Operation theatre mobile light (Halogen)	3
100	Digital infusion pump	4
101	Defibrillator	3
102	Diathermy	6
103	Suction Machine	5
	Intensive Care Unit (8 beds)	
104	ICU bed	8
105	Patient monitoring system with Central Monitoring Station with facility to monitor arterial pressure, ECG, respiration, SPO2, EtCO2, NIBP monitors	8
106	Ventilators (Adult/ Paediatric)	3
107	Blood gas and Na+/K analyzer	1
108	Suction machine (Heavy duty)	2
109	Defibrillator	1
110	ECG Machine (Single channel)	1
111	Infusion pump	2
112	Portable Lights with long arm	2
113	Head light with light source	1
114	Anaesthesia Machine	1
115	Bronchoscope (Fibre Optic) with accessories	1
116	Nebulizer	2
117	Emergency crash cart	2

	Radiology – Investigative	
118	500 mA X-ray Machine with IITV	1
119	Automatic film processor	1
120	Whole body ultrasound	1
121	Portable X-ray machine (150 mA)	1
122	Radiology & Dark Room Accessories Lead aprons	1set
	Laboratories-A. Clinical Pathology	
123	Binocular Microscope	2
124	Haemoglobinometer	2
125	Haematocytometer	2
126	ESR tube and glass ware	2
127	Haematology analyzer	1
128	Frozen section system/Cryostat	1
	B. Biochemistry	
129	Colorimeter computerized	1
130	Balance electronic 10 mg. Accuracy	1
131	Electrolyte Analyzer	1
132	Biochemistry Auto Analyzer (16 channel) with regents	1
	C. Other items	
133	Deep Freezer (-) 70 deg. C	1
134	Water bath	2
135	Centrifuges	1
136	Incubators	1
137	Hot air oven	2
138	BOD incubator	1
139	Autoclave vertical type	1
140	Bunsen burners with LPG pipe line	1 unit
141	Distillation plant 3 L/hrs. Capacity	2 sets
142	Auto washer pipette	1
143	Hot plate	2
144	Refrigerators	2
145	De-ioniser	1
	Blood Bank (As part of Pathology Department)	
146	Blood bank refrigerator	2
147	Eliza reader	1
148	Donation couch	2
149	Antisera kits, Binoculars microscope, testing plates, glass ware etc.	1 Lot
	Other Added Items	
	Medicine	
150	Nebulizer	2
151	Air Mattress	2
	Surgery	
152	Set of Surgical Instruments	2
153	Spinal Board	4
	OT	
154	Instruments Trolley	2
155	Syringe Pump	1
156	Infusion Pump	1
157	Laryngoscope (Rigid)	2
158	Patient Warmer	2
	Miscellaneous	
159	Basic Life Support Ambulance	2
160	Others: -Catheters & Disposables -General Glass ware For Lab.	Lot

2. (i)	Dates of sale of tender enquiry documents	:	From 04.03.2013 to 02.04.2013 during office hours from 1000hrs. to 1630 hrs. (but up to 1300 hrs. on 02.4.2013)
(ii)	Place of sale of Tender Enquiry Documents	:	HSCC (INDIA) LIMITED E – 6 (A), Sector – 1, NOIDA - 201301, India
(iii)	Pre Tender Meeting Date & Time	:	14.03.2013 at 1430 hrs.
(iv)	Pre-bid Meeting Venue	:	HSCC (INDIA) LIMITED E – 6 (A), Sector – 1, NOIDA - 201301, India
(v)	Closing date & time for receipt of Tender	:	02.04.2013 at 1400 hrs. (For Package 1-25) 03.04.2013 at 1400 hrs. (For Package 26-51)
(vi)	Tender Opening date & time	:	02.04.2013 at 1430 hrs. (For Package 1-25) 03.04.2013 at 1430 hrs. (For Package 26-51)
(vii)	Place of Tender opening	:	HSCC (INDIA) LIMITED E – 6 (A), Sector – 1, NOIDA - 201301, India

3. Interested tenderers may obtain further information about this requirement from the above office selling the documents. Tender Enquiry Documents may be purchased on payment of non-refundable fee of Rs 2500 (Rupees Two Thousand five hundred only) /US $ 50.00 per set in the form of account payee Demand Draft/Pay Order/Cashier's Cheque/Banker's Cheque, drawn on a scheduled bank in India, in favour of "HSCC (India) Limited" payable at New Delhi / Noida.

4. If requested, the Tender Enquiry Documents will be mailed by Registered Post/Speed Post to the domestic tenderers and by international airmail to the foreign tenderers, for which extra expenditure per set will be Rs 200.00 for domestic post and Rs 500.00 for international airmail. The tenderer is to add the applicable postage cost in the non-refundable fee mentioned in Para 3 above.

5. Tenderer may also download the tender enquiry documents from the web site www.hsccltd.com/www.mea.gov.in and www.eprocure.gov.in and submit its tender by utilizing the downloaded document, along with the required non-refundable fee as mentioned in Para 3 above. The tenderer must submit the above-mentioned **tender document fee** along-with its tender failing which the tender submitted by the tenderer shall be ignored.

6. All prospective Tenderers may attend the **Pre-bid meeting**. The venue, date and time indicated in the Para 2 above.

7. Tenderers shall ensure that their tenders, complete in all respects, are dropped in the Tender Box located at HSCC (India) Limited; E-6(A); Sector-1; Noida – 201301; India on or before the closing date and time indicated in the Para 2 above, failing which the tenders will be treated as late and rejected.

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

9. The Tender Enquiry Documents are not transferable.

10. MEA & HSCC takes no responsibility for delay, loss or non-receipt of tender documents sent by post either way.

11. MEA reserves the right to accept or reject any or all of the tenders in full or in part including the lowest bid without assigning any reasons or incurring any liability thereof.

Joint Secretary (DPA-III)
MEA, New Delhi

SECTION - II

GENERAL INSTRUCTIONS TO TENDERERS (GIT)

CONTENTS

SECTION – II

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. Ministry of External Affairs (MEA), Govt. of India, New Delhi.

(ii) "Tender" means Bids / Quotation / Tender received from a Firm / Tenderer / Bidder.

(iii) "Tenderer" means Bidder/ the Individual or Firm submitting Bids / Quotation / Tender

(iii) "Supplier" means the individual or the firm supplying the goods and services as incorporated in the contract.

(iv) "Goods" means the articles, material, commodities, livestock, furniture, fixtures, raw material, spares, instruments, machinery, equipment, medical equipment, industrial plant etc. which the supplier is required to supply to the purchaser under the contract.

(v) "Services" means services allied and incidental to the supply of goods, such as transportation, installation, commissioning, provision of technical assistance, training, after sales service, maintenance service and other such obligations of the supplier covered under the contract.

(vi) "Earnest Money Deposit" (EMD) means Bid Security/ monetary or financial guarantee to be furnished by a tenderer along with its tender.

(vii) "Contract" means the written agreement entered into between the purchaser and/or consignee and the supplier, together with all the documents mentioned therein and including all attachments, annexure etc. therein.

(viii) "Performance Security" means monetary or financial guarantee to be furnished by the successful tenderer for due performance of the contract placed on it. Performance Security is also known as Security Deposit.

(ix) "Consignee" means District General Hospital, Dickoya/Hatton, Sri Lanka. If the goods are required to be delivered to a person as an interim consignee for the purpose of despatch to another person as provided in the Contract then that "another" person is the consignee, also known as ultimate consignee.

(x) "Specification" means the document/standard that prescribes the requirement with which goods or service has to conform.

(xi) "Inspection" means activities such as measuring, examining, testing, gauging one or more characteristics of the product or service and comparing the same with the specified requirement to determine conformity.

(xii) "Day" means calendar day.

1.3 Abbreviations:

(i) "T E Document" means Tender Enquiry Document

(ii) "NIT" means Notice Inviting Tenders.

(iii) "GIT" means General Instructions to Tenderers

(iv) "SIT" means Special Instructions to Tenderers

(v) "GCC" means General Conditions of Contract

(vi) "SCC" means Special Conditions of Contract

(vii) "DGS&D" means Directorate General of Supplies and Disposals

(viii) "NSIC" means National Small Industries Corporation

(ix) "PSU" means Public Sector Undertaking

(x) "CPSU" means Central Public Sector Undertaking

(xi) "LSI" means Large Scale Industry

(xii) "SSI" means Small Scale Industry

(xiii) "LC" means Letter of Credit

(xiv) "DP" means Delivery Period

(xv) "BG" means Bank Guarantee

(xvi) "ED" means Excise Duty

(xvii) "CD" means Custom Duty

(xviii) "VAT" means Value Added Tax

(xix) "CENVAT" means Central Value Added Tax

(xx) "CST" means Central Sales Tax

(xxi) "RR" means Railway Receipt

(xxii) "BL" means Bill of Lading

(xxiii) "FOB" means Free on Board

(xxiv) "FCA" means Free Carrier

(xxv) "FOR" means Free On Rail

(xxvi) "CIF" means Cost, Insurance and Freight

(xxvii) "CIP" means Carriage and Insurance Paid up to named place of destination (consignee site). Additionally the Insurance (local transportation & storage) would be extended and borne by the Supplier from ware house to the consignee site for a period including 3 months beyond date of delivery.

(xxviii) "DDP" means Delivery Duty Paid named place of destination (consignee site)

(xxix) "INCOTERMS" means International Commercial Terms as on the date of Tender Opening

(xxx) "MEA" means Ministry of External Affairs, Govt. of India, New Delhi.

(xxxi) "CMC" means Comprehensive maintenance Contract (labour, spare and preventive maintenance)

(xxxii) "RT" means Re-Tender

2. Introduction

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

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

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

2.4 Before formulating the tender and submitting the same to the purchaser, the tenderer should read and examine all the terms, conditions, instructions, checklist etc. contained in the TE documents. Failure to provide and/or comply with the required information, instructions etc. incorporated in these TE documents may result in rejection of its tender.

3. Availability of Funds

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

This document should be read in conjunction with the Notice Inviting Tender (NIT), a copy of which is enclosed with this document. All clauses should be read in conjunction with any other instructions given elsewhere in this document, on the same subject matter of the clause.

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 – Check List for the Tenderers
- Section XX – Consignee List

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

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 on the website http://www.hsccltd.co.in , and www.mea.gov.in and www.eprocure.gov.in and will be binding on the tenderer. Tenderers are requested to visit these websites on regular basis for amendments if any.

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

10. Clarification of TE documents

10.1 A tenderer requiring any clarification or elucidation on any issue of the TE documents may take up the same with the purchaser in writing. The purchaser will respond in writing to such request provided the same is received by the purchaser not later than fifteen days (unless otherwise specified in the SIT) prior to the prescribed date of submission of tender.

C. PREPARATION OF TENDERS

11. Documents Comprising the Tender

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

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

i) Earnest money furnished in accordance with GIT clause 19.1.

ii) Tender Form as per Section X (Un priced).

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 in the prescribed format as per Section-XIV.

v) Power of Attorney in favour of signatory of TE documents and signatory of Manufacturer's Authorization Form.

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

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

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

ix) Certificate of Incorporation of the tenderer.

x) Checklist as per Section XIX.

xi) Statement of deviations parameter-wise for tendered technical specifications, if any.

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

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

<u>N.B.</u>

1. All pages of the Tender should be page numbered and indexed.

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

11.2 The authorized signatory of the tenderer must sign the tender duly stamped at appropriate places and initial all the remaining pages of the tender.

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

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

12. Tender currencies

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

12.2 For imported goods if supplied directly from abroad, prices shall be quoted in any freely convertible currency say US Dollar, Euro, GBP or Yen. As regards price(s) for allied services, if any required with the goods, the same shall be quoted in Indian Rupees only if such services are to be performed /undertaken in India.

Commission for Indian Agent, if any and if payable shall be indicated in the space provided for in the price schedule and will be payable in Indian Rupees only.

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

13 Tender Prices

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

13.2 If there is more than one item in the List of Requirements, the tenderer has the option to submit its quotation for any one or more items and, also, to offer special discount for combined items. However, while quoting for the item, the tenderer shall quote for the complete requirement of goods and services as specified in that particular item.

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

The price quoted by the tenderer for indigenous goods shall not be higher than the lowest price charged for the goods of the same nature, class or description to an individual/firm/organization or department of Govt. of India.

For imported goods, the price quoted shall not be higher than the lowest price charged by the tenderer for the goods of the same nature, class or description to a purchaser, domestic or foreign or to any organization or department of Govt. of India.

If it is found at any stage that the goods as stated have been supplied at a lower price, then that price, with due allowance for elapsed time will be applicable to the present case and the difference in cost would be refunded by the supplier to the purchaser, if the contract has already been concluded.

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

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

a) the price of the goods, quoted ex-factory/ ex-showroom/ ex-warehouse/ off-the-shelf, as applicable, including all taxes and duties like sales tax, CST, VAT, CENVAT, Custom Duty, Excise Duty etc. already paid or payable on the

components and raw material used in the manufacture or assembly of the goods quoted ex-factory etc. or on the previously imported goods of foreign origin quoted ex-showroom etc;

b) any sales or other taxes and any duties including excise duty, which will be payable on the goods in India if the contract is awarded;

c) charges towards Packing & Forwarding, Inland Transportation, Insurance (local transportation & storage) would be borne by supplier from ware-house to the consignee site for a period including 3 months beyond date of delivery, Loading/Unloading and other local costs incidental to delivery of the goods to their final destination as specified in the List of Requirements and Price Schedule;

d) the price of Incidental Services, as mentioned in List of Requirements and Price Schedule;

e) the prices of Turnkey (if any), as mentioned in List of Requirements, Technical Specification and Price Schedule; and

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

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

a) the price of goods quoted FOB port of shipment, as indicated in the List of Requirements and Price Schedule;

b) the amount of freight and insurance and price of goods quoted CIP port of entry in India as indicated in the List of Requirements and Price Schedule;

c) the price of goods quoted be on DDP basis at consignee site in India as indicated in the List of Requirements, Price Schedule and Consignee List;

d) wherever applicable, the amount of custom duty with CDEC applicable on CIP value on the goods to be imported; MEA will issue Custom Duty Exemption Certificate (CDEC) where applicable.

e) the charges for Insurance (local transportation & storage) would be borne by supplier from ware-house to the consignee site for a period including 3 months beyond date of delivery. Other local costs & Incidental costs, as specified in the List of Requirements and Price Schedule;

f) the charges for Incidental Services, as in the List of Requirements and Price Schedule;

g) the prices of Turnkey (if any), as mentioned in List of Requirements, Technical Specification and Price Schedule; and

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

13.5 Additional information and instruction on Duties and Taxes:

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

13.5.2 Excise Duty:

a) If reimbursement of excise duty is intended as extra over the quoted prices, the supplier must specifically say so also indicating the rate, quantum and nature of the duty applicable. In the absence of any such stipulation it will be presumed that the prices quoted are firm and final and no claim on account of excise duty will be entertained after the opening of tenders.

b) If a Tenderer chooses to quote a price inclusive of excise duty and also desires to be reimbursed for variation, if any, in the excise duty during the time of supply, the tenderer must clearly mention the same and also indicate the rate and quantum of excise duty included in its price. Failure to indicate all such details in clear terms may result in rejection of that tender.

c) Subject to sub clauses 13.5.2 (a) & (b) above, any change in excise duty upward/downward as a result of any statutory variation in excise duty taking place within contract terms shall be allowed to the extent of actual quantum of excise duty paid by the supplier. In case of downward revision in excise duty, the actual quantum of reduction of excise duty shall be reimbursed to the purchaser by the supplier. All such adjustments shall include all reliefs, exemptions, rebates, concession etc. if any obtained by the supplier.

13.5.3 Sales Tax:

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

13.5.4 Octroi Duty and Local Duties & Taxes:

Normally, goods to be supplied to government departments against government contracts are exempted from levy to town duty, octroi duty, terminal tax and other levies of local bodies. However, on some occasions, the local bodies (like town bodies, municipal body etc.) as per their regulations allow such exemptions only on production of certificate to this effect from the concerned government department. Keeping this in view, the supplier shall ensure that the stores to be supplied by the

supplier against the contract placed by the purchaser are exempted from levy of any such duty or tax and wherever necessary obtain the exemption certificate from the purchaser.

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

13.5.5 Customs Duty:

The tenderer shall quote the custom duty wherever applicable, considering availability of CDEC. **The applicable rates and amount of the customs duty and the corresponding Indian Custom Tariff No. should be shown separately in the price schedule**. In case of non-availability of CDEC, the supplier has to custom cleared the goods paying the applicable Custom Duty and any difference of duty from the applicable CDEC rate shall be reimbursed separately on production of such proof of payment along with the final bill.

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

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

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

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

13.10 HSCC (I) Ltd. is only a procurement support agency and the supplies/equipments/goods against this tender are meant for MEA, New Delhi.

14. Indian Agent

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

a) The complete name and address of the Indian Agent and its permanent income tax account number as allotted by the Indian Income Tax authority.

b) The details of the services to be rendered by the agent for the subject requirement.

c) Details of Service outlets in India, nearest to the consignee(s), to render services during Warranty and CMC period.

15. Firm Price

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

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

16. Alternative Tenders

16.1 Alternative Tenders are not permitted.

16.2 However the Tenderers can quote alternate models meeting the tender specifications of same manufacturer with single EMD.

17 Documents Establishing Tenderer's Eligibility and Qualifications

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

17.2 The documentary evidence needed to establish the tenderer's qualifications shall fulfil the following requirements:

a) in case the tenderer offers to supply goods, which are manufactured by some other firm, the tenderer has been duly authorised by the goods manufacturer to quote for and supply the goods to the purchaser. The tenderer shall submit the manufacturer's authorization letter to this effect as per the standard form provided under **Section XIV** in this document.

b) the tenderer has the required financial, technical and production capability necessary to perform the contract and, further, it meets the qualification criteria incorporated in the **Section IX** in these documents.

c) in case the tenderer is not doing business in India, it is duly represented by an agent stationed in India fully equipped and able to carry out the required contractual functions and duties of the supplier including after sale service, maintenance & repair etc. of the goods in question, stocking of spare parts and fast moving components and other obligations, if any, specified in the conditions of contract and/or technical specifications.

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

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

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

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

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

19. Earnest Money Deposit (EMD)

19.1 Pursuant to GIT clauses 8.1 and 11.1 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 or equivalent currencies as per GIT clause 12.2. **The earnest money shall be furnished only in one of the following forms:**

i) Account Payee Demand Draft
ii) Banker's cheque and
iii) Bank Guarantee

19.3 The demand draft, fixed deposit receipt or banker's cheque shall be drawn on any Nationalized/Scheduled bank in India or country of the tenderer, in favour of the "**Pay & Accounts Officer, Ministry of External Affairs, New Delhi**" payable at New Delhi. In case of bank guarantee, the same is to be provided from any Nationalized/Scheduled 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 180 days, the EMD shall be valid for 165 days from Techno – Commercial Tender opening date.

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 180 days (One hundred and Eighty days) after the date of opening of techno-commercial tenders prescribed in the TE document. Any tender valid for a shorter period shall be treated as unresponsive and rejected.

20.2 In exceptional cases, the tenderers may be requested by the purchaser to extend the validity of their tenders up to a specified period. Such request(s) and responses thereto shall be conveyed by surface mail or by fax/ telex/cable followed by surface mail. The tenderers, who agree to extend the tender validity, are to extend the same without any change or modification of their original tender and they are also to extend the validity period of the EMD accordingly. A tenderer, however, may not agree to extend its tender validity without forfeiting its EMD.

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

21. Signing and Sealing of Tender

21.1 The tenderers shall submit their tenders as per the instructions contained in GIT Clause 11.

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

21.3 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.

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

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

21.6 TE document seeks quotation following **two Tender System**, in two parts. First part will be known as **'Techno - Commercial Tender'**, and the second part **'Price Tender'** as specified in clause 11 of GIT. Tenderer shall seal **'Techno - Commercial Tender'** and **'Price Tender'** separately and covers will be suitably super scribed. Both these sealed covers shall be put in a bigger cover and sealed and procedure prescribed in Paras 21.1 to 21.5 followed.

D. SUBMISSION OF TENDERS

22. Submission of Tenders

22.1 Unless otherwise specified, the tenderers are to deposit the tenders in the tender box kept for this purpose at HSCC (India) Ltd., E-6A, Sector-1, Noida (U.P.)-201301. In case of bulky tender, which can not be put into tender box, the same shall be submitted by the tenderer by hand to the nominated officers of the purchaser, as indicated in the SIT. The officer receiving the tender will give the tenderer an official receipt duly signed with date and time.

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

23. Late Tender

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

24. Alteration and Withdrawal of Tender

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

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

E. TENDER OPENING

25. Opening of Tenders

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

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

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

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

25.3 Two - Tender system as mentioned in para 21.6 above will be as follows. The **Techno - Commercial Tenders** are to be opened in the first instance, at the prescribed time and date as indicated in NIT. These Tenders shall be scrutinized and evaluated by the competent committee/ authority with reference to parameters prescribed in the TE document. During the Techno - Commercial Tender opening, the tender opening official(s) will read the salient features of the tenders like brief description of the goods offered, delivery period, Earnest Money Deposit and any other special features of the tenders, as deemed fit by the tender opening official(s). Thereafter, in the second stage, the Price Tenders of only the Techno - Commercially acceptable offers (as decided in the first stage) shall be opened for further scrutiny and evaluation on a date notified after the evaluation of the Techno – Commercial tender. The prices, special discount if any of the goods offered etc., as deemed fit by tender opening official(s) will be read out.

F. SCRUTINY AND EVALUATION OF TENDERS

26. Basic Principle

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

27. Preliminary Scrutiny of Tenders

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

27.2 Prior to the detailed evaluation of Price Tenders, pursuant to GIT Clause 34, the Purchaser will determine the substantial responsiveness of each Tender to the TE Document. For purposes of these clauses, a substantially responsive Tender is one, which conforms to all the terms and conditions of the TE Documents without material deviations. Deviations from, or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 5), Warranty (GCC Clause 15), EMD (GIT Clause 19), Taxes & Duties (GCC Clause 20), Force Majeure (GCC Clause 26) and Applicable law (GCC Clause 31) will be deemed to be a material deviation. The Purchaser's determination of a Tender's responsiveness is to be based on the contents of the tender itself without recourse to extrinsic evidence.

27.3 If a Tender is not substantially responsive, it will be rejected by the Purchaser and cannot subsequently be made responsive by the Tenderer by correction of the nonconformity.

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

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

(i) Tender form as per Section X (signed and stamped) not enclosed
(ii) Tender is unsigned.
(iii) Tender validity is shorter than the required period.
(iv) Required EMD not provided.
(v) Tenderer has quoted for goods manufactured by other manufacturer(s) without the required Manufacturer's Authorisation Form as per Section XIV.
(vi) Tenderer has not agreed to give the required performance security.
(vii) Goods offered are not meeting the tender enquiry specification.

(viii) Tenderer has not agreed to other essential condition(s) specially incorporated in the tender enquiry like terms of payment, liquidated damages clause, warranty clause, dispute resolution mechanism applicable law.
(ix) Poor/ unsatisfactory past performance.
(x) Tenderers who stand deregistered/banned/blacklisted by any Govt. Authorities.
(xi) Tenderer is not eligible as per GIT Clauses 5.1 & 17.1.
(xii) Tenderer has not quoted for the entire quantity as specified in the List of Requirements in the quoted item.

28. Minor Infirmity/Irregularity/Non-Conformity

28.1 If during the preliminary examination, the purchaser find any minor informality and/or irregularity and/or non-conformity in a tender, the purchaser may waive the same provided it does not constitute any material deviation and financial impact and, also, does not prejudice or affect the ranking order of the tenderers. Wherever necessary, the purchaser will convey its observation on such 'minor' issues to the tenderer by registered/speed post etc. asking the tenderer to respond by a specified date. If the tenderer does not reply by the specified date or gives evasive reply without clarifying the point at issue in clear terms, that tender will be liable to be ignored.

29 Discrepancies in Prices

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

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

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

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

30. Discrepancy between original and copies of Tender

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

31. Qualification Criteria

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

32. Conversion of tender currencies to Indian Rupees

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

33. Item-wise Evaluation

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

34. Comparison of Tenders

34.1 Unless mentioned otherwise in Section – III – Special Instructions to Tenderers and Section – VI – List of Requirements, the comparison of the responsive tenders shall be carried out on Delivery Duty Paid (DDP) consignee site basis. The quoted turnkey prices and CMC prices will also be added for comparison/ranking purpose for evaluation.

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

35.1 Further to GIT Clause 34 above, the purchaser's evaluation of a tender will include and take into account the following:

i) In the case of goods manufactured in India or goods of foreign origin already located in India, sales tax & other similar taxes and excise duty & other similar duties, Customs Duties, Service Tax, Works Contract Tax etc which will be contractually payable (to the tenderer), on the goods if a contract is awarded on the tenderer; and

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

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

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

36. Tenderer's capability to perform the contract

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

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

37. Contacting the Purchaser

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

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

G. AWARD OF CONTRACT

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

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

39. Award Criteria

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

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

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

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

41. Notification of Award

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

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

42. Issue of Contract

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

42.2 Within twenty one days from the date of the contract, the successful tenderer shall return the original copy of the contract, duly signed and dated, to the purchaser 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

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 against it as per the clause 24 of GCC – Termination for 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	35
B	8 to 10	TE documents	No Change	35
C	11 to 21	Preparation of Tenders	No Change	35
D	22 to24	Submission of Tenders	22.1 of GIT	35
E	25	Tender Opening	No Change	35
F	26 to 37	Scrutiny and Evaluation of Tenders	No Change	35
G	38 to 45	Award of Contract	No Change	35

SPECIAL INSTRUCTIONS TO TENDERERS
(SIT)

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

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

A Preamble

No Change

B TE documents

No Change

C Preparation of Tenders

No Change

D Submission of Tenders

No Change

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No Change

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No Change

G Award of Contract

No Change

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

SECTION - IV

GENERAL CONDITIONS OF CONTRACT (GCC)

1. Application

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

2. Use of contract documents and information

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

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

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

3. Patent Rights

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

4. Country of Origin

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

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

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

5. Performance Security

5.1 Within thirty (30) days from date of the issue of notification of award by the purchaser, the supplier, shall furnish performance security to the purchaser for an amount equal to ten percent (10%) of the total value of the contract, valid up to sixty days after the date of completion of all contractual obligations by the supplier, including the warranty obligations, initially for a period of minimum 15 months from the date of Notification of Award

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

a) It shall be in any one of the forms namely Account Payee Demand Draft or Fixed Deposit Receipt drawn from any Nationalised/Scheduled bank in India or Bank Guarantee issued by a Nationalised/Scheduled bank in India, in the prescribed form as provided in section XV of this document in favour of "**Pay & Accounts Officer, Ministry of External Affairs, New Delhi**" payable in New Delhi. The validity of the Fixed Deposit receipt or Bank Guarantee will be for a period up to 3 months 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 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 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's bank guarantee for CMC security in favour of **District General Hospital, Dickoya, Sri Lanka** as per the format in Section XV.

6. Technical Specifications and Standards

6.1 The Goods & Services to be provided by the supplier under this contract shall conform to the technical specifications and quality control parameters mentioned in

`Technical Specification' and 'Quality Control Requirements' under Sections VII and VIII of this document.

7. Packing and Marking

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

7.2 The quality of packing, the manner of marking within & outside the packages and provision of accompanying documentation shall strictly comply with the requirements as provided in Technical Specifications and Quality Control Requirements under Sections VII and VIII and in SCC under Section V. In case the packing requirements are amended due to issue of any amendment to the contract, the same shall also be taken care of by the supplier accordingly.

7.3 Packing instructions:

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

a. contract number and date
b. brief description of goods including quantity
c. packing list reference number
d. country of origin of goods
e. consignee's name and full address and
f. supplier's name and address

8. Inspection, Testing and Quality Control

8.1 The purchaser and/or its nominated representative(s) will, without any extra cost to the purchaser, inspect and/or test the ordered goods and the related services to confirm their conformity to the contract specifications and other quality control details incorporated in the contract. The purchaser shall inform the supplier in advance, in writing, the purchaser's programme for such inspection and, also the identity of the officials to be deputed for this purpose. The cost towards the transportation, boarding & lodging will be borne by the purchaser and/or its nominated representative (s).

8.2 The Technical Specification and Quality Control Requirements incorporated in the contract shall specify what inspections and tests are to be carried out and, also, where and how they are to be conducted. If such inspections and tests are

conducted in the premises of the supplier or its subcontractor(s), all reasonable facilities and assistance, including access to relevant drawings, design details and production data, shall be furnished by the supplier to the purchaser's inspector at no charge to the purchaser.

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

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

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

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

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

8.8 Principal/Foreign supplier shall also have the equipment inspected by recognized/reputed agency like **SGS, Lloyd or equivalent (acceptable to the purchaser)** prior to dispatch at the supplier's cost and furnish necessary certificate from the said agency in support of their claim.

9. Terms of Delivery

9.1 Goods shall be delivered by the supplier in accordance with the terms of delivery specified in the contract.

10. Transportation of Goods

10.1 **Instructions for transportation of imported goods offered from abroad:**
Unless otherwise mentioned in SCC, the supplier shall follow the instructions mentioned below:

The supplier shall not arrange part-shipment and/or transhipment without the express/prior written consent of the purchaser. The supplier is required under the contract to deliver the goods under DDP at consignee site; the shipment shall be made by Indian flag vessels or 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.

Goods will be custom cleared by the supplier/Indian Agent and transported to the consignee's site as per the contract terms. Supplier shall be responsible for safe and timely delivery of ordered goods under his own arrangement.

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.

Goods will be custom cleared by the supplier/Indian Agent and transported to the consignee's site as per the contract terms. Supplier shall be responsible for safe and timely delivery of ordered goods under his own arrangement.

11. Insurance:

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

i) in case of supply of domestic goods on consignee site basis, the supplier shall be responsible till the entire stores contracted for arrival in good condition at destination. The transit risk in this respect shall be covered by the supplier by getting the stores duly insured. The insurance cover shall be obtained by the supplier and should be valid till 3 months after the receipt of goods by consignee.

ii) in case of supply of imported goods DDP basis, the supplier shall arrange and pay for marine/air insurance making the consignee as beneficiary. The additional extended Insurance (local transportation & storage) would be borne by the supplier from the port of entry to the consignee site for a period including 3 months beyond date of delivery.

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

12. Spare parts

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

a) The spare parts as selected by the purchaser/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.

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 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 to enable the purchaser clear or receive (as the case may be) the goods in terms of the contract.

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

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) Copy of Dispatch Clearance Certificate issued by MEA/HSCC;
(iii) Two copies of packing list identifying contents of each package;
(iv) Inspection certificate issued by the nominated Inspection agency, like SGS, Lloyd or equivalent (acceptable to purchaser) prior to despatch;
(v) Certificate of origin;
(vi) Insurance Certificate as per GCC Clause 11 &
(vii) Manufacturer's/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):

(i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
(ii) Original and four copies of the negotiable clean, on-board Bill of Lading/Airway bill, marked freight pre paid and four copies of non-negotiable Bill of Lading/Airway bill;
(iii) Four Copies of packing list identifying contents of each package;

(iv) Insurance Certificate as per GCC Clause 11;
(v) Manufacturer's/Supplier's warranty certificate;
(vi) Inspection certificate for the despatched equipments issued by recognized/reputed agency like SGS, Lloyd or equivalent (acceptable to purchaser) prior to despatch;
(vii) Manufacturer's own factory inspection report;
(viii) Certificate of origin
(ix) Port of Loading;
(x) Port of Discharge and
(xi) Expected date of arrival
(xii) Copy of Dispatch Clearance Certificate issued by MEA/HSCC.

Any delay or demurrage occurred during the customs clearance on account of non-availability of technical support/clarifications/documents from the supplier shall be borne by the supplier.

No goods (both Indian and import origin goods) shall be dispatched before issue of Dispatch Clearance Certificate by MEA/HSCC.

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 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 This comprehensive warranty shall remain valid for **twelve (12) months** from the date of installation and commissioning at final destination except for the following:

a. For 01 (one) year exclusively for items mentioned below:

followed by CMC for a period of **3(three)years** for all the equipment 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.

b. No conditional warranty like mishandling, manufacturing defects etc. will be acceptable.
c. Warranty as well as Comprehensive Maintenance Contract (CMC) will be inclusive of all accessories and Turnkey work and it will also cover the following:
   - X-Ray & CT Tubes and high tension cables

- Helium replacement
- Any kind of motor
- Plastic & glass parts
- All kinds of sensors including oxygen sensors
- All kinds of coils, probes & transducers including ECG cable, BP transducers, SpO2 probes, Ultrasound & Colour Doppler Transducers/Probes, BP cuffs, Defibrillator internal & external paddles, chart recorders, ventilator reusable patient circuits, servo humidifier with chamber, electrodes & probes for blood gas analyzers, MRI coils.
- All kinds 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

d. Replacement and repair will be undertaken for the defective goods
e. 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 warranty will be as per clause GCC 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 by double the downtime period 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 consignee's site at least once in 6 months commencing from the date of the installation for preventive maintenance of the goods.

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

15.9 The supplier along with its Indian Agent and the CMC provider shall ensure continued supply of the spare parts for the machines and equipments supplied by them to the purchaser for 4years 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 – a – vis its other Clients/ Purchaser of its equipments/ machines/ goods etc. and shall always give the most competitive price for its machines/ equipments supplied to the Purchaser.

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, the supplier shall convey its views to the purchaser within twenty-one days from the date of the supplier's receipt of the purchaser's amendment / modification of the contract.

19. Prices

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

20. Taxes and Duties

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

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

21. Terms and Mode of Payment

21.1 Payment Terms

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

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

a) On delivery:

80 % payment of the contract price shall be paid on receipt of goods on pro rata basis in good condition and upon the submission of the following documents complete in all respects. Bill shall be returned un-paid in case of any discrepancy. Delay in payment on account of above shall rest with supplier.

(i) Four copies of supplier's invoice showing contract number, goods description, quantity, unit price and total amount;
(ii) Consignee Receipt Certificate as per Section XVII in original issued by the authorized representative of the consignee;

(iii) Two copies of packing list identifying contents of each package;
(iv) Inspection certificate issued by the nominated Inspection agency, like SGS, Lloyd or equivalent (acceptable to the purchaser) prior to dispatch;
(v) Insurance Certificate as per GCC Clause 11;
(vi) Certificate of origin
(vii) Copy of Dispatch Clearance Certificate issued by MEA/HSCC
(viii) Manufacturer's own factory inspection report;
(ix) Manufacturer's warranty certificate

b) On Acceptance:

Balance 20 % payment would be made against 'Final Acceptance Certificate' as per Section XVIII of goods to be issued by the consignee(s) subject to recoveries, if any, either on account of non-rectification of defects/deficiencies not attended by the Supplier or otherwise.

B) Payment for Imported Goods:

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

a) On delivery:

Eighty (80) % of the net CIP price destination (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, 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 within 24 hours to the concerned as per the contract;
(v) Consignee Receipt Certificate as per Section XVII in original issued by the authorized representative of the consignee;
(vi) Manufacturer's/Supplier's warranty certificate;
(vii) Inspection certificate for the dispatched equipments issued by recognized/reputed agency like SGS, Lloyd or equivalent (acceptable to the purchaser) prior to dispatch;
(viii) Certificate of origin by the chamber of commerce of the concerned country;
(ix) Manufacturer's own factory inspection report;
(x) Copy of Dispatch Clearance Certificate issued by MEA/HSCC
(xi) Certificate of origin
(xii) Port of Loading;

(xiii) Port of Discharge;
(xiv) Expected date of arrival and

b) On Acceptance:

Balance payment of 20 % of net CIP price of goods would be made against 'Final Acceptance Certificate' as per Section XVIII to be issued by the consignee(s) through irrevocable, non-transferable Letter of Credit (LC) opened in favour of the Foreign Principal in a bank in his country, subject to recoveries, if any.

c) Payment of Custom Duty amount with CDEC (if applicable), Customs Clearance and handling charges, Loading/Unloading, Inland Transportation, Incidental Costs till consignee site & Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) will be paid in Indian Rupees to the Indian Agent on proof of 100 % payment to the Foreign Principal.

d) Payment of Indian Agency Commission:

Indian Agency commission will be paid to the manufacturer's agent in the local currency for an amount in Indian rupees indicated in the relevant Price Schedule (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject to further escalation / exchange variation. Payment shall be paid in Indian Rupees to the Indian Agent on proof of 100 % payment to the Foreign Principal.

C) Payment of Turnkey, if any:

Turnkey payment will be made to the manufacturer's agent in Indian rupees indicated in the relevant Price Schedule (as per prevailing rate of exchange ruling on the date of Contract) and shall not be subject to further escalation / exchange variation. Payment shall be made in Indian Rupees to the Indian Agent on proof of 100 % payment to the Foreign Principal.

D) Payment for Annual Comprehensive Maintenance Contract Charges:

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

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

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

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

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 forthwith.

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

(a) The supplier will make good any defect or deficiency that the consignee (s) may report within six months from the date of despatch of goods.

(b) Delay in supplies, if any, has been regularized.

(c) The contract price where it is subject to variation has been finalized.

(d) The supplier furnishes the following undertakings:

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

22. Delay in the supplier's performance

22.1 The supplier shall deliver of the goods and perform the services under the contract within the time schedule specified by the purchaser in the List of Requirements and as incorporated in the contract.

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

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

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

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

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

(b) That no increase in price on account of any ground, whatsoever, including any stipulation in the contract for increase in price on any other ground and, also including statutory increase in or fresh imposition of customs duty, excise duty, sales tax/VAT, Service Tax and Works Contract Tax or on account of any other tax or duty which may be levied in respect of the goods and services specified in the contract, which takes place after the date of delivery stipulated in the contract shall be admissible on such of the said goods and services as are delivered and performed after the date of the delivery stipulated in the contract.

(c) But nevertheless, the purchaser/consignee shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, excise duty, sales tax/VAT, Service Tax and Works Contract Tax or any other duty or tax or levy or on account of any other grounds, which takes place after the expiry of the date of delivery stipulated in the contract.

22.5 The supplier shall not dispatch the goods after expiry of the delivery period. The supplier is required to apply to the purchaser 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 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 may consider termination of the contract as per GCC 24.

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

24. Termination for default

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

24.2 In the event of the purchaser terminates the contract in whole or in part, pursuant to GCC sub-clause 24.1 above, the purchaser 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 for the extra expenditure, if any, incurred by the purchaser for arranging such procurement.

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

25. Termination for insolvency

25.1 If the supplier becomes bankrupt or otherwise insolvent, the purchaser reserves the right to terminate the contract at any time, by serving written notice to the supplier

without any compensation, whatsoever, to the supplier, subject to further condition that such termination will not prejudice or affect the rights and remedies which have accrued and / or will accrue thereafter to the purchaser/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 an 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 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) 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. The jurisdiction for the settlement of disputes will be New Delhi.

30.2 If the parties fail to resolve their dispute or difference by such mutual consultation within twenty-one days of its occurrence, then, unless otherwise provided in the SCC, either the purchaser/consignee or the supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided the applicable arbitration procedure will be as per the Indian Arbitration and Conciliation Act, 1996 of India. In the case of a dispute or difference arising between the Purchaser/ Consignee and a domestic Supplier relating to any matter arising out of or connected with the contract, such dispute or difference shall be referred to the sole arbitration of a person appointed by Chairman & Managing Director (CMD) of HSCC (India) Ltd. from the panel of Arbitrators approved by Ministry of External Affairs (MEA), Govt. of India, New Delhi. The award of the arbitrator shall be final and binding on the parties to the contract subject to the provision that the Arbitrator shall give reasoned award in case the value of claim in reference exceeds Rupees One lakhs (Rs. 1,00,000/-).

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

31. Applicable Law

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

32. General /Miscellaneous clauses

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

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

32.3 The supplier shall notify the purchaser /consignee of any material change would impact on performance of its obligations under this contract.

32.4 Each member / constituent of the supplier /its Indian agent /CMC Provider, in case of consortium shall be **jointly and severally liable** to and responsible for all obligations towards the purchaser/consignee for performance of contract/ services including that of its Associates/ Sub Contractors under the Contract.

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

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

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

SECTION – V

SPECIAL CONDITIONS OF CONTRACT (SCC)

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

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

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

SECTION - VI

LIST OF REQUIREMENTS

District General Hospital at Dickoya, Sri Lanka

Sl. No.	**Package-1**	**Qty.**	EMD details (Rs.)
1.	Baby Basinet	4	30,800.00
2.	Open care system	2+.3	
3.	Phototherapy Unit	2	
4.	Baby warmer	2	
5.	Incubator (Infant)	1	
6.	Resuscitation Kit (Adult & Ped.)	1+2	
	Package-2		
1.	ECG Monitor & Pulse Oximeter	2	11,000.00
2.	Multichannel ECG M/c (12 channel)	2	
3.	ECG Machine (6 channel)	2	
4.	ECG Machine (single channel)	1	
	Package-3		
1.	Multiparameter with caprometer	2	53,900.00
2.	Pulse Oximeter	2+1	
3.	Basic Monitors Resp.,Temp.,Pulse, SPO	3	
4.	Apnea Monitor	1	
5.	Multi para monitor	2	
	Package-4		
1.	ABG Machine	1	48,000.00
2.	Blood Gas with Electrolyte Analyzer	1	
3.	Blood Gas & Na+/K+ Analyzer	1	
4.	Electrolyte Analyzer	1	
	Package-5		
1.	Infant ventilator	1	1,64,000.00
2.	Ventilator adult and ped	1	
3.	Ventilator (Adult/Child)	2	
4.	Ventilator (Adult/Ped.) (continuous airway pressure system)	3	
	Package-6		1,54,000.00
1.	Aneasthesia workstation	5	1
2.	Aneasthesia machine	1	

	Package-7		
1.	500mA X-ray with IITV	1	50,000.00
2.	Portable x-ray machine(150mA)	1	
	Package-8		
1.	Whole body ultrasound	1	30,000.00
	Package-9		
1.	Bronchoscope fiber –optic with acc.	1	1,20,000.00
2.	Video Gastroscope (1No.), Videocolonoscope(1No.), Videoduodenoscope (1No.), with Processor, Halogen light source, 15" Medical Grade Sony Monitor, Software for reporting, Colour printer, Trolley	1 set	
	Package-10		
1.	Laparoscopic Cholecystectomy Set	1No.	82,000.00
2.	Bronchoscope (Rigid) with acc.& with light source	1No.	
3.	Hysteroscope & Resectoscope Set	1 No.	
	Package-11		
1.	Minor OT Table	2	1,24,000.00
2.	OT Table	4	
3.	OT Table(Ortho)	1	
	Package-12		
1.	Side Light	2	1,27,000.00
2.	Minor OT Light Ceiling	2	
3.	OT Ceiling Light	5	
4.	OT Mobile Light	3	
5.	Portable Lights with long arm	2	
6.	Spot Light for Gyn. Exam	2	
	Package-13		
1.	Plastic Surgery Set	1	13,000.00
2.	Instrument for skin graft -Electric Dermatome -Zimmer Mesher -Watson skin graft	 1 1 1	
	Package-14		
1.	ENT Diagnostic & Treatment Unit	1	12,000.00
2.	Pure Tone Audiometer (clinical)	1	
3.	Impedance Audiometer	1	
	Package-15		
1.	Suction Machine	1+5	6,100.00

2.	Suction Machine (Heavy Duty)	2	
3.	Vacuum Extractor	1	
	Package-16		
1.	ICU Beds	8	30,000.00
2.	ICU Beds with Air fluidized mattress	2	
	Package-17		
1.	Digital Infusion Pump	2+1+4+ 2+1	11,000.00
2.	Syringe Pump	1	
	Package-18		
1.	Deep freezer (-70^{0}C)	1	39,600.00
2.	Refrigerator (300 lts)	2	
3.	Blood bank refrigerator	2	
4.	Blood donation couch	2	
5.	Eliza Reader	1	
6.	Pharmaceutical fridge with 4 deg. Uniform temperature	1	
	Package-19		
1.	Binocular microscope	2	3,680.00
2.	Haemoglobino meter	2	
3.	Heametocyto meter	2	
4.	ESR Tube & glass ware	2	
5.	Bilirubinometer	1	
	Package-20		
1.	Water Bath	2	13,100.00
2.	Centrifuge	1	
3.	Incubator	1	
4.	Hot Air Oven	2	
5.	BOD Incubator	1	
6.	Hot Plate	2	
7.	Autoclave (vertical type)	1	
	Package-21		
1.	Ophthalmic Unit (chair unit)	1	6,000.00
	Package-22		
1.	Motorized Drum (snell's)	1	900.00
2.	Doctor Stool	1	
3.	Trial Set	1	
	Package-23		
1.	Slit Lamp	2	4,000.00
	Package-24		
1.	Keratometer	1	10,000.00

2.	Lensometer	1	
	Package-25		
1.	AB scan	1	29,200.00
2.	Operating Microscope	1	
	Package-26		
1.	Tonometer (non-contact)	2	5,800.00
2.	Ophthalmoscope	2	
	Package-27		
1.	Bunsen Burner with LPG pipeline	1 unit	4,400.00
2.	Distillation plant 3 lt/hr. capacity	2 sets	
3.	Deionizer	1	
	Package-28		
1.	Infant weighing machine	1	9,740.00
2.	Infanto Meter	1	
3.	Infant stadio meters	1	
4.	Antsera kits, binocular microscope, testing plates, glassware etc.	1 lot	
5.	Auto washer pipette	1	
6.	Spinal Board	4	
	Package-29		
1.	Patient Monitoring System With CMS for 8 beds.	For 8 beds	96,000.00
	Package-30		
1.	Computerized spirometer system (PFT)	1	7,000.00
	Package-31		
1.	Biochemistry Auto Analyzer (16-channel)	1	56,000.00
	Package-32		
1.	Haematology Analyzer	1	10,000.00
	Package-33		
1.	Frozen Section System/Cryostat	1	24,000.00
	Package-34		
1.	Biphasic Defibrillator with monitor & recorder	1+1+3+1	36,000.00
	Package-35		
1.	Radiology & Dark room Acc.	1 Set	15,880.00
2.	X-ray view box (single)	22	
3.	Auto film processor	1	

	Package-36		
1.	Wash Tub	1	24,000.00
2.	Mobile Wash Trolley	2	
	Package-37		
1.	Instrument Trolley	3+1+2	16,325.00
2.	Dressing Drum	6	
3.	Bowel SS for placenta	2	
4	Basin SS on stand	2	
5	Douche Can SS	2	
6	Bed Pan SS	10	
7	Baby Cradles	4	
8	Instrument Tray with cover	1	
9	Instrument cabinet	2	
10	Trolley for Oxygen transport with O_2 cylinder	8	
11	Single step stool	2	
12	Surgical drums	6	
13	Dressing trolley	2	
14	Emergency crash cart	2	
	Package-38		
1.	Delivery Beds	2	17,000.00
2.	Delivery Tables (Labor)	3	
3.	Gyn. Examination Table	2	
	Package-39		
1	Vaginal speculum dual	3	408.00
2	Obstetric forceps –Wringles	2	
3	Obstetric forceps –Furguson	1	
4	Foetoscope (Pinnard) & Foetoscope (Ultrasound)	1 each	
5	Sim's Specuulum	4	
	Package-40		
1.	CTG Machine	1 No.	8000.00
	Package-41		
1.	Dental Unit	1	12,000.00
	Package-42		
1.	Minor OT instruments sets (surgical & gyn.)	2sets	20,000.00
2.	Set of surgical instruments	2sets	
3.	Set of General Orthopedics Instruments	1	
4.	Craniotomy Set	1	
	Package-43		

1.	Head Light with light source	1	3,000.00
	Package-44		
1.	Diathermy	6	48,000.00
	Package-45		
1.	Patient warmer	2	10,000.00
2.	Air mattress	2	
	Package-46		
1.	Nebulizers (Ultrasonic)	1+2+2	3,000.00
2.	Oxygen concentrator	1	
	Package-47		
1.	SRL Camera with printer	1	3,000.00
	Package-48		
1.	Diagnostic Set	22	4,580.00
2.	Weighing Machine	22	
3.	Laryngoscope (rigid)	2	
4.	Balance Electronic 10mg accuracy	1	
	Package-49		
1.	Colorimeter computerized	1	10,000.00
	Package-50		
1.	Ambulances (Basic Life Support)	2	1,12,000.00
	Package-51		
1.	General Glassware for Lab.	Lot	1,360.00
2.	Catheters-rubber/metal	Lot	

Part II: Required Delivery Schedule:

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

Within 16 weeks from date of Notification of Award to delivery at consignee site. The date of delivery will be the date of delivery at consignee site (Tenderers may quote earliest delivery period). Installation & commissioning to be done wherever applicable within 07 days thereafter.

b) For Imported goods directly from foreign:

Within 16 weeks from the date of opening of L/C. The date of delivery will be the date of receipt by the consignee as in Consignee Receipt Certificate (Tenderers may quote the earliest delivery period). Installation & commissioning to be done wherever applicable within 07 days thereafter.

Note: The purchaser/consignee reserves the right to extend the delivery period up to one year from the date of Notification of Award (NOA) at its discretion.

Part III: Scope of Incidental Services:

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

Part IV:

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

Part V:

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

Part VI:

Required Terms of Delivery and Destination.

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

At Consignee Site basis- As specified in List of Requirement. Insurance (local transportation and storage) would be borne by the supplier from warehouse to the consignee site for a period including 3 months beyond the delivery period.

b) For Imported goods directly from abroad:

The foreign tenders are required to quote their rates on Delivery Duty Paid (DDP) at Consignee Site basis giving break-up of the price as per the Proforma prescribed in the price schedule. Insurance (local transportation and storage) would be borne by the supplier from warehouse to the consignee site for a period including 3 months beyond the delivery period.

Custom clearance, handling, loading/unloading and transportation to the consignee's site shall be the responsibility of supplier/Indian Agent.

Destination/Consignee details are given in Section XX.

Section – VII
Technical Specifications

MEDICINE

Biphasic Defibrillator, Monitor & Recorder

- Biphasic
- Waveform display (min 3)
- External energy selection from 2 J to 200 J, biphasic
- Charging time less than 8 seconds @ 200 J (with a charged battery)
- Synchronizer and cardio version
- Unique disarm button (in addition to automatic time delay)
- Should come with high resolution monitor.
- Should come with 3 lead ECG that can be measured from cables, adult external paddles, paediatric paddles.
- Heart rate: 20 to 300 bpm BPM with user selectable alarms.
- Should come with external pacing, demand and asynchronous modes
- Should display CPR in real time.
- Should have large internal memory that stores and prints 25 ECG events.
- Battery to last not less than 2 hours of continuous ECG monitoring or 30 full energy discharges.
- Battery indicator on display and self test on battery

Accessories needed

- Paddles with charge and discharge buttons.
- Pediatric paddles adapters (set of 2)
- A/c 240 v V 50 hz charger and mains power source. Adult paddles and test paddles.
- 3 lead patient cable
- One spare battery
- Roll of 50mm recording paper x 10 rolls
- 5 oz tube of defibrillation gel x 5 tubes
- ECG cable with leads- 2 sets.
- External disposable pacing pads-2 sets
- Operation manual, service manual complete.
- Should have US FDA Approval

Multi Channel ECG Machine-12 Channels

1 Description of Function
1.1 ECG Machine is primary equipment to record ECG Signal in various configurations. 12 channels with interpretation are required for recording and analyzing the waveforms with a special software.

2 Operational Requirements
2.1 The ECG Machine should be able to acquire all 12 Leads simultaneously and interpret them

3 Technical Specifications
3.1 Should acquire simultaneous 12 lead ECG for both adult and pediatric patients
3.2 Should have Real time display of ECG waveforms with signal quality indication for each lead
3.3 Should have Artifact, AC, and low and high pass frequency filters.
3.4 Should have a storage memory of at least 40 ECGs with easy transfer by optional modem and data card.
3.5 Should have full screen preview of ECG report for quality assessment checks prior to print.
3.6 Should have interpretation facility of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and pediatric patients
3.7 Should have alphanumeric Keyboard for patient data Entry.
(virtual or hard keys)
3.8 Should have High resolution (200 dpix500dpi on 25 mm/sec speed) digital array A4 size printer
3.9 Should have report formats of 3 x4; 6 x2, Rhythm for up to 12 selected leads; 12 Lead Extended measurements, 1 minute of continuous waveform data for 1 selected lead.
3.10 Should have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge
3.11 Should be able to be connected to HIS /LAN/Wireless LAN(OPTIONAL)
3.12 Should display ECG on LCD/TFT Display.
3.13 USB Support (optional) for Storage on external portable memories.
3.14 Minimum 150 ECG Storage in Floppy or flash memory or any better device.

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

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

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

7 Standards, Safety and Training
7.1 Should be FDA/CE or BIS approved product
7.2 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms.

(OR EQUIVALENT BIS Standard)

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

ECG Monitor & Pulse Oximeter

1 **Description of Function**

1.1 A pulse oximeter is a medical device that indirectly measures the amount of oxygen in patient's blood (as opposed to measuring oxygen saturation directly through a blood sample) and changes in blood volume in the skin, producing a photoplethysmograph.

2. **Operational Requirements**

2.1 Suitable for all types of patient range: Adult, pediatric, infant, and / or neonate.

3. **Technical Specifications**

3.1 Display – LCD, Backlight illuminated.
3.2 Parameters and waveform displayed – SpO_2, pulse rate, ECG, system status, plethysmogram, menus for user settings.
3.3 SPO_2 range – 70-100%
3.4 Accuracy of SPO_2 -3%
3.5 Pulse rate range should be 30-240 bpm
3.6 Audiovisual Alarms- high/low SpO_2 and pulse rate, sensor off, sensor failure, low battery.
3.7 Alarm override facility.
3.8 Cable length should be minimum 1 metre.
3.9 RS 232C Interface for data communication
3.10 Integrated Printer
3.11 Battery back-up operating time 5 hours.

4. **System Configuration Accessories, spares and consumables**

4.1 System as specified
4.2 SpO_2 sensor with cable – two nos per monitor and pediatric SpO_2 sensors – one no. per monitor, Neonatal Sensor – 01

5. **Environmental Factors**

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

6. **Power Supply**

6.1 Should work on 220-240 VAC as well as rechargeable batteries. Main adaptor to be supplied.
6.2 Rechargeable battery operated system. Charger to be provided if integrated charger is not there.

7. **Standards, Safety and Training**

7.1 Should be FDA, CE, UL or BIS approved product.
7.2 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements.

8 **Documentation** .

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.

Multi-parameter Monitor with Capnometer

1 Description of Function
1.1 Monitor is required to monitor vital parameters of patients.

2 Operational Requirements
2.1 Monitor should be portable and lightweight and should monitor vital parameters of patients.
2.2 Capability of storage of patient data and printing of patient reports.

3 Technical Specifications
3.1 Portable and Light weight preferably <10kg
3.2 12 inch multi color TFT display
3.3 Monitoring parameters: - ECG, respiration, NIBP, SaO2, capnometery and temperature
3.4 Digital and 4 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. 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 Trends should be automatically stored for at least 24 hours in at least one-minute intervals.
3.7 Numeric monitored data trend 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.

4 System Configuration Accessories, spares and consumables
4.1 Portable/Transport Monitor-01
4.2 Patient cables (5 lead) –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 Dual channel recorder –01
4.9 Paper Recorder- 100 cases.

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

7 Standards, Safety and Training
7.1 Should be FDA or CE approved or ISI marked product
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

8 Documentation
8.1 User Manual in English
8.2 Service manual in English
8.3 List of important spare parts and accessories with their part number and costing.
8.4 Certificate of Calibration and inspection from 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.

PEDIATRICS – A- OPD

Infant Weighing Machine

- Capable of weighing 0-20 Kg with a count of 50 gms with 0 adjustment
- Infant weighing pan should be stable with smooth surface.
- Epoxy coated

Infantometer

- Infant meter for measuring length of Baby
- Material Acrylic
- Sleek broad acryl base with one sliding side.
- Marking for direct reading in centimeters for 0 to 90 cms.
- Folding sides for easy storage.

Infant Staid Meter Paediatric

1. Description of Function

1.1 Used for routine height and weight measurements of patients.

2. **Operational Requirements**

2.1 It should be a platform type of weight and height measuring scale on which the patient can stand for measurement of weight and height.

3. **Technical Specifications**

3.1
1. It should be a robust model for day to day rough use in wards, OPD.
2. It should measure the weight in kilogram.
3. There should be LCD display of weight.
4. It should measure the height in centimeter.
5. It should be equipped with tare function to allow a baby to be weighed in its mother's arms.
6. The graduation of measuring weight should be 50 gm.
7. The height measuring rod should be attached with it.
8. The scale should also have BMI function.
9. It should measure the height from 60 cm onwards. In other words, the minimum height which it can measure should be 60 cm.
10. It should be mounted on transport castors to allow free mobility from one place to other.

1. System Configuration Accessories, spares and consumables

None

5. **Environmental Factors**

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

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

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

6. **Power of Supply**

6.1 Should work on 220-240V AC as well as rechargeable batteries. Main adaptor to be supplied.

7. **Standards, Safety and Training**

7.1 Should be FDA, CE, UL or BIS approved product.

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 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 description of the hospital technician and company service engineer should be clearly spelt out.

B. NURSERY

Baby Bassinets

Size of Basket – 75 to 77 x 40 x 42 cms Height of the Bassinet from floor to basket top 103-105 cams.

Strong CR ERW steel stand on four rubber stumps with hanging basket with removable mosquito net of aluminum rod.

Epoxy created at lest 50 micron

Open Care System for Neonates

1 Description of Function
1.1 Required for care of new born and infants

2 Operational Requirements
2.1 Complete system with cart and oxygenation facility is required.

3 Technical Specifications
3.1 Essential parts : Cart & bassinet Warming system with controls & alarms. Examination light Storage space- 2 sliding drawers below bassinet 2 platforms of the size 9" x 12" capable of holding up to 5 Kgms of equipments.
Cart: Should swivel on 4 wheels of at least 5" dia- with foot operated., 2 front lockable wheels. Dimensions:- Height : 180-200 cms, Width : 60-70 cms, Depth : 100-120 cms. Working level : 95-110 cms and adjustable.

Bassinet : 1 fixed and 3 movable transparent side walls :Portion above X-Ray cassette holder radiolucent. Mattress- Width : 55 – 60 cms, Length : 65- 70 cms, Thickness : Minimum 4 cms
Material : Soft, Comfortable, easy to clean, radiolucent.
Bassinet tilt in steps of 6 – 8 degrees, Trendelenburg or reverse Trendelenburg
Warmer module swivel : 45-65 degrees on either side
Warming systems- Modes :Manual & skin. Manual mode :Adjustable in steps from zero to 100

Skin mode - Method : Flexible, unbreakable skin temperature probe Set point range : 34 – 38 degrees C. Skin temp variability at Temperature equilibrium :+ 0.2 degrees C
Skin temperature display- Accuracy : + 0.2 degrees C. Type : digital LED with 0.1 degree resolution. Correlation of displayed And actual skin temp : difference £ 0.2 degrees C.
Silence/ Reset switch : To silence the alarm & reset set point.

Alarms
Probe failure
Heat failure
High and low temperature
Power failure
System failure
Examination light : Illuminance 100 foot candles at mattress center
Storage space : 2 drawers, preferably covered and sliding

Pulse oximeter : to measure oxygen saturation and heart rate resistant to motion artifact. Able to pick up signals in low perfusion states (Price to be quoted separately).
CPAP system : Flow driven (Price to be quoted separately).
With air oxygen blender and FiO2 control, with heated humidifier, airway pressure display 0-15 cm H2O, With bonnet, cap and nasal prongs (10 of each size) for babies 600 gm-4000 gms, with reusable circuits, with 1 reusable flow generator
Power requirements : 220/240 V AC, 50/60 Hz,

Accessories
I.V. line pole with pivot bracket : should be able to accommodate 2 fluid bottles
Monitor shelves : 2 in number
Should support upto approx. 20 kgs per shelf or upto 25 kgs total on single side
Standard X- Ray cassette holder : sliding holder located just below undersurface of Bassinet, with markings to help placement of cassette

Patient Probes : 4 reusable temperature probes
4 reusable oxygen saturation probes
2 patient extension cables for the saturation probes

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

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

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

7 Standards, Safety and Training
7.1 Should be FDA/CE or BIS approved product
7.2 Shall comply with electrical safety requirements as per IEC or BIS regulations.
7.3 Comprehensive warranty & CMC after warranty. CMC would include all electronic and mechanical items including PCBs and heater elements. It should provide every year per unit four re-usable temperature probes, four oxygen saturation monitor probes, 20 Flow generator, and CPAP circuit.
7.4 Comprehensive training for lab staff and support services till familiarity with the system.

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

Phototheraphy Unit

1. Dimensions of the chamber should be at least 6 feet x 3 feet x 3feet.
2. Phototheraphy chamber of 18 UVA+18 NB UVB tubes designed for providing even irradiation of the body in the treatment area.
3. UV chockes must be provided to provide long life to the tube light and cooling fans for effective cooling of the unit.
4. integrated dosimeter system for easy calculation of irradiation levels.
5. The equipment have CE or FDA or ISI certification.
6. Advanced micro computerized electronic LCD/TFT Controller which allows setting of joules/time for UVA and milli Joules/time for NB UVB tubes.
7. Automatic computation of irradiation time from joules/time for NB UVB tubes.
8. Dose limit can be preset and cumulative dose is displayed instntaneously with provision of storage of data. Provision of 'software backup' is preferable.
9. Variation in irradiation is taken care by built in UVA/NB UVB sensors which should be able to detect all irradiation completely and uniformly.
10. Switches the system 'off' automatically with warming alarm at the end of set irradiation time.
11. Built in memory system that helps to avoide error in treatement.
12. Body to be of a metal which is rust free so as to ensure long rust free life of the unit.
13. Automated and/or mechaical safety mechanism to prevent excess irradiation to the pantients so as to avoid/prevent burns etc.
14. Electrical leakage circuit tripper/breaker in each panel to ensure maximum safety of the patient.
15. Open top unit to ensure maximum ventilation and prevent claustrophobia.
16. Mechanism to provide information to the patient regarding duration of treatment and time left for exposure during their treatment.
17. Computer for patient data management with software and interface for the phototheraphy chamber which is RS-232 compatible.
18. To be supplied with suitable stabilizer.
19. Black UV Goggles and Eye pads cover (3 pairs each for adult and 3 pair for children) as protective+.

BABY WARMER UNIT

· Infant warmer to be used in neonatology.
· The unit should conform all relevant international, national and local standards.

Specifications
· Temperature control:
· Range 30-38° C
· Skin range 25 – 42 °
· Increment 0.1°
· Display Digital
· Control Unit (to be supplied with.)
· Automatic heat control type
· Set point mechanism
· Heater Indicator.

Alarms (Audible and Visual)
· High air temperature
· Sensor disconnect
· Power Failure
· Alarm in manual mode: every 15 minutes with automatic shutoff

The warmer should includes:
· Self- check features
· Breaks for casters
· Skin sensor
· Supplemental humidity
· Protection against breaks and bursts of radiant and light source
· Spares and accessories
· Service and users manuals

Accessories:
· No. of hand ports 6
· No. of tubing ports 6
· No. of oxygen inlet port 1
· Backup thermostat
· Examination Light 50 W Halogen
· Radiant heat source Quartz tube 600w
· Phototherapy lights
· Resuscitation equipment packages
· X-Ray cassette holder

Digital Infusion Pump

1. The equipment should have Roller type Peristaltic pump /Volumetric pump technology for delivery of IV fluids and blood/blood products ranging between 2.5 ml to 750 ml per minute.
2. The Equipment should have high levels of safety from air embolism by integrating atleast two ultrasonic air detection sensors.
3. Heating process should be done by an electro magnetic induction heating system.
4. The Equipment should have two infra –red temperature sensors for accurate delivery of fluids at 37deg.C.
5. The equipment should have the facility to automatically purge air for removal of any outgassed air to prevent it from entering the patient line. No manual process should be involved.
6. The equipment should have operator controlled Bolus infusion key for rapid response in critical situations.
7. The equipment should have a line pressure control sensor for restriction of flow in case of line occlusion immediately and stop the delivery of fluids for patient safety.
8. The Equipment should have a recirculate mode for pre – warming of fluids during transport.
9. The Equipment should have an interactive on-board display system which displays information about the rate of infusion , total volume infused , real temperature of fluids, line pressure etc.
10. The equipment should have an internal rechargeable battery backup.
11. Consumables should be universal for all flow rates ranging between 2.5 ml to 750 ml per minute.

Apnea Monitor

0.20 breath / minute with alarms and sensitivity setting for neonatal & pediatric use.

Bilirubinometer (Transcutaneous Serum)

1. Method of measurement –reflectance bichromatic photometry.
2. Light source- two white light emitting diodes (LED)
3. Detector- two photocell system
4. Measuring gauge- 2-58 (in unit of TBI)
5. Optical unaccuracy- <10%
6. Imprecision (CV%)-<2%
7. Correlated between TBI and laboratory values for serum bilirubin levels- more or equal to 0.92
8. Readout- three digits liquid crystal display
9. Measuring cycle time -~2 seconds. Between the measuring cycles the device is in a stand by mode.
10. Power source- 3 batteries of AAA (or LR03) type or equivalent

Auto Blood Gas Analyzer

A fully automated pH/Blood gas/electrolyte analyzer measuring the following parameters:-
pH, PCO2, PO2, Barometric pressure.
Na, K, Ca, Cl
Co-oximetry: ct Hb, CCO Hb, Met Hb, Sulf Hb, Haematocrit and Barometric pressure.

Sample volume should be approximate 100 µl for all parameters.

All calibration and cleaning cycles should be fully automated with user selectable calibration items.
Calibration should be performed by liquid calibration for all parameters.
The electrodes provided should be zero maintenance including the reference electrode.
The system should have on board data manager to store all patient results, QC data and calibrations.
The system should have a closed waste system and monitored continuously. Also all the system reagents should be monitored continuously.
A power fail protection for 20 min.to take all calibration and programmed data.
The analyzer should have a colour LCD screen to access all the system software and to display the patient's results. With alphanumeric key board/touch screen.
A built in thermal printer should be provided to print out patient results.
The system should work in discrete testing, ie, selectable parameter testing.
Should be supplied with consumable, reagents and QC agents for 1000 tests, as per the user requirements so that they do not expire.
Should not preferably use special gases.

RESUSCITATION KIT

1. **Neonatal Resuscitation Kit**

- Ambu bag, Neonatal,

  Silicon Bag, 250 ml total value
  Non breathing value, Spring loaded
  40 cm of H2 0
  Silicon clear mask size 0,1,2

- 360 ^{0} Swiveling patient connector 1.5 meter oxygen lubing
  Oxygen use over bag.

- Endotracheal tubes Disposable
  Presterilized ETO /Gamma Radiation
  Individual Double pack
  Size 2.5,3

- Magill Forcep
  Stainless Steel
  Small for infant size endotractural Tubes
  Standard quality

- Guedel Oropharageal Air Way
  Material Plastic / Silicon
  Firm, Atraumatic
  Size 00, 0, 1

Infant Laryngoscope – Miller type
Stainless Steel body with serrations
Battery Operated
Straight Blades
Size 0, 1, 2
Blades engagement and disengagement should be smooth
Share – 6 bulbs and the set of batteries.
To be supplied in a case.

C. NEONATAL ICU

Open Care System for Neonates

1 Description of Function
1.1 Required for care of new born and infants

2 Operational Requirements
2.1 Complete system with cart and oxygenation facility is required.

3 Technical Specifications
3.1 Essential parts : Cart & bassinet Warming system with controls & alarms. Examination light
Storage space- 2 sliding drawers below bassinet 2 platforms of the size 9" x 12" capable of holding up to 5 Kgms of equipments.
Cart: Should swivel on 4 wheels of at least 5" dia- with foot operated., 2 front lockable wheels.
Dimensions:- Height : 180-200 cms, Width : 60-70 cms, Depth : 100-120 cms. Working level : 95-110 cms and adjustable.

Bassinet : 1 fixed and 3 movable transparent side walls :Portion above X-Ray cassette holder radiolucent. Mattress- Width : 55 – 60 cms, Length : 65- 70 cms, Thickness : Minimum 4 cms
Material : Soft, Comfortable, easy to clean, radiolucent.
Bassinet tilt in steps of 6 – 8 degrees, Trendelenburg or reverse Trendelenburg
Warmer module swivel : 45-65 degrees on either side
Warming systems- Modes :Manual & skin. Manual mode :Adjustable in steps from zero to 100

Skin mode - Method : Flexible, unbreakable skin temperature probe Set point range : 34 – 38 degrees C. Skin temp variability at Temperature equilibrium :+ 0.2 degrees C
Skin temperature display- Accuracy : + 0.2 degrees C. Type : digital LED with 0.1 degree resolution. Correlation of displayed And actual skin temp : difference £ 0.2 degrees C.
Silence/ Reset switch : To silence the alarm & reset set point.

Alarms
Probe failure
Heat failure
High and low temperature
Power failure
System failure
Examination light : Illuminance 100 foot candles at mattress center
Storage space : 2 drawers, preferably covered and sliding

Pulse oximeter : to measure oxygen saturation and heart rate resistant to motion artifact. Able to pick up signals in low perfusion states (Price to be quoted separately).
CPAP system : Flow driven (Price to be quoted separately).
With air oxygen blender and FiO2 control, with heated humidifier, airway pressure display 0-15 cm H2O, With bonnet, cap and nasal prongs (10 of each size) for babies 600 gm-4000 gms, with reusable circuits, with 1 reusable flow generator
Power requirements : 220/240 V AC, 50/60 Hz,

Accessories
I.V. line pole with pivot bracket : should be able to accommodate 2 fluid bottles
Monitor shelves : 2 in number
Should support upto approx. 20 kgs per shelf or upto 25 kgs total on single side
Standard X- Ray cassette holder : sliding holder located just below undersurface of Bassinet, with markings to help placement of cassette

Patient Probes : 4 reusable temperature probes
4 reusable oxygen saturation probes
2 patient extension cables for the saturation probes

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

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

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

7 Standards, Safety and Training
7.1 Should be FDA/CE or BIS approved product
7.2 Shall comply with electrical safety requirements as per IEC or BIS regulations.
7.3 Comprehensive warranty and CMC after warranty. CMC would include all electronic and mechanical items including PCBs and heater elements. It should provide every year per unit four re usable temperature probes, four oxygen saturation monitor probes, 20 Flow generator, and CPAP circuit.
7.4 Comprehensive training for lab staff and support services till familiarity with the system.

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

Basic Monitor (Resp., Temp., Pulse, SPO2) for Neonatal ICU

1 Description of Function
1.1 Monitor is required to monitor vital parameters of patients.

2 Operational Requirements
2.1 Monitor should be portable and lightweight 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)

3 Technical Specifications
3.1 Portable and Light weight preferably <10kg
3.2 12 inch multi color TFT display
3.3 Monitoring parameters: - ECG, respiration, NIBP, SaO2, temperature
3.4 Digital and 4 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. 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 Trends should be automatically stored for at least 24 hours in at least one-minute intervals.
3.7 Numeric monitored data trend 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 NETWORKING AND REMOTE ACCESS (Optional)
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
4.1 Portable/Transport Monitor-01
4.2 Patient cables (5 lead) –01
4.3 Paediatric & Neonatal Cuff –01
4.4 Paediatric & Neonatal Probe SPO2 –02
4.5 Skin Temp Probe –02
4.6 Dual channel recorder –01
4.7 Paper Recorder- 100 cases.
4.8 Networking and remote access- (OPTIONAL)- 01

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

7 Standards, Safety and Training
7.1 Should be FDA or CE approved or ISI marked product
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

8 Documentation
8.1 User Manual in English
8.2 Service manual in English
8.3 List of important spare parts and accessories with their part number and costing.
8.4 Certificate of Calibration and inspection from 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.

Ventilator Neonatal / Paediatric / Infant

1. Microprocessor Controlled integrated suitable for neonate and child ventilation.
2. Should have not less than 10 inch colored TFT screen capable for the monitoring of the ventilation parameters, curves and loops.
3. Should have the automatic compliance, leakage compensation.

4. Should have the facilities for following setting for neonate to child
a) Tidal Volume(2-250 ml)
b) Flow Pattern
c) Inspiration Plateau
d) Pressure ramp
e) SIMV Rate
f) CPAP/PEEP
g) Pressure Support
h) FiO2
i) Pause Time
j) Inspiration trigger sensitivity to flow & pressure
k) Base Flow
l) Sensitivity for cycling to expiration

5. Should have the capability of monitoring of the following parameters,
a) Airway Pressure
b) Expired tidal Volume
c) Minute Volume
d) Spontaneous Minute Volume
e) Total Frequency
f) Fio2
g) Auto PEEP
h) Rapid Shallow Breathing Index
i) Plateau Pressure
j) Inspiratory & Expiratory Resistance
k) Static Compliance
l) Imposed Work of Breathing
m) Peak, Plateau and mean airway pressure
n) Plateau Pressure

6. Should have the Alarms (User Selector) for all the measured and monitored parameters.

7. Should have the following Modes of ventilations,
a) Volume controlled
b) Pressure Controlled
c) Pressure Support
d) SIMV (Pressure Control and volume control) with pressure support.
e) CPAP/PEEP (0 – 50 CM H20)
f) Auto mode /Auto flow preferable
g) PRVC
h) Biphasic preferable
i) High frequency ventilation (Optional)

8. Sensors should be automatically calibrated every time it is switched on.

9. Should have the ability to calculate

a) Intrinsic Peep
b) Occlusion Pressure
c) Negative Inspiratory force

10. Other Features
a) Should have Nebuliser
b) Should have the servo controlled Humidifier with digital monitoring of inspired gas temperature.
c) Should have an imported stand-alone air compressor integrated with the Ventilator to provide an oil free Medical air.
d) CVT as appropriate
e) Should have silicone autoclave-able two sets of Pediatric hoses.
f) Should be supplied with imported non-corrosive trolley and hinged arms.

Pulse Oximeter

1 **Description of Function**

1.2 A pulse oximeter is a medical device that indirectly measures the amount of oxygen in patient's blood (as opposed to measuring oxygen saturation directly through a blood sample) and changes in blood volume in the skin, producing a photoplethysmograph.

2. **Operational Requirements**

2.2 Suitable for all types of patient range: Adult, pediatric, infant, and / or neonate.

3. **Technical Specifications**

3.12 Display – LCD, Backlight illuminated.
3.13 Parameters and waveform displayed – SpO_2, pulse rate, system status, plethysmogram, menus for user settings.
3.14 SPO_2 range – 70-100%
3.15 Accuracy of SPO_2 -3%
3.16 Pulse rate range should be 30-240 bpm
3.17 Audiovisual Alarms- high/low SpO_2 and pulse rate, sensor off, sensor failure, low battery.
3.18 Alarm override facility.
3.19 Cable length should be minimum 1 metre.
3.20 RS 232C Interface for data communication
3.21 Integrated Printer
3.22 Battery back-up operating time 5 hours.

4. **System Configuration Accessories, spares and consumables**

4.3 System as specified
4.4 SpO_2 sensor with cable – two nos per monitor and pediatric SpO_2 sensors – one no. per monitor, Neonatal Sensor – 01

5. **Environmental Factors**

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

6. **Power Supply**

6.3 Should work on 220-240 VAC as well as rechargeable batteries. Main adaptor to be supplied.
6.4 Rechargeable battery operated system. Charger to be provided if integrated charger is not there.

7. **Standards, Safety and Training**

7.1 Should be FDA, CE, UL or BIS approved product.
7.2 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements.

8 Documentation .

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.

Incubator - Infant

1 Description of Function
1.1 An infant incubator provides a closed, controlled environment that warms an infant by circulating heated air over the skin. The heat is then absorbed into the body by tissue conduction and blood convection. Ideally, both the skin and core temperatures should be maintained with only minor variations.

2 Operational Requirements
2.1 High quality with humidity and servo controlled double walled with cabinet incubator.
2.2 Microprocessor controlled, easy access control panel with feather touch switches
2.3 With a facility to elevate base to offer adjustable range
2.4 Facility with both servo control as well as air temperature control and servo humidifier
2.5 Accommodates shelves and IV poles.
2.6 The quality of the material used should very high and crystal transparent
2.7 Super quality microprocessor based control system - self test functions are performed
2.8 System required complete with Oxygen port with tubing and Gel Mattress.

3 Technical Specifications
3.1 Continuous bed tilt up to 8° on either sides
3.2 Head end raise facility with auto lock.
3.3 Both visual and audible alarms for
(i) Patient and control and high / low temperature alarm.
(ii) Air circulation / probe / system / power failure alarm.
(iii) Humidity control alarm.
3.4 Facility to take x-ray and weight without removing baby.
3.5 Facility to display and trends of temperature information on compatible monitors with other physiological parameter
3. 6 Height 140 cm + 5 cm, depth at least 60 mm , width at least 90 mm. Mattress to hood distance 40 cm working level – 90 to 100 cm.
Iris port for tubing, probes, leads.
4cm thick gel mattress, easily cleanable.
With at least 4" diameter caster wheel with swivel in all directions and with front lockable wheels.
Two shelves cabinet with door. Weight 90-100 kg.
3.7 Patient control (Servo) mode – 35 deg-37 deg C. and Air Control (Manual mode)- 20 deg C to 39 deg C.
3.8 Air velocity less than 10 cm/sec with inner wall.
3.9 Temperature variability less than +/-0.2 deg C. and Temperature resolution 0.1 deg C
3.10 Average oxygen input concentration range 5-15 liters/min or 25-70%.
3.11 Humidification adjustable electronically with digital display. Standard: 10-80% dependent on nursery environment and incubator temperature setting.
3.12 Double wall canopy with Six hand ports with elbow operated flaps with separate ports for tubing.
3.13 CO2 flushing, according to lEC 601-2-19 / 105.1 Maximum C02 concentration inside incubator 0.2%
3.14 Servo control for Oxygen with integrated monitoring
3.15 Air filter :- 0.3 micron
3.16 Built in weighing scale with sensitivity of + 1 gm
3.17 Mattress should be radiolucent
3.18 Provision for X ray cassette holders
3.19 2 drawer storage facility and two platforms for keeping monitors , able to bear at least 5 kg weight each.

4 System Configuration Accessories, spares and consumables
4.1 System as specified
4.2 Two sets of extra non disposable temperature sensors and humidification sensors.

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

6 Power Supply
6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Suitable UPS with 30 Min Backup for complete system

7 Standards, Safety and Training
7.1 Should be FDA/CE or BIS approved product
7.2 Electrical safety conforms to standards for electrical safety IEC-60601-2-19:Medical Electrical Equipment part 2 Particular Requirements of Safety of Baby Incubator.
7.3 CMC should provide 4 non disposable temperature sensors and sensors for humidity control every year per incubator.

8 Documentations to be provided
8.1 User/Technical/Maintenance manuals to be supplied in English.
8.2 Certificate of calibration and inspection.
8.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
8.4 List of important spares and accessories with their part number and costing.
8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.

RESPIRATORY LABORATORY

Biphasic Defibrillator

- Biphasic
- Waveform display (min 3)
- External energy selection from 2 J to 200 J, biphasic
- Charging time less than 8 seconds @ 200 J (with a charged battery)
- Synchronizer and cardio version
- Unique disarm button (in addition to automatic time delay)
- Should come with high resolution monitor.
- Should come with 3 lead ECG that can be measured from cables, adult external paddles, paediatric paddles.
- Heart rate: 20 to 300 bpm BPM with user selectable alarms.
- Should come with external pacing, demand and asynchronous modes
- Should display CPR in real time.
- Should have large internal memory that stores and prints 25 ECG events.
- Battery to last not less than 2 hours of continuous ECG monitoring or 30 full energy discharges.
- Battery indicator on display and self test on battery

Accessories needed

- Paddles with charge and discharge buttons.
- Pediatric paddles adapters (set of 2)
- A/c 240 v V 50 hz charger and mains power source. Adult paddles and test paddles.
- 3 lead patient cable
- One spare battery
- Roll of 50mm recording paper x 10 rolls
- 5 oz tube of defibrillation gel x 5 tubes
- ECG cable with leads- 2 sets.
- External disposable pacing pads-2 sets
- Operation manual, service manual complete.
- Should have US FDA Approval

Pulse Oximeter

1 **Description of Function**

A pulse oximeter is a medical device that indirectly measures the amount of oxygen in patient's blood (as opposed to measuring oxygen saturation directly through a blood sample) and changes in blood volume in the skin, producing a photoplethysmograph.

2. **Operational Requirements**

Suitable for all types of patient range: Adult, pediatric, infant, and / or neonate.

3. **Technical Specifications**

Display – LCD, Backlight illuminated.
Parameters and waveform displayed – SpO_2, pulse rate, system status, plethysmogram, menus for user settings.
SPO_2 range – 70-100%
Accuracy of SPO_2 -3%
Pulse rate range should be 30-240 bpm
Audiovisual Alarms- high/low SpO_2 and pulse rate, sensor off, sensor failure, low battery.
Alarm override facility.
Cable length should be minimum 1 metre.
RS 232C Interface for data communication
Integrated Printer
Battery back-up operating time 5 hours.

4. **System Configuration Accessories, spares and consumables**
System as specified
SpO_2 sensor with cable – two nos per monitor and pediatric SpO_2 sensors – one no. per monitor, Neonatal Sensor – 01

5. **Environmental Factors**

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

6. **Power Supply**

Should work on 220-240 VAC as well as rechargeable batteries. Main adaptor to be supplied.
Rechargeable battery operated system. Charger to be provided if integrated charger is not there.

7. **Standards, Safety and Training**

Should be FDA, CE, UL or BIS approved product.
Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements.

9 Documentation .

User/Technical/Maintenance manuals to be supplied in English
Certificate of calibration and inspection.
List of important spare parts and accessories with their part number and costing.

Computerized Spirometer System (PFT Machine)

1 Description of Function
1.1 Pulmonary function tests are a broad range of tests that are usually done in a health care provider's office or a specialized facility. They measure how well the lungs take in and exhale air and how efficiently they transfer oxygen into the blood.

2 Operational Requirements
2.1 System should be supplied complete with printer.

3 Technical Specifications
3.1
1. The following tests should be performed by the PFT Equipment.
a. It should measure FEV , FVC, PEF, SVC,FEV %, MMEF, PIF, MVV,FRC, 1 1RV, TLC, FET, ERV, IRV, PiMAX/PeMAX, Diffusion capacity.
b. DLCO, BRONCHIAL PROVOCATION TEST
2. Predicted value- depends upon national preference
3. Multi window lay out
4. Configurable print out format
5. Real time flow volume and volume time traces
6. Overlaying of previous test curves for comparison
7. Open & Closed flow/volume loop test technique possible
8. Powerful search capability
9. Storage- 1000 patients' tests including flow/volume loops and volume time curves.
10. Should have networking support

4 System Configuration Accessories, spares and consumables
None

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

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

7 Standards, Safety and Training
7.1 Should be FDA, CE, UL or BIS approved product.
7.2 Comprehensive training for lab staff and support services till familiarity with the system.
7.3 Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment.

8 Documentation
8.1 User/Technical/Maintenance manuals to be supplied in English.
8.2 List of important spare parts and accessories with their part number and costing.
8.3 Certificate of calibration and inspection.
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.

8.5 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.
8.6 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.

Oxygen Concentrator (Portable)

Patented ATE module (Advanced Technology Fractionators) should have no failure – prone solenoid values, fewer pneumatic connections, fewer electrical connections. There should be no electronics for value sequencing and no pressure – reducing regulator.

One mechanically integrated module, with a single moving, part made of space-age composites.

Maintenance – free
Self-cleaning
Insensitive to contamination
Invulnerable to wear
Reliable alarms with no battery-dependent.
Flow rate 4-6 liters/minute, with two outlets for two patients and facility for nebulization. Oxygen purity 90% or more.
A compressor built for steady – state operation is matched to the ATF's constant low pressure operation.

Bronchoscope (Rigid) with Accessories with Light Source

1. **Description of Function**

1.1 A rigid bronchoscope is a straight, hollow, metal tube inserted to examine inside a patient's airway for abnormalities such as foreign bodies, bleeding, tumors, or inflammation.

2. **Operational Requirements**

2.1 Should be sturdy system complete with light source and all accessories.

3. **Technical Specifications**

3.1. Bronchoscope tube for use in adult in various standard sizes- approx 6.5, 7.5 & 8.5 and standard length (approx 42 cm).

Should have the following accessories:

a. Glass window plug
b. Rubber window plug
c. Sliding adapter for sealing cap and lens
d. Injection cannula for positive pressure assisted ventilation system.
e. Instrument guide for aspiration catheter and pressure tamponade.
f. Magnifier lens system
g. Adapter to respirator with sealing plug.
h. Prismatic light defector with adapter for fiberoptic light cable.

4. **System Configuration Accessories, spares and consumables**

Fiberoptic light cable
Halogen cold light source: 12 volt 50 watt, 15 volt, 150 watt

Telescope compatible with unit.

a. Forward viewing straight – 0 Degree
b. Foreign body holding forceps -30 Degree
c. Lateral – 70

2. Biopsy Forceps of

a. alligator type and fenestrated
b. Foreign body holding forceps
c. Dormia basket

3. Constant Voltage stabilizer

5. **Environmental Factors**

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

5.2 The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%

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

6. **Power Supply**

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

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

7. Standards, Safety and Training

7.1 Should be FDA, CE, UL or BIS approved product.
7.2 Comprehensive training for lab staff and support services till familiarity with the system.
7.3 Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 particular requirements for the safety of endoscopic equipment.

8. Documentation

8.1 User / Technical/ Maintenance manuals to be supplied in English.
8.2 List of important spares and accessories with their part number and costing.
8.3 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page / para numer or original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.
8.4 Certificate of calibration and inspection.
8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance check list. The job description of the hospital technician and company service engineer should be clearly spelt out.
8.6 List of Equipments available for providing calibration and routine Preventive Maintenance Support, as per manufacturer documentation in service / technical manual.

Ultrasonic Nebulizer

1. **Description**
   1.1 Nebulizer is a device used to administer medication to people in forms of a liquid mist to the airways. It is commonly used in treating cystic fibrosis, asthma, and other respiratory diseases.

2. **Operational Requirements**
   2.1 Heavy duty compact Nebulizer is required.

3. **Technical Specifications**
   3.1 Technical Specifications Nebuliser
      1. Compact, light weight, low noise.
      2. Durable long life compressor. Suitable for heavy duty/ institutional (hospital) use, should be able to run uninterruptedly for one hour, Max Press=2.0-2.5 bars.
      3. Should produce particle of size 1-5 micron.
      4. Aluminium cabinet painted with epoxy powder.
      5. Piston-type electric aspirator that offers high performance and great durability.
      6. Protective thermal cut out relay.
      7. Air delivery rate app. 15 L/min.
      8. 24 hours continuous work for hospital use.

4. **System Configuration Accessories, spares and consumables**
   4.1 None.

5. **Environmental Factors**
   5.1 Shall meet IEC-60601-1-2; 2001 9Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC;EMC-directive.
   5.2 The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%.
   5.3 The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%.

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

7. **Standards, Safety and Training**
   7.1 Should be FDA, CE, UL or BIS approved product.
   7.2 Training as required.

8. **Documentation**

   8.1 User/Technical/Maintenance manuals to be supplied in English.
   8.2 List of important spare parts and accessories with their part number and costing.
   8.3 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.

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

8.5 Certificate of calibration and inspection.

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

Digital Infusion Pump

1. The equipment should have Roller type Peristaltic pump /Volumetric pump technology for delivery of IV fluids and blood/blood products ranging between 2.5 ml to 750 ml per minute.
2. The Equipment should have high levels of safety from air embolism by integrating atleast two ultrasonic air detection sensors.
3. Heating process should be done by an electro magnetic induction heating system.
4. The Equipment should have two infra –red temperature sensors for accurate delivery of fluids at 37deg.C.
5. The equipment should have the facility to automatically purge air for removal of any outgassed air to prevent it from entering the patient line. No manual process should be involved.
6. The equipment should have operator controlled Bolus infusion key for rapid response in critical situations.
7. The equipment should have a line pressure control sensor for restriction of flow in case of line occlusion immediately and stop the delivery of fluids for patient safety.
8. The Equipment should have a recirculate mode for pre – warming of fluids during transport.
9. The Equipment should have an interactive on-board display system which displays information about the rate of infusion , total volume infused , real temperature of fluids, line pressure etc.
10. The equipment should have an internal rechargeable battery backup.
11. Consumables should be universal for all flow rates ranging between 2.5 ml to 750 ml per minute.

Suction Machine

1. **Description of Function**

To extract fluid from the body during surgery or emergency treatment

2. **Operational Requirements**

Shall have high vacuum suction capacity
The machine should be portable on castors/mobile trolley

3. **Technical Specifications**

Heavy duty and noiseless with piston/cylinder technology. Auto cut-off for preventing entry of fluid in pump To facilitate maintenance the cover of machine should be easy to open from the top & sides. The suction machine should be capable of producing vacuum up to -90K Pascal, which should be adjustable and monitored by vacuum gauge of suitable range. The suction capacity should be 15 litres or more per minute and can be regulated.

It should have two bottle of 4-5 liters capacity with synthetic rubber lids. The bottle shall be fitted with the arrangement to prevent overflow of fluid.

ON/OFF Switch and Power indicator.

Body material: Base, top & Panel made of rust proof and corrosion resistant moulded ABS; Jar/Bottle material; Autoclavable polycarbonate.

Optional inbuilt maintenance free battery. Battery backup upto 60 minutes on full charge.

4. **System Configuration Accessories, spares and consumables**

System as specified
3 core lead of 2 meter along with one 3 pins 15 amp. Plug -01
Power cable -3 crore lead of 5 meter along with one 3 pins 15 amp. Plug -01

The following spares machine are also required:-

Bottles 2 Nos.
Lids 2 Nos.
Rubber Seals 2 Nos.
Blades 2 Nos.
Suction tubing set 1 No.

5. **Environmental Factors**

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

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**

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

A fuse or a resettable circuit breaker f a appropriate capacity should be incorporated for protection of motor.

Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be suppled.

7. **Standards & Safety**

Should be FDA, CE, UL or BIS approved product.

Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standards).

Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2: latest edition or equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended.

8. **Training**

Comprehensive training for staff of user department and support services till famillarity with the system.

Ventilator (Adult & Pediatrics)

1 Description of Function
1.1Ventilators provide artificial respiratory support to patients.

2 Operational Requirements
2.1 Microprocessor Controlled ventilator with integrated facility for Ventilation monitoring suitable for New born to adult ventilation.

3 Technical Specifications
3.1 Standard hinged arm holder for holding the circuit
3.2 Colored TFT screen, 12 Inch or more
3.3 Facility to measure and display
a) End tidal CO2 with capnography.
b) 3 waves- Pressure and Time, Volume and Time and Flow and Time.
c) 3 loops- P-V, F-V, P-F with facility of saving of 3 Loops for reference.
d) Graphic display to have automatic scaling facility for waves
e) Status indicator for Ventilator mode, Battery life, patient data, alarm settings, clock etc
3.4 Trending facility for 24hours with minimum 5 minutes resolution for recent 24 hours
3.5 Automatic compliance & Leakage compensation for circuit and ET tube
3.6 Following settings for all age groups.
a) Tidal Volume
b) Pressure (insp)
c) Pressure Ramp
d) Respiratory Rate
e) SIMV Respiratory Rate
f) CPAP/PEEP
g) Pressure support
h) FIO2
i) Pause Time
j) Pressure & Flow Trigger
3.7 Monitoring of the following parameters
a) Airway Pressure (Peak & Mean)
b) Tidal volume (Inspired & Expired)
c) Minute volume (Inspired and Expired)
d) Spontaneous Minute Volume
e) Total Frequency
f) FIO2 dynamic
g) Intrinsic PEEP and PEEPi Volume
h) Plateau Pressure
i) Resistance & Compliance
j) Use selector Alarms for all measured & monitored parameters.
K) Rapid Shallow breathing index
3.8 Modes of ventilation
a) Volume controlled
b) Pressure Controlled
c) Pressure Support
d) SIMV (Pressure Control and volume control) with pressure support
e) CPAP/PEEP
f) Inverse Ratio Ventilation
g) Advanced mode like pressure controlled volume guaranteed
h) Non Invasive ventilation
i) APRV
j) ACMV MODE

3.9 Apnea /backup ventilation
3.10 Expiratory block should be autoclavable and no routine calibration required
3.11 Should have the ability to calculate / Procedure
a. Intrinsic Peep & Intrinsic PEEP Volume
b. Occlusion Pressure
c. Spontaneous Breathing trial
d. Facility to calculate lower and upper inflection point
3.12 Nebuliser with capability to deliver particle size of < 3 micron & to be used in both Off and On line
3.13 Automatic Patient Detection facility preferable
3.14 Medical Air Compressor. (Price to be quoted separately)
a) Stand-alone Medical Air compressor
b) Snap fit with the Ventilator module to provide an oil free Medical air.
c) Peak output flow should be minimum 160 LPM.
d) Air quality should comply with ISO compressed air purity class.
e) Medical Air Compressor should automatically activate in the event of wall air supply loss.
f) Replacement of internal filters should be performed without removing the compressor
g) Should have washable air filter.
3.15 Technical Specifications for reusable face mask & nasal mask.
Reusable face & nasal mask with textured dual flap silicone cushion flap for easy fit.
Removable forehead support and pad to match the angle of patient's forehead
Stability Selector for easy fit and angle.
Ball & Socket headgear attachments.
Should be autoclavable.
3.16 Battery back up for minimum 1 hour
3.17 RS 323C interface for communications with networked devices.
3.18 Automatic patient detection facility preferable.

4 System Configuration Accessories, spares and consumables
4.1 Ventilator - 01
4.2 Adult and Paediatric autoclavable silicone breathing circuits – 02 each
4.3 (a) Reusable Masks (Small, Medium, Large) with each machine. - 02 sets each
(b) All Accessories for non invasive ventilation – 2 sets.
(c) – Disposable circuit – 50 Nos.
4.4 Medical Air Compressor. (Price to be quoted separately)
4.5 Humidifier -Servo controlled with digital monitoring of inspired gas temperature complete with heating wire - 02

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

Blood Gas with Electrolyte Analyzer

A fully automated pH/Blood gas/electrolyte analyzer measuring the following parameters:-
pH, PCO2, PO2, Barometric pressure. Na, K, Ca, Cl.
Co-oximetry: ct Hb, CCO Hb, Met Hb, Sulf Hb, Haematocrit and Barometric pressure.

Sample volume should be approximate 100 µl for all parameters.

All calibration and cleaning cycles should be fully automated with user selectable calibration items.
Calibration should be performed by liquid calibration for all parameters.
The electrodes provided should be zero maintenance including the reference electrode.
The system should have on board data manager to store all patient results, QC data and calibrations.
The system should have a closed waste system and monitored continuously. Also all the system reagents should be monitored continuously.
A power fail protection for 20 min.to take all calibration and programmed data.
The analyzer should have a colour LCD screen to access all the system software and to display the patient's results. With alphanumeric key board/touch screen.
A built in thermal printer should be provided to print out patient results.
The system should work in discrete testing, ie, selectable parameter testing.
Should be supplied with consumable, reagents and QC agents for 1000 tests, as per the user requirements so that they do not expire.
Should not preferably use special gases.

SURGERY

Specifications regarding Adult Therapeutic UGI Videoendoscope System

- Adult Therapeutic UGI Videoendoscope
- Biopsy channel rubber valves (50 pieces with one endoscope)
- Scope should be fully immersible for disinfection.
- Large trey should be provided for disinfection of equipment

Details regarding the Adult Therapeutic UGI Videoendoscope

- ✓ **Optical System**
  Field of View: 120-140 degree or more
  Depth of View: 5-100 mm or better
  CCD: High resolution Color chip of latest technology
- ✓ **Distal End (OD): 11-13 mm or less**
- ✓ **Bending section (Range of distal end bending)**
  Up: 190-210 degree or more
  Down: 90-120 degree or more
  Right: 100-120 degree or more
  Left: 100-120 degree or more
- ✓ **Insertion tube (OD): 11-13 mm or less**
- ✓ **Working Length: 1000-1150 mm**
- ✓ **Total length: 1300-1450 mm**
- ✓ **Instrument Channel (ID): 3.8 mm or more**

Specifications for Adult Video Colonoscope System

- Adult Video Colonoscope
- Biopsy channel rubber valves (50 pieces with one endoscope)
- Scope should be fully immersible for disinfection
-

Other inclusions:

- All standard accessories, Air Leakage Tester, User/Operator & Reference Manuals,
- Large trey should be provided for disinfection of equipment

Details regarding the Adult Video Colonoscope

- ✓ **Optical System**
  Field of View: 140 degree or more
  Depth of View: 4-100 mm or better
  CCD: High resolution Color chip of latest technology
- ✓ **Distal End (OD): 14 mm or less**
- ✓ **Bending section (Range of distal end bending)**
  Up: 180 degree or more
  Down: 180 degree or more
  Right: 160 degree or more
  Left: 160 degree or more
- ✓ **Insertion tube (OD): 13 mm or less**
- ✓ **Working Length: 1600-1800 mm**
- ✓ **Total length: 1900-2100 mm**
- ✓ **Instrument Channel (ID): 3.8 mm or more**

Specifications for Adult Therapeutic Videoduodenoscope System

To include:

- Adult Therapeutic Videoduodenoscope (ERCP scope)
- Biopsy channel rubber valves (50 pieces with one set)
- Scope should be fully immersible for disinfection

Other inclusions:

- All standard accessories, Air Leakage Tester, User/Operator & Reference Manuals,
- Large trey should be provided for disinfection of equipment

Details regarding the Adult Therapeutic Videoduodenoscope (ERCP scope)

- ✓ **Optical System**
  Field of View: 100-140 degree or more
  Depth of View: 4-60 mm or better
  Angle of view: Backward oblique 5-7 degree or more
  CCD: High resolution Color chip of latest technology
- ✓ **Distal End (OD): 12-13.5 mm or less**
- ✓ **Bending section (Range of distal end bending)**
  Up: 120-130 degree or more
  Down: 90 degree or more
  Right: 105 degree or more
  Left: 90 degree or more
- ✓ **Insertion tube (OD): 11-13 mm or less**
- ✓ **Working Length: 1200-1260 mm**
- ✓ **Total length: 1500-1560 mm**
- ✓ **Instrument Channel (ID): 4.2 mm or more**

Equipment common for above Video Endoscopes include:

- Compatible Video Processor
- Compatible Xenon Light Source with spare/2 extra Xenon bulbs
- Compatible 19-21" LCD Monitor
- Portable high quality Trolley for the whole system
- All standard accessories, Air Leakage Tester, User/Operator & Reference Manuals,
- A fully loaded Windows Xp/Vista based PC [for storage of endoscopic image files; & Printing on demand](160 GB hard disk, 2 GB RAM, DVD/CD read & writable capabilities, Digital keyboard and optical mouse, 17-19" LCD monitor (other than mentioned above), UPS of standard make and model & colored laser printer, preferably with smart memory PC card slot or digital output to facilitate direct recording of data, image and video output from the processors)
- Unit should be supplied with all genuine software like windows Xp/windows 8, office 2010/2012, software for recording processing and printing etc.
- Separate trolley for installation of computer

Laparoscopic Cholecystectomy Set

High Definition Three Chip Camera System
1. Camera console 220 v with universal coupler & Autoclavable camera head
2. Pure Digital signal with high definition video(1280*1024 native resolution)
3. Resolution-2000 horizontal lines
4. 8 specialty settings
5. Integrated Flexible Scope filter
6. Signal to Noise ratio-70 db
7. Progressive scan technology both on camera head & console
8. Brightness Control on console & camera head
9. Aperture Control on console
10. Inbuilt 16 step digital Image Enhancer on console
11. Digital zoom & white balance on camera head
12. Integrated Gain/shutter/Enhancement with brightness control
13. Two peripheral control on camera head

Video Output
1. 2 DVI output
2. 2 SVHS & 1 RGB out put
3. One Composite out put

Automatic Light source
1. 220 V,300 W. Xenon Bulb(with one spare bulb)
2. Elliptical Bulb technology
3. Bulb Working life 5800hrs
4. Digital Bulb life counter on light source
5. Automatic /Manual Light Adjustment
6. Stand By Mode
7. Universal Jaw Assembly to adapt any make of fibre optic cable without adapter.

Fibre optic Cable 6.5mm*7.5 feet Snap Fit cable
Medical Grade Monitor 19'' Flat Panel Monitor Colour

Insufflator 40Liter of high flow. Microprocessor controlled unit. Soft Approach Pressure control for safe recovery of abdominal pressure. Gas heating. LCD based central display monitor with multilingual text & graphics. AV warning signal.

Laparoscopes, Fully Autoclavable with working length 300mm
Wide angled distortion free view
Universal adaptor for other light sources
Yellow Glass index for optimum evenness of focus & contrast
0 degree, 10mm
30 degree, 10 mm
0 degree , 5mm
Flexible video telescope

Specifications
Laparoscopic hand instruments (reusable) with 310mm working length, take apart locking / unlocking mechanism, rotable with interchangeable handle with monoploar diathermy attachment (Except trocars and veress needle)

Veress needle 12 cm length- 4 Nos.

Veress needle 15 cm length-4 Nos.
Carbon-di-oxide gas tubing-4 Nos.
Trocars sleeves 11 mm-4 Nos.
Reducer 11/5 mm-2 Nos.
Trocars sleeves 5.5 mm 4 Nos.
Trocars (pyramidal tip) 10 mm 4 Nos.
Trocars (pyramidal tip) 5 mm 4 Nos.
Trocars washer 5 mm 100 Nos.
Trocars washer mm 50 Nos.
Laproscopic biopsy forceps 5 mm, 2 Nos.
Maryland dissector 5mm with unipolar diathermy 2Nos.
Maryland dissector 5mm, high performance with bipolar Cutting 2 Nos.
Atraumatic graspers, 5mm 2 Nos.
Metzenbaum scissors (5cm) with unipolar diathermy 2 Nos.
Metzenbaum scissors (5cm) high performance with bipolar Cutting 2 Nos.
Fan retractors 5 mm 2 Nos.
Laparoscopic cautery leads 4 Nos.
Suction irrigation device with two way valve 2 Nos.
L shaped hook electrode 5mm
L shaped hook 5mm , high performance with bipolar cutting 2 Nos.
Laparoscopic bowel grasper 5mm, length 33-36 cm-2 Nos.
Laparoscopic spoon forceps 10mm length 33- 36 cm -2 Nos.
Needle holder 5mm, 33 cm long 4 Nos.
Laparoscopic suction cannula, 10 mm-2 Nos.
Laparoscopic suction cannula 5 mm-2 Nos.
Clip applicator 10 mm Large, Medium, Small Clips
Gall bladder extraction 5mm Large, Medium, Small Clips
Hassan cannula
Lap-Eondotrainer
Port closure needle
Sterilization tray with cover 3 x 1

Set of General Orthopedic Instruments		**Qty.**
• Langenback Retractors -		
i.	Mini Langenback Retractor 10mm x 6mm	1each
ii.	Mini Langenback Retractor 22mm x 8mm	
iii.	Kocher Langenback Retractor 40 x 11mm x 21cm	
iv.	Langenback Retractor 30 x 11	
• **Hohmann's Retractors**		
i.	8mm Blade	1each
ii.	10mm Blade	
iii.	17mm Blade	
iv.	43mm Blade	
v.	13/25 mm Blade	
• BP Knife handles		
No. 3 size		2
No. 4 size		2
No.7 size		2
• Bone levers		
Small size		2
Medium size		2
• Hammer		
i.	Collin Mallet	2
ii.	Nylon Faced Hammer 20 Nos.	2
• Bone holding reduction forceps with locking device		
Small for forearm bones		2
Large for leg bones		2
• Bone Holding Forceps		
Lane's – small, Medium, large size one each		1set
• Bone forceps with wire passer (two blunt blades with hole for passing K wire to fix phalanx fractures)		4
• Wire holding forceps		2
• Wore holding pilers		
Small		2
Large		2
• Wire bending pliers – 2 each of blunt tip and sharp tip		one all
• Bending Iron for 3.5 mm plates		5
• Bending Irons for 4.5 mm plates		5

- K Wire traction set complete

a) Each set should contain

i.	Kirschner stirrup for wire extension	5 Nos.
ii.	K-wire double ended 200mm	10Nos.

b) Each set should contain

i.	Gissane stirrup for wire extension	2Nos.
ii.	K-wire double ended 200mm	5Nos.

- Bohlers stirrups of assorted size 10
- Backhaus towel forceps 16
- Skin Hooks

  Gillies for size 1 & 3-2 each 1set

- Bone curette

i.	Volkman all size	1each
ii.	Maartini curettes all size	1each

A.O. type damaged screw removal set 2

- Small fragment plating instruments with implant set complete 2sets

Should consist of the following:

i. Small fragment instrument set (3.5mm) in autoclavable box 1No.

ii. Small screw box

Contain the following:

10mm	5 units
12mm	5 units
14mm to 40mm	8 unit each
Cancellous screws 4mm	
10mm to 50 mm	2 unit each
Screw holding forceps1	
Storage and sterilization	
Case with tray.	1 No.

iii. Box containing small plates

DC plates small 4 hole 4 No.
DC plates small 5 hold 8 No
DC plates small 6 hole 12 No
DC plates small 7 hole 8 No
DC plates small 8 hole 5 No.
Storage and sterilization Box 1 No.

- Femoral Nail Extractor Set
- Long handled bone curette

Non serrated edge 2
Serrated edge 2

- Gigli Saw Instrument Set

Each set should contain

i.	Gigli saw handle 1 pair	2
ii	Gigle saw wires 100 Nos.	

- Patella reduction clamp — 2
- Patella wire paser — 2
- Ring cutter — 4
- K-wire cutter (capacity 4mm) with replaceable Tungsten carbide blades with rubber jaws set — 2set
  Should consist of :
  i. K-wire cutter 28mm
  ii. Spare blades 4 pairs with screws
  iii. Spare rubber jaws 4 pairs with screws
  iv. Allen keys 4 nos.

- Stienmann pin cutter cutting capacity up to 6mm — 10
- Bone curette double ended round / oval
  i. small 13 cm — 1
  ii. Medium 16 cm — 1
  ii. Large 20 cm — 1

- Loute wire tightener cum wire cutter — 1
- Wire bending cum cutter plier length 15 cm — 1
- Osteotomes Smith pattern
  i. Straight 3/8, ¾ — 2
  ii. Curved 3/8, ¾ — 2

- Gouzes
  ST Thomas ¼", 3/8", ¾" — 1each

- Chisel straight with tufnol handle 2 of each size 7,10,15,20mm — 1each
- Retractors
  i. Wullstein-weitlaner self-retaining retractor 3x3 teeth blunt length 13 cm — 2
  ii. Weitlaner self –retaining retractor 3x4 teeth blunt Length 16.5cm. — 2
  iii. Weitlaner self –retaining retractor 3x4 teeth blunt Length 26 cm — 2
  iv. Adson self-retaining retractor 3x4 teeth blunt Length 26 cm — 2
  v. Gelpi self retaining retractor with balls, blunt length 18 cm. — 2

- Elevators

  Farabeuf periosteal elevator, straight 13mm, length 15 cm — 1
  Farabeuf periosteal elevator, straight 13mm, length 15 cm — 1

- Jacobs Chuck with handle

  Jacobs drill three jaw chuck with key, mix,
  Dia 6.35mm length 14 cm — 5

- Screw driver 3.5mm screw — 2
- Screw driver 4.5mm screw — 2

- Artery Forceps
  i. Mosquito Forceps 5" — 12

ii. Spencer well Forceps 5” 12

- Forceps 6” 12
  i. Plain forceps 6” 2
  ii Toothed 6”. 2

- Bone cutting forcep
  i. Liston straight 7” 1
  ii. Liston double action 10 ½” 1

- Sponge holding forceps 25 cm 4
- Tissue forceps (Kockers)
  i. 5” 2
  ii. 8” 2

Lane forceps
i. 5” 2
ii. 7 ½” 2

Allis 6” and 7 ½”

Scissor MAYO’ straight 6” 2

- Scissor dissecting 7” 2

BURNS UNIT (2-BEDS)

Pharmaceutical Refrigerator with uniform 4 Deg. C Temp.

1 Description of Function	
1.1	Laboratory Refrigerator is used to store samples, medicines, blood bags etc under controlled temperature.
2 Operational Requirements	
2.1	System required with weekly chart recorder and digital displays.
2.2	Capacity of storage: 300 litres or more
3 Technical Specifications	
3.1	Temp range-should have adjustable temperature control range from +1 degree to +8 degree C, factory preset at 4 degree C.
3.2	Refrigerator system- a)The system should have high density CFC –free urethane foam insulation to protect cabinet from ambient temperature fluctuation. b)The system should have positive, forced, air circulation to maintain temperature uniformity at all shelf levels, with quick recovery +/- 1 degree C. c)The system should have sensors for activating automatic defrost cycle to minimize the frost build up. d)The system should have automatic condensate removal with no requirement for separate drainage lines.
3.3	Internal construction should be made up of high grade stainless steel (min 22 G) External construction Corrosion resistant sheet at least I mm thickness.
3.4	Internal Temp Control a)System should have temperature control range from +1 degree C to +8 degree C. b)Temperature control resolution should be better than 0.1 degree C. c)Cooling down time of max of 150 min on half load
3.5	External ambient temp should perform in ambient temp up to +43 degree C.
3.6	Door System should lockable double glass doors for better safety
3.7	Safety system: a. system should have large and clear Digital displays for the set/run parameters. b. The system should have weekly chart recorder to record temperature chages with battery back up. c. The system should have key operated set point for the added security d.Battery Charger should be provided with details of battery No.: V:AH.
3.8	Alarms. a)System should have audible/visual warnings for over-temperature under temperature and power failure with visual status reports on critical functions. b)System should hace battery backup and connections for remote alarm contacts
3.9	Should have adjustments for uneven bases. The adjustments should be easy to use like rotating a screw at the legs in the base.
3.10	Scratch resistant internal lining of the cabinet (stainless steel or aluminium).
3.11	Should have 5-6 rolled out type drawers of stainless steel of 22G
4 System Configuration Accessories, spares and consumables	
4.1	System as specified-
5 Environmental factors	
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C

	and relative humidity of 15-90%		
6 Power Supply			
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)		
7 Standards, Safety and Training			
7.1	Should be FDA , CE,UL or BIS approved product		
7.2	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450		
8 Documentation			
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		

Instruments for Skin Graft

1.Electric Dermotome

Slim line demotome set. Should include a hand piece with roller, hand assembly plate.
4nos. blade clip with width (2-2.35cm, 5-5.5, 7-7.5 & 10-10.5cm).
Operable on universal power supply 220V with power cord.
Accessories should include screw driver for dermatome, carry case of plastic & sterile dermatome blades (box of 10).

2.Zimmer Mesher Stainless Steel

3.Watson skin graft handle with 12 knives

Wash Tub

Size: L 1550/1850mm, W:780mm, H:590/1000mm.
Power 230V, 50 Hz, 1kW. Guaranteed non trust technology. The lifting tub should be step-less with adjustable height from 590-1000mm by electromechanical actuator device that ensures an optimal nursing position throughout the care. It should have access from three sides and a large foot freedom for the staff. The tub body should be completely closed and should be made of easy to clean, absolutely acid and mineral resistant glassfibre-polyester. For the patient security, there should be integrated hand grips on both sides which make getting in and out very easy

Mobile Wash Trolley (Shower Trolley and Panel for Burns Patients):

Size: 1950/2050mm, W 630-830mm, battery operated 24 V, Power for charger: 230V, 50Hz, 0.2KW. Guaranteed non rust technology. It should be completely made of stainless steel. Height should be adjustable from 540-1000mm with scissor type hydraulic lifting and lowering mechanism, movable frames, adjustable stretcher position, side rails and padded mattresses that ensures an easy and hygienic patient care and secure transport from bed to showering room. The stretcher plate should be made of water-proof laminated plastic and should be specially adjustable both in Trendelenberg and anti-Trendelenberg position. The padded shower mattress should be made of skin soft, fully disinfectable PVC the included water drainage channels, drainage valve, stopper and drainage hose for fast water drainage.

- Wall support for holding the shower mat/padded mat.
- Shower mattress –tub form
- Multicare padded mattress.
- Head wedge for shower trolley and multicare.
- Replacement battery – 24 Volt
- External charging station 24 Volt

Plastic Surgery – General Set

Artery forceps	Mosquito	
	Straight (150-200mm)	6
	Curved (120-200mm)	6
Tissue Forceps		
	Kockers Straight(150mm)	2
	Allies (150mm)	2
	Lane's (150mm)	2
	Babcock (150mm)	2
Dissecting Forceps		
	Non toothed (150mm & 200mm)	2 &1
	Toothed (150 & 200mm)	2&1
Retractors		
	Langenbeck	2
	Czerny	2
Hook Retractor		
	Single Hook	2
	Double Hook	2
BP Handle		
	Size 3 &4	1 each
Needle Holder		
	20 & 25 cm fine tip	1 each
Scissors		
	Metzenbaum	
	Straight 8"-9"	2
	Curved 8-9"	2
Mayo's Scissors		
	Straight	1
	Curved	1
	Stich Removal Scissor	2
Towel Clips		
	Mayo's / Rackhaus	8
	Towel clip Holder	1
Sponge holding forceps 10"		1

SLR Digital Camera for clinical Photography with Printer .

- Reputed make - Nikon / Canon etc. Printer repute make
- Mega pixels 10 or more
- Still and movie mode, movie clip with audio unlimited.
- Auto and manual focus.
- Large LCD 2.5".
- Built in Flash.
- Self Timer.
- Lenses (detachable)

  i.18 – 55 mm Standard

  ii.Zoom lens

  iii.Microlens for close-up photographs
- Printer colour repute make
- Cards reader, cables/Leads for transfer of images to computer and for printing images.
- High Storage internal memory of stick to be mentioned.
- Carrying Case

I.C.U Beds (2 no.) with Air Fluidized Mattress

1 Description of Function

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

2 Operational Requirements

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

3 Technical Specifications

3.1 Should have four section mattress base
3.2 Should have X-Ray translucent back section made up of high pressure laminate.
3.3 Should have X-Ray cassette holder underneath the back section & should allow insertion of X-Ray cassette from either side of the bed.
3.4 Base frame & support frame should be made up of steel for long life & prevention from rusting.
3.5 Should have stepless electrical adjustment for the following :-
Height : 450-840 mm
Back section : 0- 50 degrees
Leg Section : 0-30 degrees
3.6 Should have stepless pneumatic adjustment for Trendelenburg (20-25° approx), anti-rendelenburg (10-15° approx)
3.7 Should have a manual quick release mechanism for back section adjustment during emergency situation.
3.8 Should be equipped with four articulated half length tuck away
side rails
3.9 Should be equipped with large castors (diameter 150 mm) with central braking and steering facility.
3.10 Mattress of the Bed should be made up of high density foam with Anti Microbial agent incorporated into all components that assists in Prohibiting growth of bacteria & fungi and easy to clean.
3.11 Mattress should be fully Radiolucent for ease in performing portable X-Rays.
3.12 Should have bumpers at all four corners and place for fixing accessories
3.13 Dimensions of bed :
Length : 2100 -2290 mm
Width : 850 -1020mm
Mattress Size : appropriate as per bed size

4 System Configuration Accessories, spares and consumables

4.1 I.C.U Bed Mainframe -01
4.2 Bed Ends, detachable : 01 pair
4.3 Articulated half length tuck away side rails : 04 Nos.
4.4 IV Rods : 01 No.
4.5 Mattress 12 cm Thick : 01 No.

5 Environmental factors

5.1 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.2 The unit shall be capable of being stored continuously in ambient temperature of -20 -50 C and relative humidity of 15-90%. 5.3 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug
6.2 Resettable overcurrent breaker shall be fitted for protection

7 Standards, Safety and Training
7.1 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.2 Should be FDA or CE approved product
7.3 Electric Shock Protection level-Class-B
7.4 Electric current Protection- Class -1
7.5 Certified to be compliant with IEC 60601-2-38 Medical Electrical Equipments part 2-38 Particular requirements for safety of Electrically Operated Hospital Beds
7.6 Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.

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

Air mattresses for burns patients:

Alternating pressure every 10 minutes. Whisper quiet with adjustable pressure settings. Low pressure/Normal pressure indicator lights. Patented CPR release. Convoluted safety foam base with water proof covering to eliminate contamination. Low friction/ shear water proof top cover. Maximum patient weight 150 kg or more. Inflated dimensions approximately 35”Wx80”Lx8”H.

Multi-parameter Monitor

1 Description of Function
1.1 Monitor is required to monitor vital parameters of patients.

2 Operational Requirements
2.1 Monitor should be portable and lightweight and should monitor vital parameters of patients.
2.2 Capability of storage of patient data and printing of patient reports.

3 Technical Specifications
3.1 Portable and Light weight preferably <10kg
3.2 12 inch multi color TFT display
3.3 Monitoring parameters: - ECG, respiration, NIBP, SaO2 and temperature
3.4 Digital and 4 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. 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 Trends should be automatically stored for at least 24 hours in at least one-minute intervals.
3.7 Numeric monitored data trend 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.

4 System Configuration Accessories, spares and consumables
4.1 Portable/Transport Monitor-01
4.2 Patient cables (5 lead) –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 Dual channel recorder –01
4.9 Paper Recorder- 100 cases.

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

7 Standards, Safety and Training
7.1 Should be FDA or CE approved or ISI marked product
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

8 Documentation
8.1 User Manual in English
8.2 Service manual in English
8.3 List of important spare parts and accessories with their part number and costing.
8.4 Certificate of Calibration and inspection from 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.

OBS./GYN. – A OPD

Gynaecology Examination Table

- Tubular stainless steel frame with three section SS top with manually operated back rest on ratchet semi circle U notch on middle section.
- Foot end section sliding completely (telescopically) under main frame. Adjustable height & trendelenberg/reverse trendelenberg position. Gas spring assisted/strong mechanism. Pair of detachable padded leg rest. Self looking traction handle.
- Adjustable IV rods.
- Swing, away side railing on two sides with mattress covered with leatherite.
- Size 180cm length x 68cm W x 75cm H.

Spot Light for Gyn. Examination

Floor stand. Flaxible fiber-optic, transmit cool illumination.
Provide homogeneous light bright spot of variable size.
Height adjustable.

Instruments Trolley Plain (SS)

The Instruments Trolley shall generally confirm to IS-5631-1970 subject to following specifications:

Frame	:	Argon welded & SS tubular rust free construction.
Top	:	Two rust free SS shelves conforming to 04Cr18 Ni or 07 Cr 18 Ni 9 grade as per IS-6911-1972 with protective sides railing on three sides.
Castors	:	8cm/7.5cm dia. Wheel type swiveling castors having antistatic rubber tread conforming to IS-4043-1979.
Shape & Dimension	:	Overall size 660mm L X 430MM W X 830MM H as per IS-5631-1970.
Material	:	Vertical SS tubes of 25mm x 18G. Longitudinal SS tubes of approx. 19mm x 18G. Railing of SS 10mm rod. SS top of 21G shelves conforming to 04 Cr 18 Ni 10 or 07 Cr 18 Ni 9 grade as per IS-6911-1972.
Finish	:	Finish bright
Test	:	As per 6.1.2. of IS-4033-1968 & latest amendments issued if any.
Marking	:	According to 7 or IS-4033-1968 & latest amendments issued if any.

Vaginal Speculum Dual

CUSCO'S Speculum Ref IS:5906

1.Material : SS (Ref IS6603, 1972)
2.Sizes : Large 110x37mm
Medium 90 x 36 mm
Small 80 x 24 mm
Max. opening of blade 45 deg (one each)

2.Handle thickness 2.5mm
3.Blade size should be appropriate, confirming to sizes mentioned above.
4.Workmanship: All surfaces shall be free from burrs, pits, cracks. Edges shall be smoothly rounded off & shall not be sharp.
5.Polished bright.

Dressing Drums (IS:3831)B -

- Material Stainless Steel (S.S.)
- S.S. thickness 0.5mm
- Body, lid built 1mm
- Hasp 3mm
- Hinge Wire 4 to 5m
- Handle 0.9m
- Chain 2.8 to 3.57
- Clamp 275m x 132 m (20)
- Size 300 x 250mm (10)
- The hose shall rest on:

i. Three / more rest without shake / play
ii. The lid shall have a snap fit on the body
iii. The hinges shall have the swivel of the lid and the movements shall be such as to make the lid come back to it's position of closing without any side pressure being applied.
iv. The hasps shall engage with disengage from the stable position.
v. The belts shall fit snugly and bear uniformly on the surface of Drum without any pockets or undue rubbing at any place.
vi. The clip when clamped shall keep the belt in a fair tension and shall not recoil. It shall enable the belt to slide around the body easily in it's open position.
vii. The sets of perforation on body shall have 39 holes of 2.4 diameter

B. DELIVERY SUITE

Delivery Bed

1 Description of Function
1.1 Delivery bed is used for Baby Delivery and should incorporate ideal blend of the patient's individual requirements on comfort and the professional needs of the delivery team, focusing on the esthetic and functional design of the entire product.

2 Operational Requirements
2.1 Delivery bed should be supplied with all accessories as mentioned in the technical specifications.

3 Technical Specifications
3.1 Delivery Bed Should have following essential specifications:
1• It should have control devise for making height and back adjustments.[manual as well as remote control].
2• It should have collapsible side rails
3• It should have three sectional mattress and seat section should have large perineal cut.
4• It should have head board which can be detached.
5• Should have wheels provided with locking system.
6• Should have retractable foot section so as to convert bed into table.
7• Should have infusion rods which have adjustable heights, quick release and attaches to all corners of bed.
8• Should have adjustable leg rests available as an accessory.
9• Should have push grip handles
10• Should have sliding stainless steel bowl at perineal part of table.
11• It should have catheter bag holder which can be attached on either side of bed.
12• It should be able to give trendelenburg, reverse trendelburg and 70 degree sitting position both mechanically and electronically.
13• It should have adjustable foot supports for nursing staff
14• It should be easy to clean, sterilize (especially blood stains) and maintain.
15. Frame should be of epoxy powder coated steel
16.Dimensions - Length 6feet and width =2 and half feet.

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

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

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

7 Standards, Safety and Training
7.1 Should be FDA/CE or BIS approved product
7.2 Comprehensive training for lab staff and support services till familiarity with the system.
7.3 Electrical safety conforms to standards for Electrical Safety IEC 60601-2-38 Particular safety requirements for Electrically operated hospital beds.

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

Delivery Table (Labour)

- Tubular stainless steel frame with three section SS top with manually operated back rest on ratchet semi circle U notch on middle section.
- Foot end section sliding completely (telescopically) under main frame. Adjustable height & trendelenberg/reverse trendelenberg position. Gas spring assisted/strong mechanism. Pair of detachable padded leg rest. Self looking traction handle.
- Adjustable IV rods.
- Swing, away side railing on two sides with mattress covered with leatherite.
- Size 180cm length x 68cm W x 75cm H.

Obstetric forceps – Wringles (2nos.)

Obstetric forceps – Ferguson (1no.)

Bowel SS for placenta (2nos.)

Bowel SS for Placenta

Size : 16”
Surface : Well polished without any cracks & wrinkles. Should not rock when kept on a level surface.

Basin SS on Stand

Steel tubular frame 1" diameter, SWG 16 with iron rod attached to the ring for towel.

Size of basin – 16"

Height approx. 85-90cm

Epoxy coating 50 microns white colour

Three legs base interconnected with steel rods. Legs to be provided with three 50cm Nylon swiveling castors.

Douche can

- Material Stainless Steel
- Capacity 1.5 liter
- Diameter (Approx.) 125 – 135m
- Height 135-140m
- It should be supplied with standard douche set conversions of nibble lubing high quality, stainless steel clep, Douche nozzle (plastic) with stop cock.
- Male witheral Dilutor Set
- Material Stainless Steel
- Type laser olive lip
- Set of 12 different sizes
- Gibs 0/2 to 9/12 English Gauge
- Lenth 280 m
- To be supplied in a velvet luved Box

Bed Pans (M) – 5nos.

General / Technical Specifications

- Bed Pan Male with Cover & Handle.
- Material: Stainless Steel (304 Gauge 18)
- Welding: Leak Proof with Argon or Equivalent Welding.

Stainless Steel in standard size

Bed Pans (F) – 5nos.

General / Technical Specifications

- Bed Pan Female with Cover & Handle.
- Material: Stainless Steel (304 Gauge 18)
- Welding: Leak Proof with Argon or Equivalent Welding.

Stainless Steel in standard size

Baby Cradle

Crib Size : 76L X 42W cm.

Height to crib top : 103 cm

Strong CR, EWR tubular steel stand on four rubber stamps with hanging bright bars mesh crib. Provided with mosquito net aluminium rod. Pretreated with-in 7 tanks hot process & epoxy powder coated min. 50 microns with phosphate layer underneath for corrosion resistance.

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Foetoscope (Ultrasound) 1no.

Pocket make

Digital FITR display upto 240-250 / minute

Sound Volume adjustable

Power: By Battery

Foetoscope (Pinard's Pattern) REF. IS 6565-1no.

- Material Aluminum complying IS: 21, 1959
- Shape (i) Diameter

Ear end	Outer 55mm Inner 50mm
Distal	Inner 14mm Outer 60mm

(ii) Length 145 mm

- Workmanship: The surfaces of the Foetoscope shall be free from scales, burrs, pits. Edges shall be smooth rounded off and shall not be sharp.
- Shall have perfectly symmetrical dimensions around the central axis. Rims of fetal end and ear end shall be in one plane, the stethoscope shall anodized in accordance with grade AC5 of IS: 1868, 1968. It shall be tested as IS: 6565, 1972.

Craniotomy instruments set surgery

Material Stainless Steel

Braun Decapitation Hook (32.5) cms

Dubious decapitation Hook

(Embyotomy Scissors)

Ternier Basiohite (cephalotibe) 44.0

Smellie perforator 27 cms

Vacuum Extractor

To be used for vacuum delivery.

Vacuum extractor must be easy to use (to assemble and to clean) and safe.
Vacuum extractor should be totally disassembled, easy to clean and sterilize (all parts must be autoclaved at 121^0C.
All parts should be manufactured from high-strength, long-life materials and require no special maintenance or storage conditions.
Vacuum extractor must be in conformity with council Directive 93/42/EFC on Medical Devices and have CE marking.
Vacuum Extractor should be supplied as complete set in a box with:
3Bird anterior suction cups complete, stainless steel,
3different sizes:
40mm opening diameter.
50mm opening diameter.
60mm opening diameter.
3soft vacuum extractor cups “SILC-CUP” complete,
3 different sizes:
40mm opening diameter.
50mm diameter.
60mm opening diameter.
2extractor handles stainless steel with connected hoze pipe 20cms long.

Sim's Speculum

1.Material : SS (Ref IS6603, 1972)
2.Sizes : Large 72x34/80x38mm
Medium 70x32/75x35mm
Small 65x26/72x30mm
Max. opening of blade 45 deg (one each)

2.Handle thickness 2.5mm
3.Blade size should be appropriate, confirming to sizes mentioned above.
4.Workmanship: All surfaces shall be free from burrs, pits, cracks. Edges shall be smoothly rounded off & shall not be sharp.
5.Polished bright.

Instruments Tray with Cover (S.S.)

- Material Stainless Steel
- Sizes 300 x 150 x 50mm
  350 x 250 x 50mm
- Minimum thickness 0.5mm and (IS 3993)
- Polished bright and free from sharp or open edges, distortion dents wrinkles, wavy surfaces, burrs, scratches.
- The above product should confirm to IS:5522, 1992 standard and in respect of materials welding, test and performance.

Instruments Trolley (SS)

The Instruments Trolley shall generally confirm to IS-5631-1970 subject to following specifications:

Frame	:	Argon welded & SS tubular rust free construction.
Top	:	Two rust free SS shelves conforming to 04Cr18 Ni or 07 Cr 18 Ni 9 grade as per IS-6911-1972 with protective sides railing on three sides.
Castors	:	8cm/7.5cm dia. Wheel type swiveling castors having antistatic rubber tread conforming to IS-4043-1979.
Shape & Dimension	:	Overall size 660mm L X 430MM W X 830MM H as per IS-5631-1970.
Material	:	Vertical SS tubes of 25mm x 18G. Longitudinal SS tubes of approx. 19mm x 18G. Railing of SS 10mm rod. SS top of 21G shelves conforming to 04 Cr 18 Ni 10 or 07 Cr 18 Ni 9 grade as per IS-6911-1972.
Finish	:	Finish bright
Test	:	As per 6.1.2. of IS-4033-1968 & latest amendments issued if any.
Marking	:	According to 7 or IS-4033-1968 & latest amendments issued if any.

Instrument Cabinet

Length (1676mm+/-10mm), width (914mm+/-10mm), breadth (456mm+/-10mm). Fabricated using 18SWG MS sheet for back and side cover. Front cover of 18SWG MS sheet.

Front door is fitted with glass panel of 4mm thick with locking facility & should have 4 nos. of glass shelves 10mm thick. The cabinet should be rested on an antirust base. Epoxy powder coating with white colour with 50microns.

The above product should conform to applicable ISI standard is respect of materials, welding process, test & performance. Conforming to BIS 6877 standard or equivalent.

Trolley for Oxygen Transport with Oxygen Cylinder

Rotameter & humidifier

B Type

- Maximum Working Pressure : 150 Kg/cm^2
- Test Pressure 250Kg/ cm^2
- Water capacity : 10.0 Ltr.
- Gas Capacity : 1.53 Cu.m.
- Outside Diameter 165 mm
- Minimum Wall Thickness 5.0mm
- Length 640mm
- Tear Weight 16.5 Kg

The valves fitted to these cylinders should conform to specifications IS:3224 & IS:3745

- The Cylinder being offered should be manufactured within the country or imported from abroad and should conform to IS Specifications 7285 and BS 5045 Part I respectively.
- They should also have approval of the Chief Controller of Explosives, Govt. of India, Nagpur.
- Each Cylinder Shoulder should be stamped with GG: Symbol for Gas, Mfgr.: Identification mark, MMYY: Month & Year of Hyd.. Test XYZ: Serial No. of Cylinder, IS 7285: B.I.S. Specifications, TW: Tear Weight, TP: Test Pressure FP:

New Born Resuscitation Tray with Resuscitation Kit

Ambu Bag neonatal 250ml tidal volume.

Laryngoscope Miller Type blade SS size 0,1,2 - straight

Endotracheal Tubes size 2.5, 3.

Compatible Macgill's Forceps

Suction Catheter- Disposable 12nos.

Infant feeding tube – 12no. disposable

Oxygen Therapy Unit

Cylinder on trolley with humidifier & rotameter

C. GYN. OT

Hysteroscope Set with Resectoscope (Complete System)

1 Description of Function

1.1 The resectoscope is a hysteroscope with a built in wire loop (or other shape device) that uses high-frequency electrical current to cut or coagulate tissue. It allows surgery inside the uterus an organ without having to make an incision.

Hysteroscopy uses a hysteroscope, which is a thin telescope that is inserted through the cervix into the uterus for examination.

2 Operational Requirements
2.1 Complete unit with Resectoscope and Hysteroscope is required

3 Technical Specifications
3.1 A)Hysteroscope Telescope with color code: 4 mm diameter with a working length of at least 30 cms; 30 degree fore oblique lens, auto clavable or sterilized by liquid disinfectant; Fiberoptic light transmission incorporated,

B)Diagnostic Sheath with obturator 5mm diameter for the above 4 mm Hysteroscope telescopes (item A), with leur lock adapter.

C)Continuous irrigation Operative Hysteroscope Sheath with obturator, outer and inner sheath for the above 4 mm hysteroscope telescope (item A) with channel for semi-rigid 5/8 fr size instruments. Should have facility for self closing sealing system for precise irrigation.

D)Accessories
Hysteroscopy flexible / semi rigid instruments which should be adaptable to above sheath (item C), 5/8 fr. Diameter-
1) Foreign body grasping forceps .
2) Scissors
3) Biopsy and Grasping forceps .
4) Needle electrode and ball electode-Unipolar – high frequency cords
of any make should be compatible with the above equipment
5) Bipolar vaporizing electrode – high frequency cords of any make
should be compatible with the above equipment
6) Myoma fixation screw
7) Palpation probe
8) Polypectomy loop
Any of the above accessories may be quoted separately as optional.

E) Resectoscope including connecting tube for inflow and outflow for the above 4 mm hysteroscope telescope (item A)complete with continuous irrigation double sheath system, i.e outer flow and rotating inner tube with ceramic insulation distal tip,with obturator to be quoted along with working element and complete set of electrodes and 2 set of HF cables.
Size of resectoscope as per requirement.
All electrodes and Collin's knife to be bipolar/unipolar (as per requirement) to be quoted with appropriate cautery.

F) Hysteromet –
Suction and irrigation system for use in hysteroscopy Irrigation function is performed by electric pump Maximum parameters for hysteroscopy are automatically set
Precise presetting of volume and pressure of suction and irrigation parameters via touch keys.
Adjacent display scales for set values and actual value to ensure safe monitoring.

To be used with pressure regulated from 0 to 200mm of Hg, and flow rate regulated from 0-500ml/min. Suction regulated to 0 to -50kPa.
Power supply 100-240 VAC, 50/60 Hz, Mains cord.
Connecting cable 100 cm, one pedal foot switch.
hysteroscopic tubing set.
Suction and irrigation tube, antireflex surface with two way stop cock for single hand control.
Suction bottle 1.5 l and 5 l, sterizable with bottle stand and bottle stand holder.
Silicon Tubing Set for suction , sterizable.
3.2 Endoscopic camera with T.V. medical grade monitor and printer

A.1)Endoscopic Camera (Digital)
1. 3 chip CCD camera for capture and processing three primary colors
2. Digital image processing and digital contrast enhancement. Multiple settings which allow the user to select the desired level of image enhancement. Horizontal image resolution of > 750lines
3. Light weight camera head with programmable function keys
4. Camera head should incorporate zoom lensing system to produce optimum image sizing for all scopes to alleviate the need to refocus on magnification.
5. PAL system/ multimedia as existing in this country
6. Automatic white balancing
7. Minimum sensitivity should be 3 Lux
8. Freely programmable camera head buttons
9. Cable should have buckling protection
10. Facilities for fine focus for smooth function. Microprocessor controlled.
11. Built in antifogging device.
12. Camera head should be compatible with telescope of any make and light of any make. Coupling device for use with all rigid or flexible endoscopes with standard eyepiece
13. Integrated universal power supply
14. Compatible with medical grade monitor with multimedia projection available in this country.
15. Should have specific built in facility for camera functionality automatically optimizing all settings.
16. Signal to noise ratio 60 db
17. Camera should be ready to use as soon as it is connected to camera control unit.

B.1) Camera Control Unit
1. Should have microprocessor control
2. Should have multiple video input and out puts – BNC,RGB,Y/C etc
3. Should have all necessary connecting cables between camera head and video monitor

C.1)MONITOR –1- Multinorm/PAL system color monitor for different color systems existing in the country.
2-Compatible with endovision camera of any make
3-Screen size diagonal 23" , Flat screen LCD monitor
4-Max horizontal screen resolution in lines >800 lines.
5-Monitor menu displays all controls, capabilities and operations via curser keys, user defined captions, easy to use and highly dependable.
6-Should be composite, have multiple video input and out puts –
BNC,RGB,Y/C, SDI, and preferably DVI etc
7-Power supply of 200-240 VAC. 50Hz
8-Should have facilities for recording the data on computer /digital
Video recorders/CD
9-On screen menu for monitor setting , Compact and light weight,Drip
water protected dust proof , all connecting cables to be supplied
10 Brightness 400cd/m2, contrast ratio 700:1
11. Antireflection coated front glass.

12 Should have consistent illumination level.
13 Should preferably have facility for upgradation and should be compatible with lower models.

F) VIDEO COLOUR PRINTER :-
1-For endovision camera and multi colour systems existing in country
2-Large colour prints of video images with outstanding quality at least
4 different images can be stored and printed on one sheet.
3-Memories of at least 4 frame. Should be compatible with any monitor and should be supplied with all connecting cables, satisfying international quality controls, safety norms and power supply. Should preferably have facility for upgradation and should be compatible with lower models.

3.3 Xenon light source
1-300 watts bulb minimum 1000 hrs. with at least one spare bulb of 15V 300 watts
2- Fully automatic with light intensity continuously adjustable from 0-100% automatically by the cameras video output signal
3- Should have display of lamp service life.
4- Stand by mode
5- Monitoring of lamp function.
6- Built in antifog air pump.
7- Universal jaw assembly to adapt cable of any make.
8- Light wt. <10 kg.>9-Certified for international /national safety standard norms+power supply
10- Power supply 220-240 VAC 50/60 Hz.
11- Should be quoted along with spare lamp
12. Fibreoptic light cable 4.8mm in diameter and 230 -300cms in length compatible with cold light source and commonly available telescopes (Necessary adaptors may be provided).

3.4 Electrocautery:
1• Should have unipolar cutting and coagulation as well as bipolar cutting and coagulation modes and have the facility of blending cutting and coagulation in different ratios and degree –soft, standard and/ or forced coagulation and spray coagulation.
2• Arc controlled cutting with a pre selectable power of maximum of 200 watts in both unipolar and bipolar modes.
3• Arc controlled coagulation with a pre selectable power of maximum of 120 watts in both unipolar and bipolar modes.
4• Auto stop function with automatic power – off on completion of coagulation process.
5• Automatic start function for bi- polar coagulation. Should be operable both in hand and foot mode and should have hand control switch on the handle of the electrode. Bipolar application with irrigation with sodium chloride.
6• Endoscopy mode with reduced voltage out put for use with fine endoscopic electrodes.(microfunction)
7• It should have automatic read out panel to display current being used and actual output at distal tip of electrode, simple operation due to clearly arranged control with easy to read symbols.
8• Should be compatible with under water operative procedures
9• It should have neural electrode monitoring through a patient contact system.
10• It should have automatic high frequency power cut off by autocoagulation stop and autostart facility
11• The unit should have the facility of self testing for trouble shooting.
12• Visual and acoustic signs of HF activation by different colored indicators and different acoustic tones for cutting and coagulating.
13• Unit should have safety monitoring circuit in event of malfunction for output monitoring. Neutral electrode connection. Automatic self test and automatic power cutoff in event of malfunction. Ground leakage current(LF/HF) HF application time.
14. Power supply 230VAC, 50/60 Hz.

15• The unit should be supplied with all standard accessories such as Electrode,Foot switch, Twin earth pad , bipolar forceps with Cord, Electrode Handle with switches , neutral plate, ball electrodes, Loop electrodes, variable output power for all types of currents.

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

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

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

7 Standards, Safety and Training
7.1 Should be FDA/ CE or BIS approved product
7.2 Comprehensive training for lab staff and support services till familiarity with the system.
7.3 Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.

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

CTG (Cardiotocograph)

Cardiotocograph antenatal (NST) and intra partum fetal monitor.
Fetal monitor for three functions
a.Fetal Heart rate recording
b.Toco-recording (For intrauterine pressure recording)
c.Maternally sensed fetal movement recording.

· Twin monitoring facility required.
· Colour coded transducers, plugs and sockets.
· Very compact and light weight.
· Detachable printer
· 1.5 MHZ multi crystal directional pulse Doppler. FHR
detection with low ultrasound energy exposure to fetus.
· Optimize, fully screened and water proof FHR transducer the transducer and belt clip are designed for ease of use
· Built in transducer storage.
· Manual or automatic Toco-Zero light weight flat faced with guarding type toco dynamo meter. It has the same belt clip and belt in, as the transducer
· Display 260 x 64 mm graphic LID in Alphanumeric mode.
· 6 hour memory with fast print facility.
· Actogram – Automatic movement signal can be printed on the chart record as a graph or as any event marks
· True dual channel twins print out
· Purpose designed trolley/cart
· Display wave form and digitals
· Automatic fetal movement detection
· Built in Rechargeable battery for 2 hours continuous work
· Built in network capacity.

OPHTHALMOLOGY

Ophthalmic Unit

Required Ophthalmic features:-
- one fully upholstered elegant ophthalmic chair
with full motorized recline facilities
with full motorized up & down movement for 300mm
- one stand and console:-
with illuminated soft light for examination
with controls for ophthalmic chair, for recline and up & down movements, back and forward movement. One foot pedal for the up and down movement is also required.

- Required Base dimensions and Floor space
Base Dimension Floor Space required
Height 7-8 feet
Length after reclining 9-10 feet
Width 4”
Input voltage & Power 110/230V
Output 3V, 6V, 12V

Accessories required:-
Examiner’s chair
Trial lens set (2nos.)
Trial Frame
Auto Refractometer with all standard features with 10 paper rolls
Distance vision horizontal drum

Motorized Drum:

1. To measure visual acuity for distant vision

2. Light fitted in the instrument.

3. Test type charts for English & Hindi alphabets.

1. C Type letters for illiterates.
2. Picture charts for children

Doctor's Stool

Dental operator's stool with backrest movement and hand rest. On swivel castors.

Trial Sets:

1. The lenses should be20mm in aluminum, amount of 38mm diameter, anodized red for minus and black for plus. The Sphere lenses with handle and cylinder without handle.

2. Trial lenses of good quality, the case made of melamine polished wood, sturdy and attractive finish.

3. lenses--Spheres

a. Concave and convex-0.12
b. 0.25 to 4.0 in 0.25 steps
c. 4.5 to 6.0 in 0.5 steps
d. 7.0 to 14.0 in 1.0 steps
e. 16.0 to 20.0 in 2.0 steps
f. 0.25 to 3.5 in 0.25 steps
g. 4.0 to 6.0 in 0.5 steps
h. Prisms-1/2,1,2,3,4,5,6,8,10,12.

4. Accessories-Trial frames, one adult size and one for child, adjustable with slots

i. -Red glass
ii. green glass
iii. -Pin hole
iv. -Slit
v. -Two blank discs
vi. two occluder
vii. -cross cylinder +/- 0.25 and +/- 0.5

Slit Lamp

Magnifications: 5x, 8x, 12x, 20x, 32x
Field of view : 40 mm – 6 mm in diameter.
Eyepiece magnification: 10x high-eyepoint eyepieces, + 8D compensation of ametropia
Width of slit image : 0 – 14 mm, continuously adjustable
Length of slit image: in steps: 0.3 / 2.5 / 3.5 / 7 / 10 / 14, Triple Slit
Slit rotation : + 90°, continuous
Decentration of slit image: + 4° horizontal, click stop at 0°
Swivel range of slit prism : 180°, scale for angular difference,
Angle of incidence: 0° - 20°, tiltable
Filters : Swing in blue, green (red-free), Heat absorbing filter and swing in screen for diffuse illumination
Free working distance: 66mm Exit prism/patient's eye
Travel of instrument base: Z axis: 29mm, X-axis: 110 mm, Y-axis: 90mm
Vertical travel of chin rest : 60 mm
Illumination: 6 V, 20 W halogen bulb
Brightness: Continuously adjustable
Instrument table: Asymmetrical with motorized control
Accessories required:-
Goldman Applanation Tonometer
Observer or Teaching Tube
The product should be CE certified/USA FDA approved

Keratometer

Professional instrument for precision measurement of radius of curvature of the anterior corneal surface in millimeters and diopteric power of the cornea.

Also capable of measuring corneal astigmatism with the axis and convex and concave surface of contact lenses.

Specifications:

The following are illustrative but not restrictive

1. Type : Bausch and Lomb type.
2. Measuring Range : Diopteric power 36.0 to 52.0 Diopters in 0.25 D steps (or closer)
   Radius of curvature-6.4 to 9.4mm in 0.05mm steps (or closer)
3. Axis of Corneal : 0-180° in 5°steps. Astigmatism
4. Eye pieces : 15x with adjustable diopteric power of }/- 5 diopters or more

S. Objective lens : Precision achromatic lens

6. Electric supply : 220V-240V,50Hz

7. Illumination. : 6 watt with transformer

8. Head rest chin rest: Adjustable with ocluder

9 Calibrating steel balls

10.Essential spares
a) Bulbs : 6 Nos
b) Fuses :4 Nos

Lensometer

1. Auto focus /Auto alignment/Auto centring
2. Contact lens module
3. Able to detect power of progressive lenses
4. Able to detect UV absorption capacity of lenses
5. Printer attachment and auto save facility
6. Power: 220- 240 V
7. Motorized table

AB Scan Sonomed

The following requirements must be met
• High resolution dedicated A and B, ophthalmic Scanning unit Bscan will cross vector.
• The system should consist of fourth generation microcomputer and high speed digital electronics,with highest resolution monitor.

Technical Features:
A-scan
• Three A scan Modes
• Auto biometric, Manual Biometric, Diagnostic
• Complete IOL program capabilities include SRK1 SRK11 SRK. T Hollady or Binkhorest formulas.
• Save in memory capacity at least 45 cases for A-scan images and corresponding IOL data.
• 10MHZ solid probe
• The unit should incorporate, audio feed back for probe alignment.
B-scan
• 256 Gray Levels
• user definable, DGC curve
• Pre & post processing capabilities.
• Volume, distance and area/ perimeter measurement
• Selectable A-vector for simultaneous A/B display.
• Annotation/arrow placement
• Archiving of at least 150 patients in a single data file with an unlimited number of data files possible.
• Complete IOL calculation capability with IOL data storage.
• B-scan sector angle at least 55°
• Standard Accessories
• Should include :
• Console with 7'' display
• Alphanumeric keyboard
• Trackball
• Foot pedal
• 7&10 MHZ, A-B scan probe
• A scan calibration cylinder
• Probe holders etc.
• Vendors may quote other optional accessories
• 100 & 12.5 MHZ, A-B scan probe

Operating Microscope - Ophthalmology

Apochromatic optics
Magnification: 5 step magnification
Focusing Range: 50 mm
Binocular tube: 45 degree inclined.
Eye pieces: 12.5X
Objective lens : 200 mm.
Total magnification: 5x to 22x or better

Illumination: Halogen illumination, Fibre light guide, 12 V 100 W as light source.
Integrated UV Filter, GG 475 filter to reduce blue ratio
Swing in daylight filter
Foot switch with full control on foot switch
Stand Arm section
Type: Floor stand type
Arm extension: 1045 mm
Balance arm vertical stroke: 400 mm
The product should be CE certified/USA FDA approved

Non contact Tonometer

· **General features**
· Measurement: Non invasive automatically activated as the cornea is in focus
· Working distance: 13-15mm
· Air pulse: soft pulse with no additional administering of anaesthetic/indicator
· Accuracy:+/-1mm Hg
· Display: Graphic liquid crystal display module with yellow backlight seven segment common
· Anode LED display
· Technical specifications:
· Electrical requirements: 90 264V AC, 50 Hz
· Power consumption: 150W
· Hand set dimentions: 40X 270mm
· Base unit dimensions: 320X310X180mm
· Weight: 8.5 Kg. (Approx)
· Cooling: Air cooled
· **Accessories:**
· Standard: Table top, joystick assembly with chin rest arrangement

Ophthalmoscope

Ophthalmoscope Welch Ally. Hein, with superior a spherical optics for viewing whole illuminated section of retina. Separation of Illumination & observation beam by spherical optical system to avoid corneal & iris reflex. It should have following specifications:

Specifications:

Lenses Range	:	+ in ID steps 1 to 10, 15D to 25D - in ID steps 1 to 10, 15D, 20D, 25D, 30D, 35D
Apertures		6, slit, fixation Stars with polar coordinates, Cobalt Blue filter, large spot, small spot, hemi spot and With red-free filter with all apertures.

Superior aspherical optics
Mounted in metal frame
Electrically rechargeable handle containing 3.5 V Ni-Cod battery with charger.
Dust proof housing.
Ergonomic shape
Self orbital Support
Complete set in box with spare bulbs 3.5 V Halogen (6 Nos.)
An equivalent or better equipment of proven design & performance which meets the technical & functional requirements shall also be considered.
The equipment offered should be brand new.

ENT

ENT Diagnostic and Treatment Unit

Rust free top with powder coating housing on lockable heavy duty castors.

Transparent acrylic cover cabinet with OPD instruments Concealed powerful suction unit with foot control switch.

Electronic temperature controlled water jet system with 0.1 deg. Seting range upto 100 deg. Cent.

Universally adjustable Bull's Eye Lamp
Foot operated, powerful spray system with micro-switching

Solid state, fine cautery with different electrodes, with cutting & coagulating system.

Convenient heat laryngeal mirror warmer system
X-ray viewing box with CFL lights
Space for instruments trays
Medicine bottles and gauze box stand

Storage drawers with locking facility
Space for cold light source.

Sinoscope 0deg. With stand. Approximate dimensions:HxWxL-150x60x70cm

Optional items: Operating microscope, Fibre optic Headlight.
.

Pure tone Audiometer- clinical

Specifications:
· Digital audiometer, TDH-39 headphones, CPU with monitor, software.
· AC: 250 to 8000 Hz -10 to 120dB.
· BC : 250 to 8000 Hz -10 to 80 dB
· ABLB
· SISI
· On line computer connection
· Micro-processor controlled
· NOAM/S/W compatible
· Direct access to hearing aid fitting software
· Two separate channels for binaural speech tests
· Tone decay tests
· Facility for free field option- optional accessories in two room setup
· Synchronised automated masking
· Talk forward/talkback system two way communication-optional acc. In two room
· Setup microphone for speech test
· Desktop-pure tone, masking, speech audiometry, speakers, facility for special tests, plain paper printer to be supplied with voltage stabilizer with tables for the printer and for the audiometer

Impedance Audiometer

Specifications:
Essential
Power supply: 220 V, 50 Hz
Probe tone: 220 or 226 Hz
Probe assembly with contra lateral test facility (with supra aural earphones:
TDH 39/TDH39A/TDH49/TDH49A/TDH 50 with MX 41 AR ear cushions or inserts earphones (ER tone
3A)
Test cavities (0.5,2,5cc)
Probe tips- assorted
Printer
Test required
· Compensated tympanometry (ear canal volume and tympanometric peak pressure)
· Ipsilateral and contra lateral acoustic reflexes
Air pressure range: +200da Pa to -400da Pa
Stimuli for acoustic reflexes:
Type: Pure tones
Frequencies: 500Hz, 1000Hz, 2000Hz and 4000Hz
Intensity: up to 120Db HL
Power supply: Battery operated & main
Self calibration
Instruction and service manuals

DENTAL

Dental Chair Unit

Electrically operated multi programmable chair
Fitted with multi-functional foot control aid

Operating light with two intensity
Auto water connection for spittoon & tumbler
High & Low vacuum motorized suction with flow control valve
Auto drain & auto flush system.

Two airotor points with one fibre optic twin beam
Ultrapush QD twist free coupling having non
Retraction valve airotor hand piece. One mini clean
Head hand piece.

Transparent water booster

Brushless micromotor with one contrangle hand piece & one straight hand piece

Two 3 way syringes

Ultrasonic scaler (OEM) unit with tree scaling tips,
One ENOD chuck, 30 ENDO files & two periodontal tips

Light cure unit with variable intensity
Stainless steel instrument tray
X-ray viewer
Oil free medical grade monobloc 0.75 HP
Airotor air compressor with imported head

Unit mount dental X-ray 70 KV (tube head, imported)
Autoclave fully programmable digital type
Dental operator's stool with backrest movement and hand rest.

OPD

Diagnostic Set

Set complete of good durable quality material. Consisting of:

(Adult & Ped Stethoscope Littman Type, Blood Pressure Apparatus Aneroid Type-Ref.IS7652, Infant Weighing Machine, Thermometer, Patella Hammer (Taylor Type design), Tuning fork (standard 108, 75Db), Tape with clearly visible markings, SS Tongue Depressor, Torch(2-cell).

WEIGHING MACHINE

- Portable-Adult
- Scale in Kg with 0 adjustment. Weight up to 200kg.
- Shell of Steel 1mm thick
- Approx size: 300 mm L x 300mm W.
- Epoxy coated

ECG Machine (6-channel)

Six channel microprocessor controlled ECG Machine to operate on mains and rechargeable battery, recorder should run minimum 4 hours on fully charged battery.

Auto Power Off (when not in use), multi-channel formats should be available. 12 lead ECG system with recorder. Should give measurement matrix. Should give lead fail/lead reversal failure messages.

Should give resting ECG. Sufficient memory for ECG storage.

Minor OT Instruments Set (Surgical & Gyn.)

Minor General Surgical Instruments Set	**Qty.**
SS Tray with Lid –Length 350mm, Width 250mm, Height 50 mm	1 No.
Kidney Tray –Length 200 mm, Width 90mm, height 40mm	1 No.
Gallipot 1 nos.)$2_{1/2}$" Diameter	1 No
Towel Clips (Mayo's/Bcakhaus) length 10 cms	4 Nos.
Allis Forcep 6"	2 Nos.
Needle Holder 6" ans 8" (Mayos Hegar)	1 each
Scalpel Handle No.4	1 No.
Artery Forceps Mosquito-6"	6Nos.
Artery Forceps (Spencerwell"s/crile)-6"	6 Nos.
Kockers artery Forceps Straight-6"	2 No.
Forceps (Toothed and Plain)	2 each
Czemy Retractor	2 Nos.
Langenbek Retractor Blade Size 1 ¾' x ½"	2 Nos.
Scissor Dissecting (Metzenbaum)-7"	2 Nos.
Scissor Suture Cutting Mayos -150mm	1 No.
Sponge Holding Forceps -240mm	2 Nos.

Venesection Set .

SS Tray with Lid-Length 250mm, width 200mm, Height 50mm	1
Gallipots (10 cm Diameter)	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Sponge Holding Mosquito Forceps – Length 240 mm	1
Artery Forcep Mosquito Curved – Length 150mm	6
Retractor (Kilner/Sengreen) –Length 150mm	2
Needle Holder (15 cm) Hegar's	1
Scalpel Handle No.3	1
Dissection Forcep – 150mm with Tooth	1
Dissection Forcep-150mm without Tooth	1
Towel Clips – Mayos/Backhaus –length 10cms	4
Mayos Scissor – Length 150mm	1
Aneurism Needle – Symes pattern-Length 180mm	1

Incision & Drainage

Tray SS with Lid –Length 250mm Width 200mm, Height 50mm	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Scalpel Handle No.3	1
Sinus Forcep – 180mm	1
Artery Forcep-150mm	6
Sponge Holding Forceps – Length 240mm	2
Towel Clips –Mayos/Backhaus- length 10cms	4
Currete	1
Galliots – Diameter 10 cms.	1

Suture Removal Set

SS Tray with lid –Length 250mm, Width 200mm, Height 50mm	1
Tooth Forceps Dissecting -150mm	2
Galliots (10cms)	1
Artery Fprce {straogit6”}	
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Stich Removal Scissors	2
Towel Clips (Mayos / Backhaus) –Length 10 cms	2
Sponge Holding Forceps – 240mm	1

Suture Set

SS Tray with lid –Length 250mm, Width 200mm, Height 50mm	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Galliots (10cms)	1
Scalpel Handle No.4	1
Sponge Holding Forceps –8”	1
Tooth Forceps	1
Needle (1/2 Circel, Cutting) (Size 20mm, 30mm)	1
Scissor Mayos – 150mm	1
Towel clip (Mayos/Back haus) – Length 10 cms	1
Needle Holder (Hegar’s) -150mm	1
Artery Forceps (Mosquito)- 150mm	6

Catheterisation Set

SS Tray with lid –Length 300mm, Width 200mm, Height 50mm	1
Cathers Foleys 16, 18, 20	1each

Bladder Syringe 150cc, Disposable Syringe	1
Metal catheter Sizes 1-12	1 Set
Introducer for Foleys catheter	1
Sponge Holding Forceps – 240mm	2
Towel Clips Mayos/Backhaus –Length 10 cms	4
Sponge Holding Forceps – 240mm	1
Catheter Tray Stainless Steel Over all Size -17x4 ¾’ x2 ¼”	1

Scissors Set

Mayos Straight Scissors 6 ½” & 7 ½”	1,1
Mayos Straight Curved 6 ½” & 7 ½”	1,1
Metzenbaum Scissors 8” & 9 ½”	2,2
Mclachilan Scissors 6 ½’	2
Stich Removal Scissors (Mayos Clinic Stich Scissors)	4
Instruments Tray Stainless Steel with Lid –Length 300mm, width250mm,	1
Height 50mm.	1

Minor OT Table with mattress

Three folding with adjustable head & foot rest.

Size: 180cmL X 50cmW X 80cmH

The central section should be adjustable for trendelenburg positions.

Material Body : Stainless steel

Leg Holders: Stainless steel

Unit shall conform to relevant safety standards & general safety standards for medical equipment as per IS8607.

Side Light

Light, examination, mobile, 220V/12V
Mobile light for medical examination Stand with 5 anti-static swivel castors Articulated arm 105 cm, spring loaded, with on/off switch and integrated transformer
· Halogene bulb: 12V/20W
· Light intensity approx: 20.000 Lux at 40 cm Natural white light: colour temperature 4000 K Reflector adjustable for positioning
· Power cord: length approx 3 m Power requirements: 220 V / 50 Hz Power
· CE/FDA/BIS approved product)
Supplied with:
· 1 x spare halogene bulb
· 1 x spare set of fuses
· User manual with trouble shooting guidance, in English
· Technical manual with maintenance and first line technical intervention instructions, in English

Single Step Stool

The general requirements shall be as per IS-4033-1978.

Frame	:	Frame work of welded tubular construction.
Top	:	Top CRCA 18G sheet. Aluminium top tread plates.
Shoes	:	Legs fitted with rubber shoes durable quality (free for 1 year use).
Dimensions	:	Height 20-22cms. Step size about 500mm x 300mm W.
Material	:	Vertical tube of ERW 18G support rod of 9.8mm & top of CRCA 18G sheet.
Finish	:	Pretreated & powder coated in 50 microns thickness.
Test	:	As per IS-4033-1968 & latest amendments issued if any.
Marking	:	As per IS-4033-1968 & latest amendments issued if any.

Minor OT Light Ceiling

The unit should have reflector for optimum utilization of the dual reflector by means of targeted light direction technique with following specifications:

- Power supply : 230V, 50/60Hz
- Colour Temp. : 4200K
- Light intensity at 0.8m distance : 40000-45000lux
- Light field diameter : 180-200mm
- Colour rendering index Ra(1-8)-93
- Luminous efficacy in the light field : 2901lm/w or more
- Power consumption : 12V/50W
- Working space : 27-173cm
- Lifetime of bulb : Atleast 2000hrs.
- Swivel radius : 960mm
- Vertical adjustment : 1250mm
- Weight : 20 kg.
- Should have CE certification for electricity safety

Dressing Drums (IS:3831)B

- Material Stainless Steel (S.S.)
- S.S. thickness 0.5mm
- Body, lid built 1mm
- Hasp 3mm
- Hinge Wire 4 to 5m
- Handle 0.9m
- Chain 2.8 to 3.57
- Clamp 275m x 132 m (20)
- Size 300 x 250mm (10)
- The hose shall rest on:

i. Three / more rest without shake / play
ii. The lid shall have a snap fit on the body
viii. The hinges shall have the swivel of the lid and the movements shall be such as to make the lid come back to it's position of closing without any side pressure being applied.
ix. The hasps shall engage with disengage from the stable position.
x. The belts shall fit snugly and bear uniformly on the surface of Drum without any pockets or undue rubbing at any place.
xi. The clip when clamped shall keep the belt in a fair tension and shall not recoil. It shall enable the belt to slide around the body easily in it's open position.
xii. The sets of perforation on body shall have 39 holes of 2.4 diameter

Dressing Trolley SS (with bowl & bucket)

The general requirements shall be as per IS-4033-1968 as well as IS-4769 subject to following specifications:

Frame	:	Welded tubular construction two stainless steel pipes.
Top	:	Two stainless steel of designation 04Cr18 Ni 10Ni 10 or 07 Cr 18 Ni 9 Of IS-6911-1972 shelves with protective sides railing of stainless steel.
Castors	:	Mounted Wheel type 4 nos. swiveling castors as per IS-4043-1979.
Shape & Dimension	:	Overall size (approx.) 1010mm L X 510mm W X 900mm H, shelf size 750L X 500 mm W (2nos.) with protective sides railing on all sides (as per IS-4769).
Material	:	Vertical pipe 1.1/4" x 18G SS longitudinal pipe of ¾" x 18G SS railing 10mm SS rod. Shelf 21 SS sheet, bowl & bucket rings of 10mm rod. SS bowl & bucket of 25G SS.
Test	:	Good quality durable rust free.
Finish	:	As per IS-4033-1968 & latest amendments issued if any.
Marking	:	According to IS-4033-1968 & latest amendments issued if any.

X-Ray View Box (Single)

- Single film
- Good quality imported Perspex sheet, uniform and bright illumination.
- Electrical Fluorescent 1/2 tubes fittings with uniform illumination.
- Shock proof body.
- Heavy duty X-Ray clips (1/2).
- On / Off switch with indicator light
- Confirm to standard electrical safety norms.

OPERATION THEATRE

Anaesthesia Workstation

1 Description of Function
1.1 Anesthesia Workstation is used for delivering anesthesia agents to the patients during surgery. The complete unit also monitors the vital signs and ventilates the patients.

2 Operational Requirements
2.1 1) Anaesthesia machine complete and integrated with Anaesthesia gas delivery system; Circle absorber system; Precision vaporizer for halothane, isoflurane/ Sevoflurane; Anaesthesia ventilator. Monitoring system to monitor Anaesthetic gases, ECG, EtCO2, FiO2 (Online O2 Analyzer), Pulse Oximeter and airway pressure, NIBP, IBP (No as required), rectal/&skin temperature.
2) Essential accessories to make the system complete and compatible with the existing system of gas outlets.

3 Technical Specifications
3.1 Flow management
1. Should be Compact, ergonomic & easy to use
2. Multi-color TFT display of at least 12" size, with virtual flow meters for O2, N2O or Air
3. Dual flow sensing capability at inhalation and exhalation ports.
4. Should have back-up O2 control which provides an independent fresh gas source and flow meter Control in case of electronic failure.
5. Gas regulators shall be of modular design/ graphic display
6. One no. yoke each for Oxygen & Nitrous Oxide. Separate Pipeline inlet for Oxygen, Nitrous Oxide and Air
7. Hypoxic Guard to ensure minimum 25% O2 across all O2-N2O mixtures and Oxygen Failure Warning.
8. Machine should provide electronic gas mixing.
3.2 Breathing system
1. Latex free fully autoclavable.
2. Flow sensing capability at inhalation and exhalation ports, sensor connections shall be internal to help prevent disconnect.
3. Sensor should not require daily maintenance.
4. Bag to vent switch shall be bi-stable and automatically begins mechanical ventilation in the ventilator position.
5. Adjustable pressure limiting valve shall be flow and pressure compensated.

3.3 Standard Circle Absorber System
- Should have adjustable pressure limiting valve, breathing circuit pressure measuring device.
- Should have a bag/ventilator selecting valve integrated onto the absorber.
- Should be suitable to use low flow techniques
- Facility to attach oxygen sensor.
Should have CO2 absorbent chamber canister

3.4 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 3 vaporizers, which allows easy exchange between agents.
Temperature, pressure and flow compensated vaporizers and Maintenance free - for Isoflurane, Halothane, and Sevoflurane

3.5 Ventilator (Integrated)
1.The workstation should have integrated Anesthesia Ventilator system for adult and paediatric.
2.Ventilator should have Volume Control and Pressure Controlled SIMV and PEEP.

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 at least 120-150 L/min peak flow to facilitate rapid movement through physiologic “dead space” in the Pressure Control mode.

3.6 1.Anesthesia Monitoring System should be modular:
a) Monitoring of vital parameters: ECG (5 leads) with ST segment analysis, NIBP, SPO2 and 2 Invasive Blood Pressure & Spirometry with display of flow volume loops.
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
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
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
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)

4 System Configuration Accessories, spares and consumables
4.1 Anaesthesia Gas Delivery system -01
4.2 Circle absorber –01 (Twin Chamber)
4.3 Ventilator -01
4.4 Monitor -01
4.5 Vaporizer Halothane -01
4.6 Vaporizer Savoflurane -01
4.7 Vaporizer Isoflurane -01
4.8 Adult and Paediatric autoclavable silicone breathing circuits -02 ea
4.9 Reusable IBP Transducer -04
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-50
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- 50 each.
4.19 HME filters- 50
4.20 Vital Parameter Accessories-01 Set
4.21 Should be supplied with negative pressure leak test equipment
4.22 SPO2 resuable probes Adult & Pead – 2 Each
5 Environmental factors

5.1 The unit shall be capable of operating continuously in ambient temperature of 100C - 400C and relative humidity of 15-90%
5.2 The unit shall be capable of being stored continuously in ambient temperature of 00C - 500C 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/port of waste anesthetic gases (AGSS Anesthetic Gas Scavenging System/Port) should be in place. 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 FDA or CE approved product
7.2 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.3 Certified to be compliant with IEC 60601-2-13-Medical Electrical Equipments part 2-13:Particular
requirements for the safety of Anaesthesia Workstations
7.4 Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
7.5 All imported components like anaesthesia machine, monitor and ventilator should be from one manufacturer/principal.

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

Ventilator (Adult & Child)

1 Description of Function
1.1Ventilators provide artificial respiratory support to the critical patients.

2 Operational Requirements
2.1 Microprocessor Controlled ventilator with integrated facility for Ventilation monitoring suitable for New born to adult ventilation.

3 Technical Specifications
3.1 Standard hinged arm holder for holding the circuit
3.2 Colored TFT screen, 12 Inch or more
3.3 Facility to measure and display
a) End tidal CO2 with capnography.
b) 3 waves- Pressure and Time, Volume and Time and Flow and Time.
c) 3 loops- P-V, F-V, P-F with facility of saving of 3 Loops for reference.
d) Graphic display to have automatic scaling facility for waves
e) Status indicator for Ventilator mode, Battery life, patient data, alarm settings, clock etc
3.4 Trending facility for 24hours with minimum 5 minutes resolution for recent 24 hours
3.5 Automatic compliance & Leakage compensation for circuit and ET tube
3.6 Following settings for all age groups.
a) Tidal Volume
b) Pressure (insp)
c) Pressure Ramp
d) Respiratory Rate
e) SIMV Respiratory Rate
f) CPAP/PEEP
g) Pressure support
h) FIO2
i) Pause Time
j) Pressure & Flow Trigger
3.7 Monitoring of the following parameters
a) Airway Pressure (Peak & Mean)
b) Tidal volume (Inspired & Expired)
c) Minute volume (Inspired and Expired)
d) Spontaneous Minute Volume
e) Total Frequency
f) FIO2 dynamic
g) Intrinsic PEEP and PEEPi Volume
h) Plateau Pressure
i) Resistance & Compliance
j) Use selector Alarms for all measured & monitored parameters.
K) Rapid Shallow breathing index
3.8 Modes of ventilation
a) Volume controlled
b) Pressure Controlled
c) Pressure Support
d) SIMV (Pressure Control and volume control) with pressure support
e) CPAP/PEEP
f) Inverse Ratio Ventilation
g) Advanced mode like pressure controlled volume guaranteed
h) Non Invasive ventilation
i) APRV
j) ACMV MODE

3.9 Apnea /backup ventilation
3.10 Expiratory block should be autoclavable and no routine calibration required
3.11 Should have the ability to calculate / Procedure
a. Intrinsic Peep & Intrinsic PEEP Volume
b. Occlusion Pressure
c. Spontaneous Breathing trial
d. Facility to calculate lower and upper inflection point
3.12 Nebuliser with capability to deliver particle size of < 3 micron & to be used in both Off and On line
3.13 Automatic Patient Detection facility preferable
3.14 Medical Air Compressor. (Price to be quoted separately)
a) Stand-alone Medical Air compressor
b) Snap fit with the Ventilator module to provide an oil free Medical air.
c) Peak output flow should be minimum 160 LPM.
d) Air quality should comply with ISO compressed air purity class.
e) Medical Air Compressor should automatically activate in the event of wall air supply loss.
f) Replacement of internal filters should be performed without removing the compressor
g) Should have washable air filter.
3.15 Technical Specifications for reusable face mask & nasal mask.
Reusable face & nasal mask with textured dual flap silicone cushion flap for easy fit.
Removable forehead support and pad to match the angle of patient's forehead
Stability Selector for easy fit and angle.
Ball & Socket headgear attachments.
Should be autoclavable.
3.16 Battery back up for minimum 1 hour
3.17 RS 323C interface for communications with networked devices.
3.18 Automatic patient detection facility preferable.

4 System Configuration Accessories, spares and consumables
4.1 Ventilator - 01
4.2 Adult and Paediatric autoclavable silicone breathing circuits – 02 each
4.3 (a) Reusable Masks (Small, Medium, Large) with each machine. - 02 sets each
(b) All Accessories for non invasive ventilation – 2 sets.
(c) – Disposable circuit – 50 Nos.
4.4 Medical Air Compressor. (Price to be quoted separately)
4.5 Humidifier -Servo controlled with digital monitoring of inspired gas temperature complete with heating wire - 02

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

OT Table -5-Section Hydraulic

1 Description of Function	
1.1	Hydraulic operating Tables are simple tables for performing surgical procedures and they work without electrical power.
2 Operational Requirements	
2.1	OT Table is required for general surgery and should have X-Ray transluscent tops.
3 Technical Specifications	
3.1	a. Five section table top with divided foot section b. Table top should permit x-ray penetration and fluoroscopy c. All table positioning, i.e., height, back section, lateral tilt, trendelenburg, and anti-trendelenburg, except foot and head section should be operated hydraulically d. Should have a manual position selector e. The casings on the frame and centre supporting column should be made of hygienic stainless steel f. Mattress should be radioluscent and suitable for fluoroscopy
3.2	Measurements:(approximate) a. Height: 730-1040 mm b. Side tilt: + 15-20 degrees c. Back section adjustment: - 15 degrees to 70 degrees d. Foot section adjustment: - 90 to 0 degree, detachable e. Trendelenburg: 25-30 degree f. Anti trendelenburg: 25-30 degree g. Head section adjustment: -40 to -30 degree, detachable h. Width: 550 mm i. Length: 1950 mm
4 System Configuration Accessories, spares and consumables	
4.1	System as specified
4.2	ACCESSORIES: All accessories including the ones listed below should be quoted. The specific accessories and their quantity will depend upon actual requirement a. Padded arm rest with straps - pair with clamps b. Anaesthesia screen with clamps c. Side supports: pair with clamps d. Shoulder supports: pair with clamps e. Knee crutches for lithotomy position: pair with clamps f. X-ray cassette tray g. Kidney bridge h. Patient Restraint Strap i. Accessories for operating in prone position j. Optional accessories for endourology work
5 Environmental factors	
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Standards & Safety	
6.1	Should be FDA , CE, UL or BIS approved product
6.3	International Safety standards like IEC 60601-2-46 or equivalent if applicable

Hydraulic Operating Theatre Table for Orthopaedic

1 Description of Function	
1.1	Operating tables provide an elevated surface that supports the patient's body during surgical procedures, stabilizing the patient's position and providing optimal exposure of the surgical field.
2 Operational Requirements	
2.1	C-arm compatiblity with hydraulic operation table
3 Technical Specifications	
3.1	**Following are the minimum essentials, quantity& size,minor details to be specified by** the user: It should be removable, five or more sections of tabletop: * Independently removable section * Full Length radio transparency along entire length with ability to move C arm under and around table throughout its length. * Besides, normal elevation of column, the table top should be capable to lift * There should be provision for lifting the trunk and pelvis sections either separately or together, anatomically elevated at the same height * Head section with adjustment for optimum positioning * The table top should allow the use X-ray cassette all over its length *The pads should be removable for hygiene and cleaning,bacteriostatic, should be made of long life material. All types of Orthopaedic position like beach chair, for discectomy surgery, femoral& tibial interlocking etc should be feasible.
3.2	Motorized Movements: * Height Adjustment Range : 200 mm or more * Table Top Lift Range : 100 mm or more * Lateral Tilt : 15 deg. or more * Trendelenberg : +30deg / -15deg. * Lengthwise manual movement of trunk sections for easy access to image intensifier : 300 mm or more
3.3	Column: Column for above table top, complete with built-in maintenance free battery. Column should be movable on trolley.
3.4	Trolley: For moving the table top and column with facility for height adjustment and trendlenberg tilting
4 System Configuration Accessories, spares and consumables	
4.1	Standard Accessories: * Water proof foot pedal for table top height adjustment and indicators * Thigh Holder: Pair of thigh holder, swiveling, adjustable via ball & socket joint, lengthwise and laterally adjustable. Complete with pads, fixing straps and clamps * Instrument tray, sliding or rail, Dimension: App x 320x 350 mm * Mobile Frame: Mobile frame, with stainless steel bucket, complete with 4 castors * Cassette Holder: Holding arm for positioning x-ray cassettes under radio transparent table top. Mounted on side rails by means of clamp. * Insertion Bar: Bar for insertion of x-ray cassette, under the table top.
4.2	Attachments: * Lower Limbs Traction Device * Femoral Nailing Device * Knee Arthroscopy Device * Meniscus Positioning Device * Hip Prosthesis Device * Humerus Positioning Device * Shoulder Arthroscopy Device * Spine Cord Positioning Device * Hand Surgery Table

5 Environmental factors		
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%	
5.2	The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%	

6 Power Supply		
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug	
6.2	Energy requirement and efficiency should conform to Indian Bureau of energy efficiency etc.	

7 Standards, Safety and Training		
7.1	Should be compliant with IEC 61010-1:(or any international equivalent eg EN/UL 61010) covering safety requirements for electrical equipment for measurement control and laboratory use	
7.2	Should be CE, FDA approved .	
7.3	Comprehensive training for lab staff and support services till familiarity with the system.	

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.		

OT Ceiling Light (Halogen)

Specifications:

Description:
Light: Illumination of operating fields (1 to 3) in one surgery simultaneously and instruments trolley area.

1. Illumination intensity –
(a) Large light-100000 lux or more
(b) Satellite light- 95000 lux or more
2. Colour (light) temperature- 4200-4500 deg Kelvin
3. Colour rendering index Ra-93-94
4. Type of lamp- Halogen type
5. Life time of lamp-(1000 to 10000) hours Approx
6. Automatic switch to reserve bulb.
7. Radiated heat less than 5-8 deg C
8. Adjustable position- at least 3 axis upto 60 deg
9. Non fogging surface
10. Power supply 220-240 V AC fitted with Indian plug
11. Power supply voltage fluctuation compensable.
12. UPS back up for 30 minutes
13. Dimming facility of light of 3-6 levels without the change of colour temperature
14. Depth of illumination 80-130cm
15. Light emission area 1500-2400 cm sq
16. Timer indicating number of hours used
17. Detachable autoclaving sterilizable handles to supplied 25 Nos.

1. The equipment should be designed to comply with existing international standards in term of safety and performance i.e IEC 60.1

2. All the tenders to be supported by original brochure containing the details of the technical specifications of the product Standard and safety:

1. Should be CE/FDA/BIS approved product
2. Electricity safety confirms to standards for electrical safety IEC-60601-1 general requirement
Documentation:
1. User manual in English
2. Service manual in English
3. List of requirements available for routine preventive maintenance and support as per manufacturer documentation in service/technical manner
4. List of important spare parts and accessories with their part number and cost
5. Log book of checklist and maintenance-job description of hospital technician and company service engineer.

OT Mobile Light (Halogen)

1**. Description of Function**
Mobile operating light is required for illuminating the operating held in an emergency environment and the system can be moved from place to place.

2. Operational Requirements
State of the art system with shadow less light

3. Technical Specifications
a. Mobile light on lockable castors
c. Light output 1,00,000 Lux or more
d. Colour temperature 4500 K or better
e. Colour Rendering index (CRI) 95%
f. Sterilizable focusing handle
g. Should withstand wide voltage fluctuation
h. Should have intensity control from 40-100%
Emergency power Unit having in-built CVT with automatic change over from mains to battery mode in the event of power failure to provide 60 minutes backup

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

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

6. Power Supply
Power input: 220-240V/50Hz AC Single phase fitted with appropriate Indian plugs and sockets

7. Standards & Safety
Should be CE/UL/BIS approved product
Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirement (or equivalent BIS Standard).
Shall meet internationally recognised standard for Elector Magnetic Compatibility (EMC) for electromedical equipment IEC-60601-1-2: latest edition or equivalent at BIS or should comply with 89/366/EEC; EMC-directive as amended. Certified to be complaint with IEC 60601-2-41 particular requirements for the safety of Operation Theatre Light or Equivalent if applicable.

Digital Infusion Pump

1. The equipment should have Roller type Peristaltic pump /Volumetric pump technology for delivery of IV fluids and blood/blood products ranging between 2.5 ml to 750 ml per minute.
2. The Equipment should have high levels of safety from air embolism by integrating atleast two ultrasonic air detection sensors.
3. Heating process should be done by an electro magnetic induction heating system.
4. The Equipment should have two infra –red temperature sensors for accurate delivery of fluids at 37deg.C.
5. The equipment should have the facility to automatically purge air for removal of any outgassed air to prevent it from entering the patient line. No manual process should be involved.
6. The equipment should have operator controlled Bolus infusion key for rapid response in critical situations.
7. The equipment should have a line pressure control sensor for restriction of flow in case of line occlusion immediately and stop the delivery of fluids for patient safety.
8. The Equipment should have a recirculate mode for pre – warming of fluids during transport.
9. The Equipment should have an interactive on-board display system which displays information about the rate of infusion , total volume infused , real temperature of fluids, line pressure etc.
10. The equipment should have an internal rechargeable battery backup.
11. Consumables should be universal for all flow rates ranging between 2.5 ml to 750 ml per minute.

Defibrillator

- Biphasic
- Waveform display (min 3)
- External energy selection from 2 J to 200 J, biphasic
- Charging time less than 8 seconds @ 200 J (with a charged battery)
- Synchronizer and cardio version
- Unique disarm button (in addition to automatic time delay)
- Should come with high resolution monitor.
- Should come with 3 lead ECG that can be measured from cables, adult external paddles, paediatric paddles.
- Heart rate: 20 to 300 bpm BPM with user selectable alarms.
- Should come with external pacing, demand and asynchronous modes
- Should display CPR in real time.
- Should have large internal memory that stores and prints 25 ECG events.
- Battery to last not less than 2 hours of continuous ECG monitoring or 30 full energy discharges.
- Battery indicator on display and self test on battery

Accessories needed

- Paddles with charge and discharge buttons.
- Pediatric paddles adapters (set of 2)
- A/c 240 v V 50 hz charger and mains power source. Adult paddles and test paddles.
- 3 lead patient cable
- One spare battery
- Roll of 50mm recording paper x 10 rolls
- 5 oz tube of defibrillation gel x 5 tubes
- ECG cable with leads- 2 sets.
- External disposable pacing pads-2 sets
- Operation manual, service manual complete.
- Should have US FDA Approval

Diathermy/Electrosurgical Unit

1 Description of Function
1.1 Electro-surgical units are required to provide cutting and coagulation electrically during surgery.

2 Operational Requirements
2.1 A user friendly, Microcontroller-based multi-programmable by the user, isolated Electro surgical generator, designed for all surgical procedure and with Spray mode for Surgery and essential facility of Vessel Sealing system (Comprehensive unit).

3 Technical Specifications
3.1 Ensure controlled, precise desiccation with less destruction of peripheral tissue
3.2 Permits two surgeons to operate from a single unit & accessories are activated only when keyed, should not get activated inadvertently
3.3 Low voltage coagulation
3.4 Must have three types of cut modes-Low, Pure& Blend
3.5 Must have four coagulation mode
3.6 Maximum output: 350-520 kHz sinusoid 300 watts.
3.7 Power efficiency rating more than 96
3.8 Modes: Both Bipolar (minimum 1 port) and Mono-polar (minimum 2 ports), Mono-polar should have cutting, spray, desiccation and fulguration modes. Each monopolar should have separate output setting.
3.9 Under water facility is essential. Convection cooling system

4 System Configuration Accessories, spares and consumables (unit rate to be quoted for individual items)
4.1 Main Unit -01 No
4.2 Pencil Holder -01 No
4.3 Electrode Blades -10 Nos
4.4 Electrode Needle Fine -10 Nos
4.5 Electrode – Ball point – (3 different sizes- small, Medium & long) – 5 each
4.6 Pencil Switches with hand control -10 Nos disposable, 2 Nos reusable
4.7 2 Foot Control paddle
4.8 chuck handles - 10 Nos disposable, 2 Nos reusable
4.9 Reusable Patient plate with cable – 5 Nos. Disposable patient plate with cable – 100Nos.
4.10 Mobile trolley/cart on castors with brakes -01 Nos
4.11 Power cord of 5 meters length and plug with appropriate rating for standard Indian electrical sockets. -01 No
4.12 Vessel sealing Clamps for both open and Endoscopic surgical procedures – 4 Nos each (Price should be quoted separately)

5 Environmental factors
5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
5.3 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

6 Power Supply
6.1 Power input to be 180-270 V AC, 50 Hz as appropriate fitted with Indian plug
6.2 Resettable over current breaker shall be fitted for protection

7 Standards, Safety and Training
7.1 Patient system should be guaranteed by Return Electrode Contact Quality Monitor System which should automatically switch off the unit together with audiovisual alarms in case of power supply disconnection of the plate in the event of wire break off or loose connection. If the plate is not installed underneath the patient or it has a crack in the system it should not work.
7.2 The supplier should be CE / US FDA marked for quality standards.
7.3 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements
7.4 Certified to be compliant with IEC 60601-2-2 Medical Electrical Equipment Part 2-2: Particular requirements for the safety of High Frequency Surgical Equipments.

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

Suction Machine

- Noiseless suction unit should have fast vacuum build up.
- Vacuum should have minimum vacuum of 675 mm Hg. Suction capacity 50 liter/ min. & twin bottle capacity of 3 liters each.
- Suction system should have piston/cylinder (self lubricating).
- Fitted on mobile stand with ON/OFF facility.
- Mechanical overflow protection system.
- Should be supplied with following accessories with each suction.
- 3 liters suction container, polysulfone, graduated-2 in no.
- Lid with overflow sensor and mechanical overflow protection device.
- Holder for 3 liter suction containers.
- Tubings
- Footswitch
- Should be operable on manual mode in case of electricity failure .

ICU-08 BEDS

I.C.U Beds

1 Description of Function

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

2 Operational Requirements

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

3 Technical Specifications

3.1 Should have four section mattress base
3.2 Should have X-Ray translucent back section made up of high pressure laminate.
3.3 Should have X-Ray cassette holder underneath the back section & should allow insertion of X-Ray cassette from either side of the bed.
3.4 Base frame & support frame should be made up of steel for long life & prevention from rusting.
3.5 Should have stepless electrical adjustment for the following :-
Height : 450-840 mm
Back section : 0- 50 degrees
Leg Section : 0-30 degrees
3.6 Should have stepless pneumatic adjustment for Trendelenburg (20-25° approx), anti-trendelenburg (10-15° approx)
3.7 Should have a manual quick release mechanism for back section adjustment during emergency situation.
3.8 Should be equipped with four articulated half length tuck away
side rails
3.9 Should be equipped with large castors (diameter 150 mm) with central braking and steering facility.
3.10 Mattress of the Bed should be made up of high density foam with Anti Microbial agent incorporated into all components that assists in Prohibiting growth of bacteria & fungi and easy to clean.
3.11 Mattress should be fully Radiolucent for ease in performing portable X-Rays.
3.12 Should have bumpers at all four corners and place for fixing accessories
3.13 Dimensions of bed :
Length : 2100 -2290 mm
Width : 850 -1020mm
Mattress Size : appropriate as per bed size

4 System Configuration Accessories, spares and consumables

4.1 I.C.U Bed Mainframe -01
4.2 Bed Ends, detachable : 01 pair
4.3 Articulated half length tuck away side rails : 04 Nos.
4.4 IV Rods : 01 No.
4.5 Mattress 12 cm Thick : 01 No.

5 Environmental factors

5.1 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.2 The unit shall be capable of being stored continuously in ambient temperature of -20 -50 C and relative humidity of 15-90%. 5.3 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

6 Power Supply

6.1 Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug
6.2 Resettable overcurrent breaker shall be fitted for protection

7 Standards, Safety and Training
7.1 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.2 Should be FDA or CE approved product
7.3 Electric Shock Protection level-Class-B
7.4 Electric current Protection- Class -1
7.5 Certified to be compliant with IEC 60601-2-38 Medical Electrical Equipments part 2-38 Particular requirements for safety of Electrically Operated Hospital Beds
7.6 Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.

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

Patient Monitoring System with Central Monitoring Station

1 Description of Function
1.1 Critical patients need to be monitored continuously in ICU at the bedside as well as at the central nursing station.

2 Operational Requirements
2.1 ICU should comprise of 08 nos. monitors at the bedside and with central station.
2.2 Capability of storage of patient data and printing of patient reports.

3 Technical Specifications
3.1 Minimum 15 inches multi colored TFT display screen.
3.2 Separate CPU/Module rack.
3.3 Eight digital and waveforms/traces display
3.4 Combination of single, dual and multi parameter modules.
3.5 Parameter modules freely exchangeable between all the monitors.
3.6 Multi channel (up to 12 leads) ST segment analysis.
3.7 Facility to monitor and display - ECG, Respiration, NIBP, SpO2, CO2 with capnography, Temp, Cardiac output & IBP.
3.8 Automatic arrhythmia detection & alarm for standard and lethal arrhythmia.
3.9 EtCO2 -Main stream/ side stream. Display both inspired and expired values, showing capnography.
3.12 Central station for 10 no. bedside monitors with independently controlled. 17" multi color TFT Monitor, complete with Ethernet LAN cabling, alarm management, 72 hours trending, bed to bed viewing of waveforms and remote alarm management like silencing of alarms etc.
3.13 Should provide hemodynamic, oxygenation, Ventilation
calculation package.
3.14 Should have drug calculation package.
3.15 Trend of at least 48 hours.
3.16 200 nos. event recall/snapshot facility both manually and automatically triggered by alarm.
3.17 Automatic Zoom In Facility in the monitor display.
3.18 The monitors should have monitor-to-monitor overview facility and data transfer over the network.
3.19 CRT Slave monitors- 21 inches in ICU - one per central station
3.20 Include Laser Printer and dual channel strip chart recorder.
3.21 Specifications for Transport Monitor:
1.Portable and light weight preferably< 10 kg.
2.Modular with 12 inches multi color TFT Display.
3.Monitoring Parameters - ECG, Respiration, NIBP, SaO2 and temperature.
4.Digital and six waves/traces display.
5.Trends up to 24 hours.
6.60 minutes or more battery backup.
7.Convenient handle for carrying the same.
8. Able to fix with bed/ trolley.

4 System Configuration Accessories, spares and consumables
4.1 ECG/Resp: 5 Lead ECG Cable with clip- 2 sets per monitor and 10 Lead ECG Cable with clip- 1 set per monitor.
4.2 NIBP: Adult cuff- 2nos. per monitor and two sizes of pediatric cuffs- one per monitor (complete sets)
4.3 Reusable SPO2: Adult SPO2 sensor with cable- two nos. per monitor and Pediatric SPO2 sensors- one no. per monitor.
4.4 IBP: Include four nos. per monitor of reusable pressure transducer with bracket, holder and 100 nos. disposable domes per monitor.

4.5 Temperature: Rectal temperature probe- two per monitor and skin temperature probe- one per monitor.
4.6 EtCO2 module with all accessories. In case of side stream EtCO2-10 sets of sampling tubes for each module to be included.
4.7 Cardiac Output: Should be by thermodilution method with all accessories
4.8 EEG Modules- with all accessories. Should display at least two channels. (Optional)
4.9 BIS/Entropy Module: Adult Sensors-200 numbers.
Spectral analysis modules by compressed spectral array.
(Optional)
4.10 Necessary cabling for networking the monitors on turnkey basis.
4.11 Necessary mounting solution/ mounting on any pendant for monitors

5 Environmental factors
5.1 The unit shall be capable of operating continuously in ambient temperature of 10 –40 deg C and relative humidity of 15-90%
5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 –50 deg C and relative humidity of 15-90%
5.3 Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMCdirective.
5.4 The supplier shall provide environment friendly furnitures and wall fittings for the entire system. Cabling has to be provided by the supplier.

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

7 Standards, Safety and Training
7.1 Should be FDA, CE, UL or BIS approved product
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 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.

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

Ventilator-(Adult & Paediatric)

1 Description of Function
1.1 ICU ventilators provide artificial respiratory support to the critical patients in the Intensive Care Units.

2 Operational Requirements
2.1 Microprocessor Controlled ventilator with integrated facility for Ventilation monitoring suitable for New born to adult ventilation.

3 Technical Specifications
3.1 Standard hinged arm holder for holding the circuit
3.2 Colored TFT screen, 12 Inch or more
3.3 Facility to measure and display
a) End tidal CO2 with capnography.
b) 3 waves- Pressure and Time, Volume and Time and Flow and Time.
c) 3 loops- P-V, F-V, P-F with facility of saving of 3 Loops for reference.
d) Graphic display to have automatic scaling facility for waves
e) Status indicator for Ventilator mode, Battery life, patient data, alarm settings, clock etc
3.4 Trending facility for 24hours with minimum 5 minutes resolution for recent 24 hours
3.5 Automatic compliance & Leakage compensation for circuit and ET tube
3.6 Following settings for all age groups.
a) Tidal Volume
b) Pressure (insp)
c) Pressure Ramp
d) Respiratory Rate
e) SIMV Respiratory Rate
f) CPAP/PEEP
g) Pressure support
h) FIO2
i) Pause Time
j) Pressure & Flow Trigger
3.7 Monitoring of the following parameters
a) Airway Pressure (Peak & Mean)
b) Tidal volume (Inspired & Expired)
c) Minute volume (Inspired and Expired)
d) Spontaneous Minute Volume
e) Total Frequency
f) FIO2 dynamic
g) Intrinsic PEEP and PEEPi Volume
h) Plateau Pressure
i) Resistance & Compliance
j) Use selector Alarms for all measured & monitored parameters.
K) Rapid Shallow breathing index
3.8 Modes of ventilation
a) Volume controlled
b) Pressure Controlled
c) Pressure Support
d) SIMV (Pressure Control and volume control) with pressure support
e) CPAP/PEEP
f) Inverse Ratio Ventilation
g) Advanced mode like pressure controlled volume guaranteed
h) Non Invasive ventilation
i) APRV

j) ACMV MODE
3.9 Apnea /backup ventilation
3.10 Expiratory block should be autoclavable and no routine calibration required
3.11 Should have the ability to calculate / Procedure
a. Intrinsic Peep & Intrinsic PEEP Volume
b. Occlusion Pressure
c. Spontaneous Breathing trial
d. Facility to calculate lower and upper inflection point
3.12 Nebuliser with capability to deliver particle size of < 3 micron & to be used in both Off and On line
3.13 Automatic Patient Detection facility preferable
3.14 Medical Air Compressor. (Price to be quoted separately)
a) Stand-alone Medical Air compressor
b) Snap fit with the Ventilator module to provide an oil free Medical air.
c) Peak output flow should be minimum 160 LPM.
d) Air quality should comply with ISO compressed air purity class.
e) Medical Air Compressor should automatically activate in the event of wall air supply loss.
f) Replacement of internal filters should be performed without removing the compressor
g) Should have washable air filter.
3.15 Technical Specifications for reusable face mask & nasal mask.
Reusable face & nasal mask with textured dual flap silicone cushion flap for easy fit.
Removable forehead support and pad to match the angle of patient's forehead
Stability Selector for easy fit and angle.
Ball & Socket headgear attachments.
Should be autoclavable.
3.16 Battery back up for minimum 1 hour
3.17 RS 323C interface for communications with networked devices.
3.18 Automatic patient detection facility preferable.

4 System Configuration Accessories, spares and consumables
4.1 ICU Ventilator - 01
4.2 Adult and Paediatric autoclavable silicone breathing circuits – 02 each
4.3 (a) Reusable Masks (Small, Medium, Large) with each machine. - 02 sets each
(b) All Accessories for non invasive ventilation – 2 sets.
(c) – Disposable circuit – 50 Nos.
4.4 Medical Air Compressor. (Price to be quoted separately)
4.5 Humidifier -Servo controlled with digital monitoring of inspired gas temperature complete with heating wire - 02

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

Blood Gas & Na+/K Analyzer

A fully automated pH/Blood gas/electrolyte analyzer measuring the following parameters:-
pH, PCO2, PO2, Barometric pressure.
Na, K, Ca, Cl
Co-oximetry: ct Hb, CCO Hb, Met Hb, Sulf Hb, Haematocrit and Barometric pressure.

Sample volume should be approximate 100 µl for all parameters.

All calibration and cleaning cycles should be fully automated with user selectable calibration items.
Calibration should be performed by liquid calibration for all parameters.
The electrodes provided should be zero maintenance including the reference electrode.
The system should have on board data manager to store all patient results, QC data and calibrations.
The system should have a closed waste system and monitored continuously. Also all the system reagents should be monitored continuously.
A power fail protection for 20 min.to take all calibration and programmed data.
The analyzer should have a colour LCD screen to access all the system software and to display the patient's results. With alphanumeric key board/touch screen.
A built in thermal printer should be provided to print out patient results.
The system should work in discrete testing, ie, selectable parameter testing.
Should be supplied with consumable, reagents and QC agents for 1000 tests, as per the user requirements so that they do not expire.
Should not preferably use special gases.

Suction Machine (Heavy Duty)

Description of Function

To extract fluid from the body during surgery or emergency treatment

Operational Requirements

Shall have high vacuum suction capacity
The machine should be portable on castors/mobile trolley

Technical Specifications

Heavy duty and noiseless with piston/cylinder technology. Auto cut-off for preventing entry of fluid in pump To facilitate maintenance the cover of machine should be easy to open from the top & sides. The suction machine should be capable of producing vacuum up to -90K Pascal, which should be adjustable and monitored by vacuum gauge of suitable range. The suction capacity should be 15 litres or more per minute and can be regulated.

It should have two bottle of 4-5 liters capacity with synthetic rubber lids. The bottle shall be fitted with the arrangement to prevent overflow of fluid.

ON/OFF Switch and Power indicator.

Body material: Base, top & Panel made of rust proof and corrosion resistant moulded ABS; Jar/Bottle material; Autoclavable polycarbonate.

Optional inbuilt maintenance free battery. Battery backup upto 60 minutes on full charge.

System Configuration Accessories, spares and consumables

System as specified
3 core lead of 2 meter along with one 3 pins 15 amp. Plug -01
Power cable -3 crore lead of 5 meter along with one 3 pins 15 amp. Plug -01

The following spares machine are also required:-

Bottles 2 Nos.
Lids 2 Nos.
Rubber Seals 2 Nos.
Blades 2 Nos.
Suction tubing set 1 No.

Environmental Factors

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

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

Power Supply

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

A fuse or a resettable circuit breaker f a appropriate capacity should be incorporated for protection of motor.

Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be suppled.

Standards & Safety

Should be FDA, CE, UL or BIS approved product.

Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standards).

Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2: latest edition or equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended.

Training

Comprehensive training for staff of user department and support services till famillarity with the system.

Defibrillator

- Biphasic
- Waveform display (min 3)
- External energy selection from 2 J to 200 J, biphasic
- Charging time less than 8 seconds @ 200 J (with a charged battery)
- Synchronizer and cardio version
- Unique disarm button (in addition to automatic time delay)
- Should come with high resolution monitor.
- Should come with 3 lead ECG that can be measured from cables, adult external paddles, paediatric paddles.
- Heart rate: 20 to 300 bpm BPM with user selectable alarms.
- Should come with external pacing, demand and asynchronous modes
- Should display CPR in real time.
- Should have large internal memory that stores and prints 25 ECG events.
- Battery to last not less than 2 hours of continuous ECG monitoring or 30 full energy discharges.
- Battery indicator on display and self test on battery

Accessories needed

- Paddles with charge and discharge buttons.
- Pediatric paddles adapters (set of 2)
- A/c 240 v V 50 hz charger and mains power source. Adult paddles and test paddles.
- 3 lead patient cable
- One spare battery
- Roll of 50mm recording paper x 10 rolls
- 5 oz tube of defibrillation gel x 5 tubes
- ECG cable with leads- 2 sets.
- External disposable pacing pads-2 sets
- Operation manual, service manual complete.
- Should have US FDA Approval

ECG Machine (Single channel)

Floating: protection against defibrillator effect, Lead, standard 12 leads, lead change, automatically, patient current leakage input impedance calibrating voltage: 1mv
A/D conversion: 12 bit
Frequency response: 0.05Hz-150Hz (IEC)
Time constant> 3.2 sec
CMRR>80 dB
EMG filter-35Hz (-3 dB)/25Hz (-3 dB)
Sensitivity: ½, 1,2(cm/mV) , conversion deviation

Digital Infusion Pump

1. The equipment should have Roller type Peristaltic pump /Volumetric pump technology for delivery of IV fluids and blood/blood products ranging between 2.5 ml to 750 ml per minute.
2. The Equipment should have high levels of safety from air embolism by integrating atleast two ultrasonic air detection sensors.
3. Heating process should be done by an electro magnetic induction heating system.
4. The Equipment should have two infra –red temperature sensors for accurate delivery of fluids at 37deg.C.
5. The equipment should have the facility to automatically purge air for removal of any outgassed air to prevent it from entering the patient line. No manual process should be involved.
6. The equipment should have operator controlled Bolus infusion key for rapid response in critical situations.
7. The equipment should have a line pressure control sensor for restriction of flow in case of line occlusion immediately and stop the delivery of fluids for patient safety.
8. The Equipment should have a recirculate mode for pre – warming of fluids during transport.
9. The Equipment should have an interactive on-board display system which displays information about the rate of infusion , total volume infused , real temperature of fluids, line pressure etc.
10. The equipment should have an internal rechargeable battery backup.
11. Consumables should be universal for all flow rates ranging between 2.5 ml to 750 ml per minute.

Portable Light with long arm

Mobile Light, 220V/12V
Mobile light for medical examination Stand with 5 anti-static swivel castors Articulated arm 105 cm, spring loaded, with on/off switch and integrated transformer
· Halogene bulb: 12V/20W
· Light intensity approx: 20.000 Lux at 40 cm Natural white light: colour temperature 4000 K Reflector adjustable for positioning
· Power cord: length approx 3 m Power requirements: 220 V / 50 Hz Power
· CE/FDA/BIS approved product)

Supplied with:

· 1 x spare halogene bulb
· 1 x spare set of fuses
· User manual with trouble shooting guidance, in English
· Technical manual with maintenance and first line technical intervention instructions, in English

Head Light with Light Source

Fiber-optic head light with 3.5mm cable, light adjustable, light weight, head band supplied with suitable xenon light source. 4 port turret.

Anaesthesia Machine

- Stainless Steel/Aluminium epoxy coated body with cylinder tank at the back or side.
- Two tube flow meter for air/N2O & Oxygen.
- New generation vaporizer only one halothane/isoflourane.
- Safety feature
  -Hypoxic guard – min. 25% oxygen delivery
  -Automatic N2O cut-off device in case of O2 failure

- Breathing system – Magill, Bains & T piece only.
- Monitor fixed configuration with ECG, SPo2, NIBP, Temp. & upgradable to ETCO2.
- Ventilator
  -Electrically operated pneumatically driven.
  -Simple switch operation from manual to control mode.

Bronchoscope Fiber-optic with Accessories

1 Description of Function
1.1 Bronchoscopy is a procedure in which a hollow, flexible tube called a bronchoscope is inserted into the airways through the nose or mouth, to provide a view of the tracheobronchial tree. A Video Bronchoscope has a video output for images to be displayed on a TV Monitor.

2 Operational Requirements
2.1 • Compatible with Laser (YAG/ Diode).
• Compatible with Electrosurgical accessories.
2.2• Light weight & fully immersible in disinfection solution.
2.3 The system should meet all the numerical values given in the technical specifications within a tolerance of +/- 10 %.

3 Technical Specifications
3.1 VIDEO BRONCHOSCOPE (THERAPEUTIC) ADULT
1. Latest colour CCD chip technology.
2. Compatible Xenon light source with backup Halogen source.
3. Compatible RGB Colour monitor (at least 14").
4. Compatible image capturing device with adequate detachable and storage memory devices (CD Writer).
5. Field of View: 120 degrees or more.
6. Depth of field: 3 mm to 100 mm or better.
7. Direction of View: Forward viewing.
8. Distal end dia: At least 6 mm.
9. Insertion tube dia: At least 6 mm.
10. Working Length: 580 mm to 600 mm.
11. Min. Visible distance: 3 mm from distal end.
12. Instrumental Channel dia: more than 3 mm.
13. Bending range: Up 180 deg and Down 130 deg.

4 System Configuration Accessories, spares and consumables
4.1 Standard set should include:
• Biopsy forceps (Fenestrated and Alligator type) - qty 1 each
• Grasping Forceps (Shark Tooth type) - qty 1.
• Cytology Brush Set (qty 10-12 brushes) with Reusable Cannula sheath - qty 1.
• Coagulation Electrode with cord - qty 1 no.
• Cleaning and maintenance kit.
4.2 Separate Instrument channel for therapeutics. It should be compatible with the above-mentioned video processor unit, Xenon light source, RGB colour monitor and image capturing device.
Standard set should include:
• Biopsy forceps (Ellipsoid) - qty 1 each.
• Cytology Brush set (qty 6 pieces, disposable type).
• Cleaning and maintenance kit.

5 Environmental factors
5.1 The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%
5.2 The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%

6 Power Supply
None

7 Standards, Safety and Training
7.1 Certified to meet the current leakage requirement of IEC 60601-2-18 or equivalent standard for Medical Equipment particular requirement for safety of endoscopy equipments.
7.2 Should be FDA/CE or BIS approved product

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 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.

Nebulizer

1. **Description**

Nebulizer is a device used to administer medication to people in forms of a liquid mist to the airways. It is commonly used in treating cystic fibrosis, asthma, and other respiratory diseases.

2. **Operational Requirements**

Heavy duty compact Nebulizer is required.

3. **Technical Specifications**

3.1 Technical Specifications Nebuliser

1. Compact, light weight, low noise.
2. Durable long life compressor. Suitable for heavy duty/ institutional (hospital) use, should be able to run uninterruptedly for one hour, Max Press=2.0-2.5 bars.
3. Should produce particle of size 1-5 micron.
4. Aluminium cabinet painted with epoxy powder.
5. Piston-type electric aspirator that offers high performance and great durability.
6. Protective thermal cut out relay.
7. Air delivery rate app. 15 L/min.
8. 24 hours continuous work for hospital use.

4. **System Configuration Accessories, spares and consumables**

None.

5. **Environmental Factors**

Shall meet IEC-60601-1-2; 2001 9Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC;EMC-directive.

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

The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%.

6. **Power Supply**

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

7. **Standards, Safety and Training**

Should be FDA, CE, UL or BIS approved product.
Training as required.

8. **Documentation**

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

List of important spare parts and accessories with their part number and costing.
Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.

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

Certificate of calibration and inspection.

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

Emergency Crash Cart (SS)

Frame	:	Welded tubular construction two stainless steel tubes with 6 coloured removable bins & 2 polystrin lockable storage unit of 3 drawers each. Top drawers to have containers of different sizes. Should have cushioned frame to keep oxygen cylinder.
Top	:	Stainless steel of designation 04Cr18 Ni 10 or 07 Cr 18 Ni 9 of IS-6911-1972 top of 21G sheet.
Castors	:	Four swiveling castors as per IS-4043-1979 two with brakes.
Dimension	:	Stainless sheet of designated 04Cr18 Ni 10 or 07 Cr 18 Ni 9 of IS-6911-1972 top of 21G sheet frame of SS 1" X 18g tubes and ¾" x 18G tubes. Two polystyrene lockage storage with three drawers each. SS 12mm rod for IV cardiac message board of 12mm thick ply duly laminated.
Material	:	Stainless sheet of designated 04Cr18 Ni 10 or 07 Cr 18 Ni 9 of IS-6911-1972 top of 21G sheet frame of SS 1" X 18g tubes and ¾" x 18G tubes. Two polystyrene lockage storage with three drawers each. SS 12mm rod for IV cardiac message board of 12mm thick ply duly laminated.
Test	:	As per IS-4033-1968.
Finish	:	Good quality durable rust free as per IS-4033-1968.
Marking	:	According to IS-4033-1968.

RADIOLOGY

500mA X-Ray Machine with I.I.T.V.

1. GENERATOR:

Two pulse.

- Radiographic Parameters
  Maximum mA Output: 500mA
  Maximum kV Output: 125kV

- Fluoroscopic Parameters
  Maximum mA Output: 3mA
  Maximum kV Output: 90kV

- Exposure Time
  From 5 Milisecond to 5 Seconds with digital mAs integrator.

  The generator should be provided with Rapid anode Braking Device (to increase tube life). Automatic computation & display mAs value kV digitally to be provided.

2. X-RAY TUBE:

The unit should be complete with : 2 Nos. of 20/40kW X-ray Tube (BEL or equivalent) with high speed anode rotation of higher rpm each with a pair of H.T. Cable for under couch and over coach radiography.

3. TABLE

Motorized table vertical to trendelenberg position with automatic stop. Table accessories viz. foot rest, compression band, hand grips, foot step, skull cone, shoulder rest, radiation lead rubber flaps.

Bucky with adjustable cassette tray with a grid ratio of 10:1 and 100 lines per inch. Motorized Under Couch Collimator and Manual Over Couch collimator.

The Spot Film Device should include the following:

- 4 in 1 on 8'X10"Film
- 2 in 1 on 10"X12"Film
- 1 in 1 on 14"X14" Film

along with a suitable grid

4. COLUMN STAND:

Floor to Ceiling with Counter Balancing System.

5. I.I.T.V.

The entire system should consist of the following:

- Image Intensifier (II) capable of being coupled with the existing 500mA X-Ray machine and fluoroscopic tables.
- High resolution CCD camera to capture the image from the output phosphor of the II.
- Trolley mounted 17" Monitor (44").

Minimum specifications of the Image Intensifier:

- Nominal entrance field diameter of 23 cm with dual field selection capability.
- Output window size 20-25 mm.
- Vertical & Horizontal image orientation reversal switches mounted on II.
- The assembly should have 'All metal' construction and provide magnetic and lead shielding.

Minimum specifications of the CCD Camera.

- Should be of PAL Systems with minimum 750 x 580 pixels.
- Video Standard 50 Hz 625 lines interlaced.
- Video gain should have automatic gain control.
- Circular blanking facility.
- Video output -1-Vpp composite video.
- Last image hold facility must be present.

Minimum specification of the monitor:

- Minimum 43 cm 17" diagonal with circular mask.
- Local controls for image contrast and brightness adjustment.
- Should be cart/trolley mounted and moveable anywhere in the fluoroscopy room.

The Image Intensifier should be fully counter balanced consisting of ceiling counterpoise system with rails.

5. ACCESSORIES

- Voltage stabilizer servo controlled type of 50KVA capacity.
- Lead Aprons – 4 nos.

The machine offered should have valid AERB Type Approval.

Automatic Film Processor (Table Top)

Table top Automatic Film Processor for processing of all standard medical x-ray and imaging films. It should have the following features for processing:

-Film size from 10cm x 10cm to 35cm x 43 cm.
-The processing time should be variable from 1.5 to 3.0 minutes, preferably in step of 5-10 sec.
-It should have a developing tank of minimum 5 ltrs. Capacity for longer immersion of films for complete development.
-The main drive should stop automatically during idle time to prevent wear & tear.
-It should have water saving mode, anti crystallization and anti-oxidation programme.
-There should be automatic fresh water inflow during the processing.
-There should be sufficient sensors for film detection and level sensor for overflow protection.
-Multiple programme memory shall be preferred for different applications.
-It should have digital display of temp. and timing for developer bath, process time and error messages, film counter etc.
-Microprocessor controlled switches and thermostatic control for maintenance of temp. of chemicals between 28 deg. C and 36 deg. C and Dryer temp.
-Processing time, temp., and replenishment rates should be adjustable from the control panel itself.
-The container assembly should be monoshell & made of material which is non-corrosive and of latest technology.
-The replenishment containers should have capacity of 25 ltrs. And the replenishment should be automatic. The unit should be quoted with appropriate voltage stabilizer and availability of spares and service facilities.
-Any masonary work & plumbing required for making required through the wall installation (i.e. making opening in the wall) shall be done by the firm without any extra cost.
-Online water filters for the equipment.
-CVT of appropriate rating required for the equipment to be supplied.

Whole Body Ultrasound Machine

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

1. The unit should be compact, lightweight and portable. Weight should not exceed 10kg excluding cart and accessories.
2. It should be suitable for abdominal, small parts and vascular applications in adults and pediatric patients.
3. It should be compatible with a Laparoscopy Probe.
4. Multiple preloaded as well as user configurable application presets should be available.
5. It should have 128 or more digital channels for image formation and acquisition.
6. Transducers: Three (1) Convex 5.2 MHz for abdominal imaging, (2) Linear 13-6 MHz for intra-op imaging, (3) Endocavitory 8-5 MHz for transrectal ultrasonography and end firing biopsy, one each.
7. All transducers should be lightweight digital phased array broadband type transducers with at least 128 elements.
8. Detachable needle guide should be available with convex and endocavitory probes.
9. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Power (energy) Doppler and triplex Doppler should be available.
10. Advanced features such as tissue harmonic imaging with contrast media and compound beam forming technology should be available.
11. Controls for 2D mode: Total gain, depth, TCG, dynamic range, acoustic power output, number for position of focus.
12. Controls for Colour Doppler: PRF, colour gain, position and size of ROI, steering of ROI, colour maps and colour invert.
13. Controls for pulsed Doppler: variable sample volume size from 1 to 5mm or more, steer, PRF, baseline, gain angle correction, spectral invert, duplex/triplex on/off.
14. Measurements for 2D mode: Multiple distances, area and volume.
15. Measurements for Doppler modes: Stenosis quantification in percentage, diameter, PSV, EDV, mean, PI, RI, floor volume, acceleration time and index. Automatic and manual measurements and display of pulsed Doppler calculations should be possible.
16. Cineloop memory of minimum 10 seconds on all modes.
17. Flat LCD/TFT monitor of at last 10 inches.
18. Alphanumeric soft keys keyboard with easy access scans controls and trackball.
19. Onboard storage of atleast 1000 images. Storage in JPEG and AVI format should be possible.
20. Sorting of data base with patient name and date should be possible.
21. USB port connectivity to printer or computer.
22. Facility for storage on CDR should be available.
23. Unit should function with 200-240 V, 50 Hz AC, 5 amp power outlet. Power requirement to be specified.
24. In built battery back up for at least three hours use should be available.
25. The unit should be compatible with and should have facilities for interfacing with the hospital LAN.
26. Essential accessories: Thermal colour printer, UPS, mobile cart with transducer holder, jelly bottle holder and space for printer.
27. Paper and cartridges for 1000 image printouts should be provided.
28. The unit offered must be sturdy and should be able to withstand accidental hits and falls during transportation.

Portable X-Ray Machine

150 mA high frequency unit for frequent transport and heavy use in-
1. Casualty, operation theatre, nursery, ICU, recovery, labour room, wards, plaster room, orthopaedics procedures and as standalone unit to substitute main x-ray machine.
2. In thick body parts such as chest, abdomen, spin lateral views, hop lateral in restless patients, infants and children.
3. In a 300 bed multi specialty hospital with approximately 150-200 x-rays on main x-ray machine and 15-20 portable x-ray per day.
4. Every feature should be supported by product literature and would have to be demonstrated to technical specification examination committee in various hospitals settings with standard test objects & patients with standard KUP and ampere meters etc.
5. Compatible/ Upgradable with minor modifications for digital radiography in future.
Description for supply, generator, tube, console, collimeter stand and miscellaneous items as follows:

Supply
Should work on hospital electricity supply from main 220±10% volts as well as generator supply with no external transformer with 16 amp single phase plug with some buffering device such as on line capacitor etc. to smoothen fluctuations/spike etc.

Generator
1. Fully microprocessor controlled
2. High frequency
3. Allowing a minimum tube current of 150 mA
4. With KVP ratings of 40-125 KVP in steps of 1KV.
5. And minimum exposure time of 5 mille seconds to 5 secs.
6. Should be capable of occational immediate double (repeat) exposure without large time gap.

Exposure table	KV	mA	Seconds	mAS
Thick restless patient, chest	55	150	0.1sec	15
Thick restless abdomen a) lying b) erect bucky	90	50	1.0	150
Thick spine lateral	125	100	1.5	150
New Born			0.005	
Occasion repeat exposure	90	150	1+1sec	300mAs

X-Ray Tube
1. Rotating anode double focus tube with at least one focal spot 0.8mm or less for fine radiography with 2800 rpm with anode breaking device and auto protection of tube from over heat, electrical or electronic disturbances and rating & cooling compatible with exposure table requirements and bucky radiography, anatomical programming and automatic exposure control.
2. Tube head should be capable of rotating± 180 degree
3. Tube rating and cooling capacity should be mentioned as maximum continuous thermal dissipation (e.g.>300W)

Console
1. Soft touch control for easy cleaning and disinfection by spirit or other commonly available material.
2. Digital display of mAs, KVP, time etc.
3. 2 steps (standby ready and exposure) switch on consol as well as remote operations (by 5meter), preferably wire less.
4. With some self diagnosis such as tube overheating, improper voltage, exposure fault etc.
5. Should have anatomical programming.
6. Compatible with bucky radiography and automatic exposure control.

7. Option with price should be quoted for (a) reduction of dose by half
(b) dose area product measuring chamber,(c) automatic exposure control.

Collimeter:
1. Fully radiation proof
2. Adjustable timer for auto cut off (minimum 30 sec)
3. With field 0-0 to 17"X17" at one meter
4. With retractable measuring tube
5. Angulation indicator.

Tube Arm & Main Frame:
1. Stable, spring balanced frame with 4.5 feet horizontal distance between column and tube, safe(accident proof) and effective, durable use by light weighted radiographer (e.g. lady) in O.T, Nursery, Labor Room, and Orthopedic ward etc.
2. Tube arm rotation of +/- 90 degree for exposing adjacent beds in wards, orthopedic procedures.
3. Tube head protection in lift or bumping against furniture or walls
4. Tube head rotation of +/-180 degree for cross table lateral and other oblique and difficult views.
5. With standard mechanical and safety features for carriage in life, uneven surface passages & doors such as resting and exposure position lock handle release breaks or single paddle breaking in convenient position, large rubber sheathed wheels, lead or equivalent radiation proof lined cassette case for largest size and space for lead apron and thyroid shield etc.

Required Accessories:
1. Two large sized (0.5 mm) lead equivalent aprons with two thyroid shields and one gonadal shield and other radiation protection devices.
2. Stationery bucky cassette 17"X17" frame for bucky thick part radiography at with stand.
3. Scale for assessment of magnification.

Upgradability & Compatibility
With digital radiography and hospital information services.

Miscellaneous
Warranty
1. Spare parts
2. Should have CE and AERB & BIS certification
3. Local Service center
4. Proven track record in Govt. sector
5. Users list & performance certificate
6. Operation manual, exposure charts, books and suitable support literature. List to be provided at the time of installation.

Radiology- Dark Room Accessories

-Safe Lamp (1no.)

-X-ray cabinet Dryer- Heavy duty x-ray film drying machine for 25min. films with stainless steel drip tray. Body should be made of 18guage sheet of stainless steel.
-It should have two heating & two blowing units each of standard make.
-It should have sufficient dimensions to accommodate 25 films with alternate spacing for film hangers so that films do not get stuck together.

-Timer(1no.)
-Three Tanks Film Developer with master tank temp. control. (1no.)
-Film hangers-(25no.)
-X-Ray View Box (Double)- (1no.) : Two films. Good quality imported Perspex sheet, uniform and bright illumination. Electrical Fluorescent 2/3 tubes fittings with uniform illumination. Shock proof body. Heavy duty X-Ray clips (2/3). On / Off switch with indicator light. Confirm to standard electrical safety norms.

Radiology Accessories:

X-Ray Cassettes with intensifying screening

- Light weight
- Front Side – 1mm Aluminium equivalent
- Backside – 0.1mm lead equivalent. Smooth felt pad fitted to the backside for attaching the intensifying screen.
- Locking system – Push-Lock type

Intensifying Screens:

- High Speed
- Calcium tungstate/ Rare Earth Phosphor (Compatible with double emulsion regular Medical (film)
- Blue light emitting (for Ca Tungstate screens)
- Polyester base
- Universal or Front – Back type
- Should be easy to clean.

Sizes: **Qty:6 each**
14 x 17
14 x 14
15 x 12
12 x 12
10 x 8
12 x 10

X-Ray Stationary Grid (Grid Ratio 6:1, Parallel)
Size 12” x 15”

Metal Cassette Passbox (4 Doors)
Lead Lines Box for 4 Packets
Lead lines box for 6 packets.
Lead lines box for 12 packets

Feather Weight Apparel (Lead Aprons):
BARC approved, 0.5mm Lead Equivalent
Medium; (100 x60 cms) 4 Nos.
Regular; (110 x 60cms) 4 Nos.

THYROID SHIELD - 2 Nos.
Protective Gloves - 3 Nos.
Lead Goggles: 1mm Pb front and side - 2 Nos.
Lead Apron Hanger, capable of keeping multiple aprons (At least 6)

X-ray View Box: (Regular long fluorescent tube type, electronic choke, bright screen, aluminum body). Size: 2 x 1

X-ray View Box: (Regular long fluorescent tube type , electronic choke, bright screen, aluminum body). Size : 5 X 1 (Table mounted)

Lead marker - 4 set
For X-ray Films

LABORATORY – A CLINICAL PATHOLOGY

Binocular Microscope

1. Optical system should be infinity corrected.
2. System complete with illumination system is required.
3. Body: Binocular, sturdy, stable base body with focus adjustment controls.
4. Eye Piece: Paired, high quality, (the image of the object as seen through the binocular eyepiece should be well defined centrally in at least 2/3 field of view), achromatic, wide field, 10x with inbuilt pointer. The eyepiece should be aplanatic and have a minimum field number of 18. Diopter adjustment must be present on one/both eye pieces or on the eye piece tube.
5. Objective: Three objectives 10x, 40x, 100x, 10x and 40x objectives should have numerical apertures of 0.25 and 0.65 respectively and should be of spring loaded type or otherwise, 100x should have numerical apentrue of 1.25 and should be of oil immersion and spring loaded type. Suitable prominent marking should be provided on 100x for easy identification. Unbreakable containers to be provided for storing the objectives. All objective should be wide field, achromatic and parafocal. Making for the Objectives: Each objective should be engraved with the following information's:-

    - Name of the manufacturer
    - Magnification and numerical aperture, for example, 10x/0.25
    - 100x objective should be engraved with the word 'Oil' in changing from one objective to another or reintroducing the same objective by rotation of the nosepiece, the object at the center of the filed should not appear displaced by more than 0.02 mm in the object plane in any direction.

6. Nose Piece: Revolving nose piece to accommodate a minimum of three objectives with click stops. It should be provided with ribbed grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment. Extra ports if any should be fitted with dust proof metallic/ebonite caps.
7. Stage Uniformly horizontal, mechanical stage having dimensions of length 140 mm (+/- 20mm) with fine vermier graducations (minimum reading accuracy of 0.1 mm) the stage should be provided with spring loaded slide holder for exact positioning of specimen/ slide. It should be designed with convenient sub-stage vertical coaxial adjustment for slide manipulation. The stage should have ball bearing arrangement to allow smooth travel in transverse directions i.e. 80mm (+/-5mm) and front to back direction, 50mm (+/-5mm).
8. Sub-stage condenser: Abbe-type condenser, numerical aperture (N.A.) 1.25 focusable with rack and pinion arrangement incorporating an aspherical lens and an iris-diaphragm. The condenser should have a filter holder and removable/swing in/ out blue filter (suitable for bright field Microscopy).

9. Sub-stage illuminator:

    1. The system should have a build-in variable light source (illuminator). The light source should have a 20 W, 6 V Halogen lamp. The circuitry for the light source should include a constant voltage supply. The system should be provided with a step down transformer and an on-off switch and intensity control. The lamp should be provided with a lamp socket which has the facility for easy replacement of the bulb.
    2. Power Supply
        a. Voltage 220V, 50HzAC
        b. Should have one on-off power switch, 3 core power cord with a 3 point male plug.

3. The system should have an inbuilt protective / safety device to withstand fluctuations of voltage from 140 V to 280 V.
4. A plano-concave mirror in fork mounting should be supplied which would be attachable to the base for field use. (Where power is not available).
5. The fuse for the halogen lamp should be easily accessible to the operator.
6. The Illuminator should have a build-in field diaphragm for Kohler illumination.

10. Eye piece tubes: Binocular eye piece tubes, inclined at 45 degrees, rotateable through an angle of 360 degrees, having inter-pupillary distance range of 54-74mm or wider, covering the above mentioned range.
11. Focusing Knob: Co-axial coarse and fine focusing knobs capable of smooth fine focusing movement over the full range of coarse travel. The fine focusing movement should have sensitivity of two microns or less (finer) over the entire coarse focusing stop safety arrangement should be provided.
12. General 1.All optical parts including objectives, eye pieces and prisms should have anti-reflective coating which also gives anti-fungal property.
    2. All metallic parts should be corrosion-proof, acid-proof and stain-proof
    3. Working manual should be provided with each microscope
    4. A bottle of at least 25 ml immersion oil, a roll of lens tissue paper and lens cleaning solution (100 ml) should be provided with each microscope.
    5. One no. of anti static cleaning brush should be provided with each Microscope for cleaning purpose.
13. Microscope should be supplied with spare parts as under :
    - 100x oil immersion objective (as per the specifications given under B3) – one
    - Halogen bulb, (6volts, 20w) – 6 Nos.
    - Fuses – 6 Nos.
14. All consumables including microscope cover required for installation and standardization of system to be given free of cost.
15. The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%
16. The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%

17. Power input to be 220-240VAC, 50Hz fitted with Indian plug.
18. Suitable voltage corrector/stabilizer
19. Should be FDA or CE or ISI approved product
20. User/Technical Maintenance manuals to be supplied.
21. Certificate of calibration and inspection from factory.
22. List of important spare parts and accessories with their part number and costing.

Hemoglobinometer (Sahli's)

Prismatic square tube type complete set in a box containing 20 disposable pippets, prismatic square tube and accessories for immediate testing and result and conforming to international accepted standards.

Haematocytometer

Latest model of Haematocytometer. Complete set confirming to internationally accepted tolerances/standards & trade practices.

ESR Tubes, Glassware & Stand/Rack

Type Wintrobe. Permanent graduated marks. 6-8 tubes, stable, aluminium, wintrobe tubes should fit snugly into the holes. It should not rock when kept on smooth surface.

Heamatology Analyzer (Automatic)

·WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, LYM%, MXD%, GRAN%, LYM#, MXD#, GRAN#, RDW CV, RDW SD, PDW, MPV, PCT and Histogram for RBC, WBC and PLT
· It should be based on Electrical resistance for counting
· SFT method for Hemoglobin
· Sample volume should be 20ul for prediluted mode and 13ul for Whole blood.
· Throughput: Up to 60 samples per hour.
· Large colour display: resolution 800X600
· It should have the facility for data storage min 30,000 samples with histogram.
· It should be close tube sampling facility.
· Close tube sampling should have the facility for 4 position (QC 1.5 ml, 3 or 5 ml)
· 2 RS 232 port is required.
· Comprehensive QC program: L-J, X, XR and XB analysis.
· QC should be up to 9 QC lot- 30 runs lot
· Unique calibration program with fresh blood.
· Membrane key facility should be there.
· It should have the facility for in built printer with keyboard interface.

Frozen Section System/Cryostat

Specifications:

Open top, heated sliding window, corrosion proof, stainless steel cryo chamber with good Fluorescent illumination. Cooling via two separate refrigeration system.

Temp. of cryo chamber should be at least -30^{O}c Facility for integrated peltier quick specimen freezing up to -45° C. Separate cooling should be adjustable up to -50 ° C.

Temperature of the cryo chamber should be maintained within Q2^{O}C of set temperature and maintained by hermetically sealed compressor system.

Automatic programmable defrosting and manual defrosting should also be possible.

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

Microtome should be encapsulated to support efficient spray disinfection.

Microprocessor / Microcontroller based touch key control panel with LCD display for all functions including microtome

Space for other specimen rack minimum 6 blocks . Removable section waste tray.

Section thickness setting must be outside the cryo chamber.

Disposable blade holder for low and high profile blades and Knife holder which can hold minimum 16 cm C type knife.

Specimen holder can hold specimen size up to 70 x 50 mm.Facility for both 360° rotation as well as movement in X Y axis. Section thickness cutting 1-60 micro meter.

Specimen retraction around 50 micron.

Trimming in steps from 5 to 150 Microns

Motorised coarse speed 500 micro meter /sec & 1000 micro meter / sec

Control for number of sections.

Cryo cabinet should be of appropriate size.

Voltage - 220 -240 V, 50 Hz

Essential Accessories should be quoted separately:

1. Microtome knife 160 mm. – 4 Nos.
2. Voltage stabilizer, block holder.
3. UPS for the above machine
4. Two bottle of low temperature oil.
5. High and Low profile blades – 5 packets each.
6. Specimen holder of appropriate size – 20 Nos.
7. Freezing compound at least 10 bottles
8. Glass ant- role device for knives and blades

B. BIOCHEMISTRY

Colorimeter Computerized

Microprocessor controlled instrument which automatically calibrates itself but has facility for manual calibration for specialist applications. Read out is via 20mm LED display.

Wavelength Range	:	340-800nm (extended)
Selection	:	8-gelatine filters on a switched wheel. Peak wavelength of 430, 470, 490, 520, 540, 580, 600 & 710nm. Optional drop-in interference filters extend range 340 to 800nm.
Light source	:	Tungsten filament
Size	:	300 x 353 x 120 mm

Balance Electronic 10 mg accuracy
Should have transparent case
LCD Display
Readability 10mg
Should have internal calibration (automatic)
Should have taring facility
Levelling bubble
Minimum warm up time

Electrolyte Analyzer

1 Description of Function	
1.1	For analysis of Electrolytes in serum, plasma, urine, cerebrospinal fluid (CSF), hemolysate and whole blood.
2 Operational Requirements	
2.1	System should be able to measure Na, K, Ca and should be upgradable to measure Cl (chloride) and Li (lithium) Electrodes.
3 Technical Specifications	
3.1	System should be able to measure following parameters: Na, K, Ca and should be upgradable to measure Cl (chloride) and Li (lithium) Electrodes.
3.2	The machine should have reagent in single reagent pack for all the measurable parameters and the pack should be Bio Hazard free.
3.3	It can be used for blood/plasma/serum, urine, body fluids, dialysate, aqueous & QC Fluids
3.4	Resolution should at least in 0.1 mmol/Litre
3.5	Sample can be fed by capillary syringe or sample tube directly
3.6	Sample volume should be less than 100 micro-liters.
3.7	Analysis time should be less than 60 seconds
3.8	Calibration should be fully automatic 1 and 2 point calibration. 1 point with every sample and 2 point time bound
3.9	Quality control memory storage, of at least 3 levels
3.10	Facility of flagging of abnormal results and user programmable ranges.
3.11	Stand by mode: user controlled and automatically controlled
3.12	Memory for last 20 messages.
3.13	Built in printer for printing the data.
3.14	RS.232.C (standard serial port) should be available
4 System Configuration Accessories, spares and consumables	
4.1	ISE Analyser-01
4.2	Na, K, Ca Electrodes- 01 ea
4.3	Li and Cl Electrodes-01 ea(OPTION) Quote price separately for these.
5 Environmental factors	
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
6 Power Supply	
6.1	Power input to be 220-240VAC, 50Hz
6.2	Suitable Servo controlled Stabilizer/CVT
6.3	Resettable overcurrent breaker shall be fitted for protection
6.4	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7 Standards, Safety and Training	
7.1	Certified for meeting IEC 60601-1-4 Medical electrical equipment - Part 1-4: General requirements for safety - Collateral Standard: Programmable electrical medical systems
7.2	Attach original manufacturer's product catalogue and specification sheet. Photocopy/ computer print will not be accepted. All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well as on technical bid corresponding to technical specifications.
7.3	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.4	Should be FDA or CE approved product

8 Documentation	
8.1	Certificate of calibration and inspection.
8.2	User manual in English
8.3	Service manual in English
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.
8.5	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

Biochemistry Auto Analyzer (16 channel) with regents

· Multi parameter and discrete analyzer including electrolyte with computer and printer.
· Capable of analyzing all routine bio-chemistry analysis including electrolytes (ISE –Module)
· Throughput up to 320 test/hour, on 24 hours basis.
· Capability up to 40 samples/run and up to 20 different at any one time
· On board refrigeration for reagents.
· Integrated computer system for data management and storage data.
· Sample volume can be adapted to paediatric samples (micro analysis)
· Calibration and maintenance requirement is minimum.
· To be supplied with 90 Litre/hour multi-stage with 3 different grades of water (3 separate filter) and deionised.
· Tests to be analyzed by pre-analyzer, LFT, liquids, total protein, calcium, posphorus, magnesium, amylase,, sodium, potassium, bicarbonate, chloride urea, creatine and glucose etc.
· Battery backup minimum for 30 mins.
· With complete accessories as cuvette, startup kit, consumables, cup 1000 etc.

Deep Freezer (-70 Deg.C)

Ø Description of function
o Deep freezers are required to preserve blood and blood products, vaccinations etc at specified temperature.

Ø Operational Requirements
o Internal minimum capacity 350 to 400 L net at least double door with adjustable at least 4 to 6 shelves
o Range up to -65deg.C to -80deg.C (adjustable)
o Vertical Cabinet (upright mode)

Ø Technical Specifications
o Construction: Solid rust free cabinet to prevent corrosion and lockable castor wheels. Inner surface should be stainless steel.
o Control System: Micro-processor based temperature controller with digital temperature display LED/LCD with seven days graphic temperature recorder with rechargeable battery backup including charger maintenance free and insensitive to vibration. Details of battery and battery charger shall be indicated.
o Refrigeration System: Heavy Duty refrigeration system, maintenance free, below -85deg.C (± 1deg.C) with hermetically sealed dual compressor, noise free and vibration free, air cooled with security lock to prevent unintentional switch off shall be supplied. It should have maximum cooling time of 5 hours at maximum ambient temperature of 33deg.C.
o Alarm: It should also have audio visual Electronic Alarm System independent of power supply.
o Insulation: High density polyurethane or equivalent Gaskets – Double seal silicon.
o Door heating system for easy opening of door.
o Availability of spares / disposable for at least 10 years.
o All consumables required for installation and standardization of system to be given free of cost.

Ø Environment factors
o The unit shall be capable of operating continuously in ambient temperature of 10 – 400C and relative humidity of 15-90%.
o The unit shall be capable of being stored continuously in ambient temperature of 0 – 500C and relative humidity of 15-90%.

Ø Power Supply
o Power input to be 220-240V AC, 50Hz, / 440V 3 Phase as appropriate fitted with Indian plug.
o Resettable over current breaker shall be fitted for protection.
o Suitable voltage Stabilizer / CVT should be provided.
o Power backup / UPS.

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

Water Bath

1. **Description of Function**

1.1 Water bath maintains a constant preset temperature for treating samples.

2. **Operational Requirements**

General purpose water bath is required.

3. **Technical Specifications**

3.1 Small (app dimensions 40-45x35-40x20-25 cms) light, stainless steel body
l
3.2 Microprocessor controlled programmeable, digital display for temperature etc.

3.3 Temp. Range 37^0 C to 56^0 C + 50^0 C

3.4 Should have a stirrer for circulation

3.5 Bath Capacity: 8-10 litres.

4. **System Configuration Accessories, spares and cosumables**

4.1 System as specified..

5. **Environmental Factors**

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

6. **Power Supply**

6.1 Power unit to be 220 -2 40 VAC, 50Hz fitted with Indian plug

6.2 Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications, (Input 160-260 V and output 220-240 V and 50 Hz).

7. **Standards, Safety and Training**

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

7.2 Should be FDA, CE, UL or BIS approved product.

8. **Docuumentation**

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.

Centrifuge

1. **Description of Function**

    1.1 The Refrigerated Centrifuge (RC) is a mechanical device used to separate biological substances of differing densities.

2. **Operational Requirements**

    2.1 Programmable microprocessor control system with self-diagnostic feature.

3. **Technical Specifications**

    3.1 Maximum speed : Approx. 4,000 rpm Swing –out / 14,000 rpm Angle.

    3.2 Maximum RCF: 3,000 x g Swing-out/ 18000xg Angle

    3.3 Maximum capacity: 4 x 200 ml Swing-out / 24 x 1.5/2 ml Angle

    3.4 Temperature range: -10^0C/ + 40^0C

    3.5 Digital displays for Programme No, temperature, Speed, RCF, & Time

    3.6 Al least 10 program memories

    3.7 Timer 1-99 minutes and hold position

    3.8 At least 5 acceleration / 5 braking rates.

    3.9 Maintenance free induction motor.

    3.10 Totally CFC free refrigerant fluid and insulation.

    3.11 Angle Rotor: 24 x 1.5 /2.0ml, with adaptor for 200/500/800microlt

    3.12 Angle Rotor: 30x1.5/2.0ml, with adaptors for different sizes.

    3.13 Swing-out Rotor: 4 x 200ml with sealing cap and adaptors for different sizes.

4. **System Configuration Accessories, Spares and Consumables**

    4.1 As specified.

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 operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%.

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

6. **Power Supply**

6.1 Power input:220-240V/ 50Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.

7. **Standards, Safety and Training**

7.1 Should incorporate Safety Features for Imbalance detection, lid interlock, over temperature , rotor over speed etc.

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

7.3 Should be FDA or CE approved product.

7.4 Should comply with IEC/TR 61010-3-020: Safety requirements for electrical equipment for measurement, control, and laboratory use –Part 3-020: Conformity verification report for IEC61010-2-020:1992 Particular requirements for laboratory centrifuges".

8. **Documentation**

8.1 User manual in English.

8.2 Service manual in English.

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

8.4 Certificate of calibration and inspection.

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

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

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

Incubator

UNSPSC Code: 41104402
ECRI Code: 12-112

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Incubator is a closed chamber which heats/chill a sample at a preset temperature for long term for applications like culture growth etc.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Microprocessor/Microcontroller/Microcomputer controlled system.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Capacity: 120 L		
3.2	Interior chamber: Stainless steel for easy cleaning and decontamination		
3.3	Timer: 1 min. to 100 hours and hold position		
3.4	Minimum turbulence and no cross contamination		
3.5	Adjustable safety thermostat for temp setting at 1 deg C increment		
3.6	Temp Accuracy +/-1% of required temp, with inbuilt Temp.Sensor		
3.7	Internal glass door for the observation		
3.8	With minimum two adjustable shelfs		
3.9	Audiovisual Alarm to Indicate when temperature deviates more than 1°C from setpoint, and when program or time has finished. Alarm may be muted.		
3.10	Peltier heating with continuous air circulation and Heating by natural/forced convection for homogenous temperature distribution		
3.11	Temperature range: +5° C to 80°C		
3.12	There should be a Membrane Keypad with LCD/LED to set and display operating parameters, current status, running time and alarm conditions for time and temperature.		
3.13	Interior lighting facility, insulated door fitted with heavy hinges handle locking, mechanical door lock.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	As specified		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.3	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

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	Suitable Servo controlled Stabilizer/CVT		
6.3	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		
6.4	Resettable overcurrent breaker shall be fitted for protection		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450		
7.3	Should be FDA , CE,UL or BIS approved product		

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	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		
8.4	List of important spares and accessories with their part number and costing.		
8.5	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.6	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		

Hot Air Oven

1. **Description of function**

1.1 Hot Air Oven is required for heating a sample under controlled conditions.

2. **Operational Requirements**

2.1 Microprocessor based system with PID-temperature controller with integrated auto diagnostic system with fault indicator.
2.2 Thermostatically controlled system.

3. **Technical Specifications**

3.1 External: Stainless Steel Casing :wxhxd: 850 x 600 x700 mm (All dimensions will have a tolerance of +/-5mm). Insulated stainless steel door with locking and rear zinc-plated steel.
3.2 Interior – w x h xd: 40mm x 45mm x 30 mm, 55 litres app (all dimensions will have a tolerance of 5mm) easy-to-clean interior, made of stainless steel, with supports on the three sides for three adjustable perforated stainless steel shelves.
3.3 Forced air circulation by quiet air turbine/Fan to ensure uniform temperature.
3.4 Fitted with load indicator and safety thermostat take over indicator lamp. LCD/LED Indicator.
3.5 Temperature Variation +/-1 deg C.
3.6 Temperature Range – ambient to 250 deg C.
3.7 Output available for data acquisition.

4. **System Configuration Accessories, Spares and Consumables**

4.1 System as specified.

5. **Environmental factors**

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

6. **Power Supply**

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

6.2 Voltage corrector /stabilizer of appropriate ratings meeting ISI Specifications. (Input 160-260 V and output 220-240 V and 50 Hz,=.)

7. **Standards, Safety and Training**

7.1 System should cofirm to IS:6365-1971 (Reaffirmed 1995) with latest amendments in ISI specifications for laboratory Electric Ovens. Alternatively system should be FDA Approved or CE Certified.
7.2 Electrical safety conforms to standards for electrical safety IEC- 60601/ IS-13450.

8. **Documentation**

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

8.2 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.

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

8.4 Certificate of calibration and inspection.

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

BOD Incubator

· Stainless steel make, full length inner plexi-glass door.
· Castor wheel mounted tie easy movability.
· CFC free High efficiency refrigerator system mounted at bottom, proper air circulation for uniformity.
· Temperature Range: +5degC to 50deg.C, 0.1degC resolution
· Temperature Control: Digital Control,
· Micorprocessor based controller for mains, heating, and cooling with separated indicator lights.
· Accuracy of Temperature: + 0.5degC
· Power:230 volts, 50Hz AC, Mains single phase.
· Size: 700 x 900 x 650 mm approx. 15cu.ft.
· 3 shelfs, made of stainless steel
· Inner illumination with sleek fluorescent tubes.
· Voltage Stabilizer: 3 KVA
· Remarks
The apparatus should confirm to Indian Standard Institution Guidelines with latest amendments in Indian Standard Specification for Incubators or equivalent National or International Standards covering Markings, tests and Safety requirements Voltage regulators of appropriate rating to be included for each item to cope with 160-260 V.

Autoclave (Vertical Type)

• Description of Function: Steam Sterilizers or Autoclaves are required to sterilize objects under high temperature and pressured steam.

• Operational Requirements: Suitable for hospital dressings, linen, surgical instruments, glassware, culture media and laboratory ware etc.

• Technical Specifications:-

Ø Single door high pressure steam sterilizer with double/triple walled, steam jacket and separate boiler

Ø Material of construction:

a. Sterilizer chamber SS 316
b. Door SS 316
c. Jacket MS
d. Loading carriage SS 316
e. Transfer trolley: MS, painted
f. Door Gasket: Silicon or better
g. Insulation: fiber glass resin bonded wool or better
h. Insulation cover: SS sheets

Ø Chamber capacity 75 – 100 ltrs.
Ø Operating temperature 1210C - 1380C pressure 1.1 to 2.2 kg/ cm2 of steam pressure
Ø Sterilizer should be provided with steam generator
Ø Spring loaded safety valves and automatic vacuum breaker for jacket
Ø Removable plug screen for chamber drain
Ø SS baffle for even steam distribution in the chamber
Ø Safety valve protection against poor pressure.
Ø Safety lock for door :pressure lock safety device
Ø Low water off

• System Configuration Accessories, spares and consumables:

Ø System as specified-
Ø Should provide available spares and consumables for at least 10 years
Ø Should provide a sufficient quality of consumable along with the equipment

• Environmental factors: Shall meet IEC-60601-1-2 :200(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

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

• Standards and Safety:

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

• Documentation:

Ø User/Technical/Maintenance manuals to be supplied
Ø Certificate of calibration and inspection from factory.
Ø List of important spare parts and accessories with their part number and costing.
Ø 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
Ø Should submit a report of quality checks using biological indicator.

Bunsen Burners with LPG Pipeline

1 Description of Function	
1.1	A small laboratory burner consisting of a vertical metal tube connected to a gas source and producing a very hot flame from a mixture of gas and air let in through adjustable holes at the base
2 Operational Requirements	
2.1	Suitable for operation with LPG and piped Natural Gas, confirming to international / national specification
2.2	Designed with a flame stabilizer to provide a steady flame for general laboratory needs
3 Technical Specifications	
3.1	Should be based on sensor technology, the flame ignites in a non-touch mode. Unintentional ignitions should not happen; the reaction range of the infrared sensor should be clearly defined
3.2	Should operate in three modes: Foot switch: This ignites the instrument only when the foot switch is activated. Flame stays on for as long as the foot switch is pressed down. Continuous: The duration of burning – between 10 and 60 minutes – is regulated via a timer. Sensor: The sensor window registers your hand movement when it passes 6-8 cm in front of the window and then the flame is automatically ignited
4 System Configuration Accessories, spares and consumables	
4.1	Series-fitted with nozzles for LPG and piped Natural Gas
4.2	Compatible regulator and hoses should be supplied.
5 Environmental factors	
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%
6 Power Supply	
6.1	Rechargeable battery operated system. Charger to be provided if integrated charger is not there
7 Standards, Safety and Training	

8 Documentation

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 description of the hospital technician and company service engineer should be clearly spelt out.			

Distillation Plant

1 Description of Function	
1.1	Required for distilled water production for lab.
2 Operational Requirements	
2.1	Double distillation plant with stand not wall mounted and approx. 5 – 10 litres/ hour output.
2.2	Instant distilled water flow should be there
2.3	Easy to operate, durable, safe for routine use.
3 Technical Specifications	
3.1	Quartz distiller, Demountable boiler
3.2	Panel box and stand to accommodate regulator and electrical supply, clamps etc
3.3	Quality of distillate – pyrogen free, PH- 6.9- 7.0.High purity, low conductivity.
3.4	Distilled water should be heavy metal, salts, pyrogon and iron free.
3.5	Specific Conductivity at 25 deg C less than 0.4 x 10-6S/cm
3.6	Glass material (or chemical inert material)
3.7	Equipment should be thermal shock proof.
3.8	Gas vent should be there to remove volatile impurities leaving the condensate free from gaseous impurities
3.9	Automatic low water cut off.
3.10	Tubing should be made up of good quality rubber (heat resistant).
3.11	Wiring of the equipment should be enclosed in Case.
3.12	It should have deconcentrator a bleeder device on the evaporation that constantly removes a part of the boiling water from it so that the cumulative concentration of non volatile impurities in the water is prevented
4 System Configuration Accessories, spares and consumables	
4.1	System as specified-
4.2	All consumables required for installation and standardization of system to be given free of cost.
5 Environmental factors	
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
6 Power Supply	
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)
6.3	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.
7 Standards, Safety and Training	
7.1	Should be FDA , CE,UL or BIS approved product

8 Documentation			
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.		

Automatic Washer Pipette

Made of stainless steel.
Size-22”-24” H Diameter: 5”-6”
Removable pipette holder.
Mode heat wash.
To work on 220V, 50Hz.

Hot Plate

1. **Description of Function**
   1.1 Hot plate is required for recording reaction time mice to heat stimulus. The Cold Plate Test is useful in studying the traditional cold receptors.

2. **Operational Requirements**
   2.1 System required with complete accessories and PC connectivity facility.

3. **Technical Specifications**
   3.1 Heating Plate > 4mm thick of electrocytic copper sheet.
   3.2 Reaction time display in 0.1 second increment.
   3.3 Solid –state temperature regulation with LCD graphic display of temperature in 0.1 degree C (scale range from 2 deg C to60 deg C).
   3.4 Dedicated Data Acquisition Software Package.
   3.5 The Experimental data can be directly exported to the PC USB or serial ports.

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

5. **Environmental Factors**
   5.1 None.

6. **Power Supply**
   6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug.
   6.2 Suitable Automatic Voltage regulator/stabilizer meeting ISI specifications should be supplied.
   6.3 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.

7. **Standards and Safety**

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

Refrigerator (300 ltrs.)

1. **Description of Function**
   1.1 Laboratory Refrigerator is used to store samples, medicines, blood bags etc. under controlled temperature.

2. **Operational Requirements**
   2.1 system required with weekly chart recorder and digital displays.
   2.2 Capacity of storage: 300 litres or more.

3. **Technical Specifications**
   3.1 Temp range-should have adjustable temperature control range from +1 degree to +8 degree C, factory preset at 4 degree C.
   3.2 Refrigerator System

   a) The system should have density CFC – free urethane foam insulation to protect cabinet from ambient temperature fluctuation.
   b) The system should have positive, forced, air circulation to maintain temperature uniformity at all shelf levels, with quick recovery +/-1 deg.C.
   c) The system should have sensors for activating automatic defrost cycle to minimize the frost build up.
   d) The system should have automatic condensate removal with no requirement for separate drainage lines.

   3.3 Internal construction should be made up of high grade stainless steel (min 22 G) External construction Corrosion resistant sheet at least 1 mm thickness.
   3.4 Internal Temp Control

   a) System should have temperature control range from +1 degree C to +8 degree C.
   b) Temperature control resolution should be better than 0.1 degree C.
   c) Cooling down time of max of 150 min on half load.

   3.5 External ambient temp should perform in ambient temp up to +43 degree C.
   3.6 Door System should lockable double glass doors for better safety.
   3.7 Safety System:

   a) System should have large and clear Digital displays for the set/run parameters.
   b) The system should have weekly chart recorder to record temperature charges with battery back up.
   c) The system should have key operated set point for the added security.
   d) Battery Charger should be provided with details of battery No.: V:AH.

   3.8 Alarms:

   a) System should have audible/visual warnings for over- temperature under temperature and power failure with visual status reports on critical functions.
   b) System should have battery backup and connections for remote alarm contacts.
   3.9 Should have adjustments for uneven bases. The adjustments should be easy to use like rotating a screw at the legs in the base.

3.10 Scratch resistant internal lining of the cabinet (stainless steel or aluminium).
3.11 Should have 5-6 rolled out type drawers of stainless steel of 22 G.

4. **System Configuration Accessories, spares and consumables**

4.1 System as specified.
4.2 Quote pricing for the following essential spares; (01 each) Compressor; Evaporator; Evaporator fan motor; Condenser fan motror; Filter drier; Condensate heater; Service valve; Control unit; Transformer; Thermostat; Lamp; Contactor; Relay; Relay base; Door switch; door gasket

5. **Environmental Factors**

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

6. **Power Supply**

6.1 Power input to be 220-240 VAC, 50Hz fitted with Indian plug.
6.2 Voltage corrector/stabilizer of appropriate ratings meeting ISI specifications. (Input 160-260 V and output 220-240 V and 50 Hz).

7. **Standards, Safety and Training**

7.1 Should be FDA, CE, UL or BIS approved product.
7.2 Electrical safety conforms to standards for electrical safety IEC- 60601/ IS-13450.

8. **Documentation**

8.1 User / Technical/ Maintenance manuals to be supplied in English.
8.2 Certificate of calibration and inspection.

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

Deioniser

Electronic controlled programmable with LCD to view water conductivity,

Water temperature and time dispensed in minutes

Flow rate upto 60 litres/hr

Resin and salts for water softening

Cartridge to remove solids by 5 micron filter, activated carbon catridge, organic

Adsorption cartridge

Ultraviolet reactor

Booster pump

70-80 ltr. Water storage tank

Dispensing gun.

BLOOD BANK

Blood Bank Refrigerator

1. Description of Function

Blood Bank Refrigerator is used to store blood bags under controlled temperature.

2. Operational Requirements

System required with weekly chart recorder and digital displays.

3. Technical Specifications

Temp range-should have adjustable temperature control range from +1 degree to +8 deg.C, factory preset at 4 degree C.

Capacity should accommodate 350 or more unit's blood and storage internal volume should be 700 liters.

Refrigerator system-
a)The system should have high density CFC- free urethane foam insulation to protect cabinet from ambient temperature fluctuation.
b)The system should have positive, forced, air circulation to maintain temperature uniformity at all shelf levels, with quick recover +/-1 deg.C.
c)The system should have sensors for activating automatic defrost cycle to minimize the frost build up.
d)The system should have automatic condensate removal with no requirement for separate drainage lines.
e)Internal construction should be made up of high grade stainless steel (min 22 G) External construction Corrosion resistant sheet at least 1mm thickness.

Internal Temp Control
a)System should have temperature control range from +1 degree C to +8 degree C.
b)Temperature control resolution should be better than 0.1 degree C.
c)Cooling down time of max of 150 min on half load.
External ambient temp should perform in ambient temp up to +43 deg.C.
Should have connectivity to computer and data logger.
Door System should lockable double glass doors for better safety.

Safety System:
a)System should have large and clear Digital displays for the set/run parameters.
b)The system should have weekly chart recorder temperature changes
c)The system should have key operated set point for the added security.

Alarms.
a)System should have audible/visual warnings for over-temperature under temperature and power failure with visual status reports on critical functions.
b)System should have battery backup and connections for remote alarm contacts.
c)Should have connectivity to computer and data logger.

Should have adjustments for uneven bases. The adjustments should be easy to use like rotating a screw at the legs in the base.
Scratch resistant internal lining of the cabinet (stainless steel or aluminium).

4. System Configuration Accessories, spares and consumables

System as specified

Quote pricing for the following essential spares; (01 each) Compressor; Evaporator; Evaporator fan motor; Condenser fan motor; Filter drier; Condensate heater; Service valve; Control unit; Transformer; Thermostat; Lamp; Contactor; Relay; Relay base; Door switch; Door gasket.

5. Environmental factors

The unit shall be capable of being stored continuously in ambient temperature f 0-50 deg C and relative humidity of 15-90%. The unit shall be capable of operating continuously in ambient temperature of 5 to 45 deg C and relative humidity of 15-90%

6. Power Supply

Power input to be 220-240VAC, 50Hz

Voltage corrector/ stabilizer of appropriate ratings meting ISI Specifications . (Input 160-260V and output 220-240 V and 50Hz).

Suitable Automatic Voltage regulator/stabilizer meeting ISI Specifications should be supplied. Broad specifications are: Automatic Type Input 150-280V, Output 220V +/ -7%, 50Hz, Single phase, AC with automatic 2-4 sec Cut off and 6-9 minutes restart delay. Quick start arrangements for by passing the start delay. Suitable MCB on input voltmeter and indicators on Front Panel. Input Power Cable with 15 A Plug and six way output terminal strip for two outlets.

7. Standards and Safety

Should be FDA, CE, UL or BIS approved product.

Should comply with WHO/ UNICEF Specification Reference: BTS/RF.1

Test and inspections as per WHO Procedure reference: Laboratory Test Procedure: Standard Test Procedure: BTS/ Proc/ 3.
Should comply with International Electromagnetic Compliance standards like IEC or EMC Directives. Electrical safety conforms to standards for electrical safety IEC-60601/IS13450.

8. **Documentation**

-User/ Technical/ Maintenance manuals to be supplied in English.
-Certificate of calibration and inspection from factory.

Elisa Reader

1 Description of Function	
1.1	ELISA Reader is required to Read the Color Density known as OD(Optical Density) in ELISA (Enzyme Linked Immuno-Sorbent Assay.)Plates.
2 Operational Requirements	
2.1	ELISA Reader complete with Printer is required.
3 Technical Specifications	
3.1	Should have 8-12 measuring channel & reference channel
3.2	Should have wave length range of 400- 750 nm with 6 filter 340, 405. 450, 492, 540, 620nm with provision for fitting any additional filters
3.3	Should have an absorption range of 0-4.000A
3.4	Should have a resolution of 0.001A
3.5	Should read within 6-8 seconds
3.6	The control panel should have soft colored touch screen display/easy to use multifunctional keyboard . Results should be readable on screen or be printed out using on board printer.
3.7	Should have external & internal programmable time & speed shaking
3.8	Should be able to read all types of plates
3.9	Should have a single halogen lamp with save features as light source
3.10	Should allow user defined programmes, 30 or more.
3.11	RS232/USB output for Printer, PC connectivity and Data acquisition should be there
3.12	Should have data memory of 300 plates.
3.13	Should have external printer, capable of printing complete results & graphs etc. from Elisa system
4 System Configuration Accessories, spares and consumables	
4.1	System as specified-
4.2	Halogen Lamps : 2
4.3	Thermal print paper : 10 Rolls/Z Fold
4.4	Dust Cover -01
4.5	Set of pipettes consisting of single channel variable volume color pipettes 0.5-10 ul, 5-40 ul, 40-200 ul, 200-1000 ul
4.6	8 channel variable volume color multi channel pipettes 5-50 ul and 50-300 ul.
5 Environmental factors	
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 - 50deg C and relative humidity of 15-90%

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

6 Power Supply

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

7 Standards and Safety

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

8 Documentation

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

Blood Donation Couch

1 Description of Function	
1.1	Blood Donor Couch is a completely automatic enveloping, variable tilt chair and specially designed to make blood withdrawals easier, safe and functional, and also for other diagnostic and therapeutic areas
2 Operational Requirements	
2.1	1) Provides a comfortable position for the donor. 2) Variable positioning for either arm with Comfortably wide arm-rests. 3) Arm rests have swinging out as well as up and down moving facility. 4) Reclining and upright body positions with a smooth shifting to any position. 5) Both sides should have supporting brackets. 6) If a vasovagal attack occurs the Donor's head needs to be lowered immediately and his legs lifted above his heart level so that blood can flow back to the brain and other vital organs. Electronic remote controlled facility should be provided for this function
3 Technical Specifications	
3.1	Ergonomically designed comfortable chair type for donor comfort. Mattress should be comfortably cushioned with elegantly thick washable upholstery.
3.2	Seat, back rest and leg rest size designed for donor comfort. It should have step less electric remote controlled height adjustment approximately 58 – 60 cm.
3.3	Adjustable arm rests-Swivel able and lift up for donor’s comfort and phlebotomist friendly
3.4	Easily tilted to head low position, electrically operated
3.5	Comfortable working level for the operator. Lifting capacity - Approx 200 kg.
3.6	UP/DOWN control
4 System Configuration Accessories, spares and consumables	
4.1	Donor Couch -01
4.2	Dust Cover -01
4.3	Power cable -01
4.4	Arm Rests(pair) -01 pair
4.5	Remote control -01
5 Environmental factors	
5.1	The unit shall be capable of operating continuously in ambient temperature of 10 -40 C and relative humidity of 15-90%
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 C and relative humidity of 15-90%
5.3	Shall meet IEC-60601-1-2 :200(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
6 Power Supply	

6.1	Power input: 220-240V/ 50 Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.
6.2	Reset table over current breaker shall be fitted for protection
6.3	Suitable Servo controlled Stabilizer/CVT

7 Standards and Safety

7.1	Should be FDA or CE approved product
7.2	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
7.4	All electrical actuators and mechanisms should be housed inside the structure making the product safer

8 Documentation

8.1	User manual in English
8.2	Service manual in English
8.3	Certificate of Calibration and inspection from the factory
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.

ANTI SERA KITS, TEST PLATES , GLASS WARE

		Quantity
A)	**Blood Grouping Sera/Reagents**	
•	Antisera to blood group A, B & D with known control sera	10 Sets
•	Testing Plates	04 Nos.
•	Lancets	200
B)	Reagents for serological tests for syphillis and positive sera for control. Elisa tests kits for hepatitis and HIV I & II.	10each
C)	Binocular Microscope for specifications refer under Clinical Pathology	
D)	Glass Ware for Blood Bank	No.
	Pippetes (Pasture)	10
	Serological graduated pippetes of capacity 0.1ml, 1ml & 10ml.	10 of each size
	Glass Tubes 6mm x 50mm	100
	Racks for the above test tubes	6
	Filter paper (Whatman)	12
	Glass Micro slides 75mmx25mm	6 boxes of 100

E) Serological Water Bath – Digital display of various settings of temp., timer. Temp. range from 37deg.C to 90deg.C. Size approx. 300x250x170mm. Inner-stainless steel. Outer-M.S. epoxy coated.

F) Table top centrifuge for four tubes with 24 tubes to be supplied.

G) Analytical balance of 10mg accuracy.

H) VDRL shaker – With digital speed controller, timer & power indicator to work on 220v, 50Hz.

Other Added Items

Nebulizer

1. **Description**

Nebulizer is a device used to administer medication to people in forms of a liquid mist to the airways. It is commonly used in treating cystic fibrosis, asthma, and other respiratory diseases.

2. **Operational Requirements**

Heavy duty compact Nebulizer is required.

3. **Technical Specifications**

3.1 Technical Specifications Nebuliser

1. Compact, light weight, low noise.
2. Durable long life compressor. Suitable for heavy duty/ institutional (hospital) use, should be able to run uninterruptedly for one hour, Max Press=2.0-2.5 bars.
3. Should produce particle of size 1-5 micron.
4. Aluminium cabinet painted with epoxy powder.
5. Piston-type electric aspirator that offers high performance and great durability.
6. Protective thermal cut out relay.
7. Air delivery rate app. 15 L/min.
8. 24 hours continuous work for hospital use.

4. **System Configuration Accessories, spares and consumables**

None.

5. **Environmental Factors**

Shall meet IEC-60601-1-2; 2001 9Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC;EMC-directive.

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

The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%.

6. **Power Supply**

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

7. **Standards, Safety and Training**

Should be FDA, CE, UL or BIS approved product.
Training as required.

8. **Documentation**

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

List of important spare parts and accessories with their part number and costing.
Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.

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

Certificate of calibration and inspection.

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

Air mattresses

Alternating pressure every 10 minutes. Whisper quiet with adjustable pressure settings. Low pressure/Normal pressure indicator lights. Patented CPR release. Convoluted safety foam base with water proof covering to eliminate contamination. Low friction/ shear water proof top cover. Maximum patient weight 150 kg or more. Inflated dimensions approximately 35”Wx80”Lx8”H.

General Surgical Instruments Set	**Qty.**
SS Tray with Lid –Length 350mm, Width 250mm, Height 50 mm	1 No.
Kidney Tray –Length 200 mm, Width 90mm, height 40mm	1 No.
Gallipot 1 nos.)$2_{1/2}$" Diameter	1 No
Towel Clips (Mayo's/Bcakhaus) length 10 cms	4 Nos.
Allis Forcep 6"	2 Nos.
Needle Holder 6" ans 8" (Mayos Hegar)	1 each
Scalpel Handle No.4	1 No.
Artery Forceps Mosquito-6"	6Nos.
Artery Forceps (Spencerwell"s/crile)-6"	6 Nos.
Kockers artery Forceps Straight-6"	2 No.
Forceps (Toothed and Plain)	2 each
Czemy Retractor	2 Nos.
Langenbek Retractor Blade Size 1 ¾' x ½"	2 Nos.
Scissor Dissecting (Metzenbaum)-7"	2 Nos.
Scissor Suture Cutting Mayos -150mm	1 No.
Sponge Holding Forceps -240mm	2 Nos.

Venesection Set .	
SS Tray with Lid-Length 250mm, width 200mm, Height 50mm	1
Gallipots (10 cm Diameter)	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Sponge Holding Mosquito Forceps – Length 240 mm	1
Artery Forcep Mosquito Curved – Length 150mm	6
Retractor (Kilner/Sengreen) –Length 150mm	2
Needle Holder (15 cm) Hegar's	1
Scalpel Handle No.3	1
Dissection Forcep – 150mm with Tooth	1
Dissection Forcep-150mm without Tooth	1
Towel Clips – Mayos/Backhaus –length 10cms	4
Mayos Scissor – Length 150mm	1
Aneurism Needle – Symes pattern-Length 180mm	1

Incision & Drainage	
Tray SS with Lid –Length 250mm Width 200mm, Height 50mm	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1

Scalpel Handle No.3	1
Sinus Forcep – 180mm	1
Artery Forcep-150mm	6
Sponge Holding Forceps – Length 240mm	2
Towel Clips –Mayos/Backhaus- length 10cms	4
Currete	1
Galliots – Diameter 10 cms.	1

Suture Removal Set

SS Tray with lid –Length 250mm, Width 200mm, Height 50mm	1
Tooth Forceps Dissecting -150mm	2
Galliots (10cms)	1
Artery Fprce {straogit6"}	
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Stich Removal Scissors	2
Towel Clips (Mayos / Backhaus) –Length 10 cms	2
Sponge Holding Forceps – 240mm	1

Suture Set

SS Tray with lid –Length 250mm, Width 200mm, Height 50mm	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Galliots (10cms)	1
Scalpel Handle No.4	1
Sponge Holding Forceps –8"	1
Tooth Forceps	1
Needle (1/2 Circel, Cutting) (Size 20mm, 30mm)	1
Scissor Mayos – 150mm	1
Towel clip (Mayos/Back haus) – Length 10 cms	1
Needle Holder (Hegar's) -150mm	1
Artery Forceps (Mosquito)- 150mm	6

Catheterisation Set

SS Tray with lid –Length 300mm, Width 200mm, Height 50mm	1
Cathers Foleys 16, 18, 20	1each
Bladder Syringe 150cc, Disposable Syringe	1
Metal catheter Sizes 1-12	1 Set

Introducer for Foleys catheter	1
Sponge Holding Forceps – 240mm	2
Towel Clips Mayos/Backhaus –Length 10 cms	4
Sponge Holding Forceps – 240mm	1
Catheter Tray Stainless Steel Over all Size -17x4 ¾’ x2 ¼”	1

Scissors Set

Mayos Straight Scissors 6 ½” & 7 ½”	1,1
Mayos Straight Curved 6 ½” & 7 ½”	1,1
Metzenbaum Scissors 8” & 9 ½”	2,2
Mclachilan Scissors 6 ½’	2
Stich Removal Scissors (Mayos Clinic Stich Scissors)	4
Instruments Tray Stainless Steel with Lid –Length 300mm, width250mm,	1
Height 50mm.	1

Spinal Board

Instruments Trolley Plain (SS)

The Instruments Trolley shall generally confirm to IS-5631-1970 subject to following specifications:

Frame	:	Argon welded & SS tubular rust free construction.
Top	:	Two rust free SS shelves conforming to 04Cr18 Ni or 07 Cr 18 Ni 9 grade as per IS-6911-1972 with protective sides railing on three sides.
Castors	:	8cm/7.5cm dia. Wheel type swiveling castors having antistatic rubber tread conforming to IS-4043-1979.
Shape & Dimension	:	Overall size 660mm L X 430MM W X 830MM H as per IS-5631-1970.
Material	:	Vertical SS tubes of 25mm x 18G. Longitudinal SS tubes of approx. 19mm x 18G. Railing of SS 10mm rod. SS top of 21G shelves conforming to 04 Cr 18 Ni 10 or 07 Cr 18 Ni 9 grade as per IS-6911-1972.
Finish	:	Finish bright
Test	:	As per 6.1.2. of IS-4033-1968 & latest amendments issued if any.
Marking	:	According to 7 or IS-4033-1968 & latest amendments issued if any.

Syringe Infusion Pump

UNSPSC Code: 42222002
ECRI Code: 13-217

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	The Syringe Infusion Pump provides uniform flow of fluid by precisely driving the plunger of a syringe down its barrel. It provides accurate and continous flow rate for precise delivery of I.V. medication in critical medical care.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The syringe pupm should be programmable, user friendly , safe to use and should have battery back up and comprehensive alarm system. This should be able to integrate in the HIS		
2.2	Demostration of the equipment is essential.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	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.		
3.2	Bolus rate should be programmable to 40 – 500 ml/hr or more with infused volume display. Reminder audio after every 0.5 ml delivered bolus. SAVE last Bolus rate even when the AC power is switched OFF.		
3.3	Display of Drug Name with a provision of memorizing 10~15 names by the operator		
3.4	Keep Vein Open (KVO) must be available 1.0 ml/hr or set rate if lower than 1.0 ml. User should have choice to disable KVO whenever desired.		
3.5	Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg		
3.6	Must Work on commonly available ISI/CE/FDA		

	APPROAVED/CERTIFIED 20, 50/60 ml Syringes with accuracy of minimum of +/-2% or better.		
3.7	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.		
3.8	Anti bolus system to reduce pressure on sudden release of occlusion		
3.9	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,Drive disengaged and preventive maintenance.		
3.10	Rechargeable Battery having at least 5~6 hour backup for about 5ml/hr flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Syringe Infusion Pump -01		
4.2	Mounting device/ Docking Station for two or four pumps as per requirement so as to enable to power up to 2-4 pumps with one power cord when mounted on IV pole. -01		

5 Environmental factors

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

6 Power Supply

Sl	Name	Technical Specs	Bidders Deviation

		quoted by bidder	if any
6.1	Power input to be 220-240VAC, 50Hz		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be FDA or CE approaved product		
7.2	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements		
7.3	Certified for meting IEC60601-2-24:Particular requirements for the safety of infusion pumps and controllers		
7.4	Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection , water ingress.		
7.5	Electrical Safety Classification Class I/II, Type CF and Internally powered equipment.		
7.6	Certified for meeting IEC 60601-1-4 Medical electrical equipment - Part 1-4: General requirements for safety - Collateral Standard: Programmable electrical medical systems		
7.7	Comprehensive warranty for 5 years and provision of CMC for next 5 years.		
7.8	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.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	Certificate of calibration and inspection from factory.		
8.2	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.3	User Manual in English		
8.4	Service manual in English		
8.5	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.		

8.6	List of important spare parts and accessories with their part number and costing.		
8.7	User list to be provided with performance certificate .		
8.8	Performance report in the last 5 years from major hospitals should be enclosed.		

Digital Infusion Pump

1. The equipment should have Roller type Peristaltic pump /Volumetric pump technology for delivery of IV fluids and blood/blood products ranging between 2.5 ml to 750 ml per minute.
2. The Equipment should have high levels of safety from air embolism by integrating atleast two ultrasonic air detection sensors.
3. Heating process should be done by an electro magnetic induction heating system.
4. The Equipment should have two infra –red temperature sensors for accurate delivery of fluids at 37deg.C.
5. The equipment should have the facility to automatically purge air for removal of any outgassed air to prevent it from entering the patient line. No manual process should be involved.
6. The equipment should have operator controlled Bolus infusion key for rapid response in critical situations.
7. The equipment should have a line pressure control sensor for restriction of flow in case of line occlusion immediately and stop the delivery of fluids for patient safety.
8. The Equipment should have a recirculate mode for pre – warming of fluids during transport.
9. The Equipment should have an interactive on-board display system which displays information about the rate of infusion , total volume infused , real temperature of fluids, line pressure etc.
10. The equipment should have an internal rechargeable battery backup.
11. Consumables should be universal for all flow rates ranging between 2.5 ml to 750 ml per minute.

Laryngoscope

Each set should have following contents;-

Blade size 55mm
Blade size 80mm
Blade size 130mm
Blade size 170mm
Blade size 180mm
3.5 Volts halogen/ krypton bulb, with handle, rechargeable battery and Charger

Patient Warmer

Base Unit:-

1. The set temp range in the unit should be from 32° - 43°.
2. Air flow must be between 40-50 cfm.
3. Air filtration capacity should be highly efficient-must be ≤0.3 microns.
4. The sound level should be <50db.
5. It should be light weight, between 5-6 kgs
6. It must be CE certified.

Blanket:-

1. It should be made of soft material (Polypropylene or Polyethylene material) with superior top layer having insulating & radiating qualities.
2. It should be extra wide to tug in patients.
3. It should be non conductive, non irritable & must confirm flammability standard.
4. It should be latex free
5. It should be supplied with 50 adult & 50paediatric blankets.

Miscellaneous (Ambulances)

Ambulance for Basic Life Support (BLS) - (BS-IV)

I. Vehicle:-

1. As per specification (Annexure-I).
2. The bidders should have the experience of fabricating the ambulance with installation of equipment for the Govt. Agencies.
3. The bidders should have workshop for the maintenance of Ambulance as well as equipment provided /fixed in the Ambulance at consignee.

II. The specification relating to the fabrication of the ambulance is as under :-

A- Interiors - As per specification (Annexure II)
B- Electrical System and power back up - As per specification (Annexure III)
C- Central pipe line oxygen system - As per specification (Annexure IV)
D- Stretcher - As per specification (Annexure V)
E- Air Conditioning –Heating - As per specification (Annexure V)
F- Medical equipment - As per specification (Annexure VI)
G- Miscellaneous gadgets - As per specification (AnnexureVII)

ANNEXURE-I
SPECIFICATION OF THE VEHICLE FOR AMBULANCE

Engine
Engine 4 Cylinder, Dl, Turbo Charges with Inter Cooler, Electronical
Diesel Control, Bharat Stage – IV Compliant
Displacement 2500 – 3500 CC
Max Torque 190-200Nm@1600-2100rpm
Compression ration 15.01-20-01

Clutch
Type Single Plate, Dry Friction, Hydraulically actuated
Outside Dia 230-250

Transmission
Type Gear lock synchromesh on forward gears
No. of Gears 5 Forward 1 reverse

Steering
Type Worm & Roller Type, Power Steering
Tuming Radius 6-8 m
Frame Monocoque Chassis

Suspension
Front & Rear Semi Elliptical Leaf Springs with hydraulic telescopic shock absorbers. Anti Roll Bar in Front

Brakes
Service Brakes Dual Circuit Hydraulic, Vacuum Assisted
Front Disc Brakes
Rear Drum Brakes
Parking Brakes Mechanical on rear wheels

Wheels & Tyres Four & One Spare
Size 215 Radial 14, 10-15PR

Electrical System
System Voltage 12 Volts
Battery Lead Acid 70-90 Ah
Altemator 65 Amp @ 12 – 13.5 Volts & 6000 rpm
Starter 12V, 2-3 KW

Fuel Tank 60-90 Litres

Dimensions (MM)
Wheel Base 2500-3500mm
Overall Width 1900-2200mm
Overall Length 4500-6000mm

Over Height 2400-2800mm
Min. Ground Clearance 180-210mm
Weight (Kg)
GVW 3000-5500 Kgs. Minimum

ANNEXURE-II
(A) INTERIORS
Interiors of ambulance may be as follows:-
(i) Colour – To complement the basic design of ambulance in reference.
(ii) Linings of wall, roof fibre reinforce profile i.e. fibre sheets with provision for mounting of light equipment, electrical switches. It should have a good thermal and Acoustic barrier. Insulation should be of polyurethane/ Glass wool. Between the interior conversion panels and the internal surface of the base vehicle body there should be adequate insulation of appropriate grade to have a good climatic control environment inside the vehicles.(between 15 to 60 mm of insulation of fire resistant glass wool/ Polyurethane.)

Additional Requirement
Inspection of Equipment will be done to check the compliance of the specification of Ambulance. Third party inspection cost is to be borne by supplier.
Construction of Ambulance is Monocoque type.
The minimum thickness at any point of the Flat panels FRP sheet should not be less than 3 to 3.5 mm.
The ceiling, both the sidewalls, both sides of the partition wall should be produced in one single piece matching to the dimension of the patient compartment dimension of the ambulance.
Technical drawing of the installation of Medical equipment to be provided by the supplier and will be subject to suitable correction by technical committee before the actual fabrication of Ambulance Compartment.

The internal furniture layout must include a washbasin made up of SS material
The water tap of the washbasin should be operated with a foot / elbow switch at a convenient and safe place around the wash basin area, so that it is easy for the users to activate the switch and get water flow.
The tap should be operated using 12V DC water pump placed at the fresh water tank. The capacity of the fresh water tank as well as the waste water tank should be at least 20L.

(iii) Flooring – (1) Antiskid flooring
(2) Colour match with interiors
(iv) Window curtains – Self –winding sunshade curtains on side windows and its colour should match with interiors.
(v) Doctor's Chair - Reclining with Hand-rest Adjustable with rear belt Covering should be of Soft leather (Form Cover).
(vi) Waste bin- Single, Detachable
(vii) Attendant's seat – 3 seater with head, back rest with flat belts.
(viii) Cupboards - 1. Laminated light coloured finish for the cupboard matching with the interiors.
2. Labeling of place for equipments, drugs, medical accessories in the cupboard.
3. Lockable shutters of the cupboard.
4. Opening of cupboards should not make any hindrance with the patients and doctors movement, equipment operations should be provision with magnetic look.
5. Separated Cabinet made of FRP should provide for equipment so to isolate equipment from other patient handing system.
6. Interior minimum of Length - 2700 mm, Width - 1500mm, Height - 1500 mm.
(ix) An intercom be installed between doctors and Driver Cabin for communication.
(x) There should be two small handle at the entry of the ambulance from the rear for the purpose of 'getting in' the ambulance.
(xii) (1) Fire extinguisher (2) One each for driver and doctor cabin.
(xiii) Floor strips/ locking system compatible with combicot stretcher.
ANNEXURE-III

(B) ELECTRICAL SYSTEM AND POWER BACK-UP

Electrical system should be able to take load of various equipment installed in the ambulance as per specification enclosed. The detailed specifications are as follows:

(i) Sockets (15 Amp), switches in each corner of ambulance and total No. of sockets, 220 V, AC (10) and 12V DC (4 sockets).

(ii) Sockets and switches for each medical equipment as specified. Site of Socket and Switches, next to oxygen outlet panel.

(iii) Proper illumination of inside of ambulance on the roof and side panel and should be controlled by Central Control panel with ISI Switches.

(iv) Wiring to be fire resistant type (ISI).

(v) Wiring to be equipped with safety fuses (MCB). Electrical overload protection to be installed.

(vi) Provision for AC and DC points for charging the equipments (on battery mode).

(vii) 1K V inverter ISI to be installed for use when vehicle in standing idle with backup time of 6 - 8 hrs.

(viii) Existing alternator to be upgraded to an alternator of 135 Amp (or 24V DC, 65 amps alternator), which is enough to handle electrical load of ambulance. The mounting system of alternator should be modified to house the bigger alternator.

(ix) Sirens-Blinders-Alarms.

(x) An electrical extension board may be provided with 5amp to 15 amp switch and multi-socket – two each with indicator and 3.5 meter wire.

(xi) The ambulance should be equipped with latest high intensity 2 tone blinking alarm and emergency light system.

- The alarm system should have a public address system as an additional feature.
- The blinker should be mounted on all the three sides of ambulance and equipped with 11 fibre coiled high intensity blinkers.

(xii) Trimmings – All trimmings should be done with maximum of stainless steel, non magnetic and heavy aluminium sections fastened in place with pop rivets/solid rivets and self threading screws.

(xiii) Partition wall between drivers with rest of ambulance should be of fibre with insulation. The partition wall should have a sliding glass window to insure easy communication between driver and doctor.

(xiv) Halogen/LED at the top of ambulance on its all boundaries/borders so that at the time of disaster the ambulance crew is able to carry out is operation in the darkness.

ANNEXURE-IV

(C) CENTRAL PIPELINE AND OXYGEN SYSTEMS

1. Provision for Two D Type cylinders (on which a ventilator can work for 12hours) with a trolley and gravity flap door mounted with a cable locking device.
Provision for one B Type cylinders as stand by oxygen supply.
2. The Cylinder should be easily changeable with easy access and minimum disturbance to the patient and doctor and medical gadgets.
3. Two oxygen outlet points to be provided. One for ventilator and one as stand by with oxygen regulator/humidifier.

OTHER FEATURES OF CENTRAL PIPE LINE

1. Pipe should be made of eflone with breaded stainless steel to ensure flexibility and stability.
2. Oxygen cylinders D type mount for 2 nos.
3. Compressed Air Cylinders/ oxygen cylinder B type mount for 1 no.
4. Pressure gauges for oxygen / compressed air 3 nos.
5. High Pressure regulator 3 nos.
6. Straight / L-nozzle 3 nos.
7. Anti vibration mounts 4 nos.
8. Cylinder holding pads 16 nos.
9. Bottom pad for cylinder 2 nos.
10. Head board for outlet points three
11. Pressure switches 2 nos.
12. Buzzer 2 nos.
13. Non-return valves 2 nos.

14. Indicating lights LED type 4 nos.
15. Interconnecting fitting and wiring etc. LOT
16. Oxygen flow meter with humidifier 1no.

ANNEXURE-V
(D) STRETCHER
1. One scoop stretcher, aluminum makes which should include 3-4 restraints straps.
2. Combi Cot Stretcher

(E)AIR CONDITIONER AND HEATING
1 The ambulance should be equipped with concealed air conditioner (with double blower system)
2 The compressor should be ISI make.
3. The condensers equipped with super heavy induced magnetic motors, which is safe for operations in high moisture and highly temperature (Spray resistant)
4. Airflow should be concealed directed with 2 independent blowers. One from front and the other from rear.
HEATING
1.Separate 220V heating blower should be provided for patient cabin temperature.

ANNEXURE-VI
(P - I)
MEDICAL EQUIPMENT
Equipment to be placed on BLS Ambulance:
The ambulance will be required to be equipped with, but not limited to the following:
A Suction Devices battery operated.
1. An engine vacuum operated or electrically powered and battery backup (inbuilt), complete suction aspiration system. Shall be installed permanently on board to provide for the primary patient. It shall have wide bore tubing.
2. A manual suction device, age and weight appropriate, with wide bore tubing and at least a six ounce reservoir.
3. Three must be an assortment of suction (minimum of 2 each) on board. Sizes 6 fr, 8fr, 10fr, 16fr, 18fr. A rigid suction catheter (e.g. Yankaur) will also be carried. Minimum 2 each.
B. Bag Mask Ventilation Units.
1. One Neonatal, One Child, and One adult (Silicone), hand-operated. Valves must operate in all weather, and unit must be equipped to be capable of delivering 90-100% oxygen to the patient.
2. The following sized masks will be carried aboard in the ambulance to be used in conjunction with the ventilation units above 1, 2, 3, 4. Either the disposable or non- disposable types are acceptable. 5of each size in case disposable are supplied.
C. PVC/Silicone Oropharyngeal (Berman type)/Nasopharyngeal Airways – adult, All airways shall be clean and individually wrapped.
D Guedels airway with bite block all adult sizes, color coded. .
(P - II)
1. Large adult
2. Med. Adult
3. Small for Pediatric
E. "S" tube type airways may not be substituted for Berman type airways.
F. A "no smoking" sign will be prominently displayed in the patient compartment.
G. Bite sticks commercially made. (Clean and individually wrapped).
H. Twelve sterile dressings (minimum size 5 inches x 9 inches).
I. Thirty-six each sterile gauze pads 4 inches x 4 inches.
J. Twelve each bandages, self-adhering type, minimum three inches by five yards. Bandages must be individually wrapped or in clean containers.
K. A minimum of four commercial sterile occlusive dressings, four inches by four inches.
L. Adhesive Tape, hypoallergenic, one, two and three inches wide.
M. Burn sheets, two, sterile.

N. Scissors, adhesive tap, vacuum splint (arm-2,legs-2)
O. Cervical collor(disposable) be included (adult :-Large&mediem.)
(P-III)
P. Spinal immobilization devices:
1. Spine board, at least 16 inches by 72 inches constructed of three-quarter inch ply board or equivalent material and having at least three quarter inch runners on each side for lifting with appropriate straps. If not equipped with runners, board must be designed so handholds are accessible even with gloves on.
2. Cervical collars to accommodate the infant. Child, medium adult, and large adult sizes. Collars must be manufactured of semi-rigid or rigid material.
3. Three, two inches by nine foot patient restraint straps.
4. Head immobilization device. Commercially available or towel/blanket rolls.
Q. Five inch triangular bandages.
R. Two blankets.
S. Bandage Shears, Large size.
T. Stethoscope Adult
U. Kidney trey
V. Two dependable flashlights / emergency light or electric lanterns, minimum size, two-D-cell or six volt lanterns.
W. Minimum of one fire extinguishers, CO2 or dry chemical or type ABC.
X. Working gloves, two pair for each crewmember.
Y. Minimum of 1000 cc of sterile water or normal saline solution for irrigation.
Z. Personal protective equipment which includes (gloves, masks, gowns ,eye shields & shoe covers)
AA. PPE set -5 set.

(P-IV)
BB. Additional Equipment:
Combitube 2
LMA Laryngeal Mask Ventilation Airway(2,3,4) sizes
Airsplints Complete Set (U/L & L/L)
Defibrillator Monitor with Ex 70 Pacer,Which should have ECG SPO2 & NIBP & temperature.
Suction Apparatus Portable
Emergency Kit: Ambubag, ET tube, Laryngoscope adult size (Large, extra large & medium), Pediatric Laryngoscope, Magill forceps, Stylet Airways (Otophayngeal airway, all sizes –Adult & Pediatric) (Transport Ventilator), Mini O2 Cylinder. In the emergency kit the suction device should be Foot/ Knee operated.

(P-V)
MISCELLANEOUS GADGETS
Minimum Ambulance Rescue Equipment
The following additional items will be carried by each ALS and BLS ambulance:
A. Hammer, one four pound with 15inch handle.
B. One axe.
C. Wreeking Bar, Minimum 24-inch (bar and two preceding items can either be separate or combined as a forcible entry tool).
D. Crowbar, minimum 48 inches with point.

ANNEXURE-VII
TERMS & CONDITIONS
1. The registration of the vehicle as Ambulance with the transport authority will be sole responsibility of the supplying agent (tenderer/bidder).
2. The vehicle should be delivered to the consignee duly registered as ambulance from transport authority by the tenderer.

All the medical equipment of the Ambulance should be CE/FDA compliant.

Catheters & Disposables

1. Ryel's tubes

- Adult / Paediatric
- PVC
- Sizes

Paediatric		
F G 7-8	-	
Length	-	50-52 cm
Adult		
Sizes	-	FG 12, 14, 16, 18
Length	-	100 – 105 cm

Sterilized Gamma Radiation / ETO
Individual double packing

Qty. : 6 (six) of each size.

2. IV Cannulas

- PTFE catheter with Wings
- Colour coded different sizes
- Needle sharp bevelled
- Sizes 12, 14, 18, 20, 24 gauge
- Packed in a Blister pack with peel open facility
- Presterilized ETO / Gamma

Qty. : 12(twelve) of each size.

3. Catheters

a) Urinary Plain

Material Indian Rubber

Sizes 6, 8, 10, 12, 14, 16

Quantity six of each size.

b) Foley's Catheter

- Two way
- Material Latex
- Individually packed
- Presterilized ETO/ Gamma
- Sizes 10, 12, 14, 18, 20, 22

Quantity six of each sizes.

c) Malecot' s Catheter
Material Indian Rubber
Sizes 10, 14, 18, 22, 24, 28, 30
Quantity 6 of each size

d) Rectal Catheter

- Material Indian Rubber
- sterlised
- Adult and child size
- Six packets of adult and child sizes.

e) Corrugated Drainage Tubes

Material PVC
Individually packed
Size 1- 1.5" 6-8"
Preterilised ETO / Gamma Radiation
Qty. : 12(twelve).

f) Infusion Set adult - Qty.100.
Adult with Murphy's chamber and flow regulator individual packed, double packing
Presterilized with Gamma / ETO

g) Chest Drainage Catheters
Material PVC
Sizes 20, 24, 26, 30
Individually packed , single use
Presterilized ETO/ gamma Radiation
Quantity six of each

h) Scalp Vein
Single use
Presterilized , individually blister packing
Sizes 18, 20, 21, 22, 23, 24, 26 gauge
Quantity six of each sizes

i) Infusion set – Pediatric with chamber and Floater : Qty.100.
Capacity of chamber 100 cc
Double packing
Presterilized ETO/ Gamma Radiation

j) Blood transfusion sets Regulator with Murphy, chamber, and single use, double packing
Presterilized ETO/ Gamma Radiation

k) Suction catheters
Material PVC
Single use
Sterilized ETO/Gamma Radiation
Sizes 6,8,10,12,16,18 FG.
Quantity 12 of each size

L.) Urine collection bag

a) Adult : (100 nos.)
Capacity : 2000 cc
Prestrilized ETO/ Gamma
Individually packed

b) Pediatric (100 nos.)
Capcity 500ml
Pressurize ETO/ Gamma
Individually packed

M) Surgical Gloves
Material Latex
Sizes 6 ½ , 7 ½ , 6
Double packing, single use

Presterilised ETO/ Gamma Radiation
25 dozens of each size

N) Endotracheal Tubes
High volume, Low pressure cuff
Pilot Balloon with semi directional value.
Individually paked
Presterilized ETO / Gamma

Sizes

3.0 mm to 5 mm, uncuffed
5.5 to 8 mm cuffed
Quantity 4 of each size

General Glassware for Lab.

-Microslides. Size 75x25mm, Good quality. 500nos.
-Heamatocyte tubes with stand. Good quality, permanent marks. 24 nos.
-Capilary tubes for clotting time. 500no.
-Test tube Corning :small 10mmODx75mm. 48nos.
:medium 15mmODx150mm. 48nos.
:large 25mmODx150mm. 48nos.

-Micropipettes, graduated. Capacity 0.1ml, 1ml, 10ml. Qty. 10 each.

-Petridesh-small, medium, large with cover. Qty. 25 each
-Stamming Jars for microslides, 6nos.
-Stamming Racks for microslides, 6nos.
-Volumetric flask-Glass Boris. Round bottom, conical shape. Capacity 500ml. Qty. 24nos.
-Reagents bottles-Borosil. Capacity 500ml. Qty. 24nos.
-Reagents bottle screw top, glass borosil, capacity 50 ml.
-Centrifuge tubes-Glass Borosil. Capacity 15ml, 25ml, with marks. 24 each.

Proctoscope Set

Material Stainless Steel

Diameter 2-3 cms

Length 10 cms

Set of three sizes in a wooden Box.

Cervical Dilator Set

Makeness Stainless steel

Type Hegar, Double enclosed

Set of height

Sizes

1 x 2 mm

3 x 4 m

5 x 6 m

7 x 8 m

9 x 10 m

10 x 11mm

12 x 13m

13 x 14mm

15 x 16 m

To be supplied in a wooden velvet livid Box

SECTION-VII
TECHNICAL SPECIFICATIONS

Note 1: Tenderer's attention is drawn to GIT clause 18. The tenderer is to provide the required details, information, confirmations etc. accordingly failing which it's tender is liable to be ignored.

Note 2: General : Bidders are requested to make sure that they should attach the list of equipment for carrying out the routine and preventive maintenance wherever asked for and should make sure that Electrical Safety Analyzer/Tester for Medical equipment to periodically check the electrical safety aspects as per BIS Safety Standards IS-13540 which is equivalent to IEC electricity safety standard IEC-60601 is a part of the equipments. If the Electrical Safety Analyzer/Tester is not available they should provide a commitment to get the equipments checked for electrical safety compliance with Electronic Regional Test Labs/Electronics Test and Development Centres across the country on every preventive maintenance call.

Note 3: Optional Items: Bidders are requested to quote for all the available options as asked in the bidding document with reasonable pricing. However, the pricing for the optional items will not be considered for price comparison for ranking purpose. If the firm has not quoted for any optional item (except the items of turnkey) their offer will be treated as Technically Responsive if otherwise meeting the specifications.

SECTION-VII

TECHNICAL SPECIFICATIONS

GENERAL TECHNICAL SPECIFICATIONS

GENERAL POINTS:

1. Warranty:

a) One year Comprehensive Warranty as per Conditions of Contract of the TE document for complete equipment (including X ray tubes, Helium for MRI, HT cables, probes, electrodes, detectors, batteries for UPS, other vacuumatic parts wherever applicable) and Turnkey Work from the date of satisfactory installation, commissioning, trial run & handing over of equipment to consignee.

b) 98% up time Warranty of complete equipment with extension of Warranty period by double the downtime period on 24 (hrs) X 7 (days) X 365 (days) basis.

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

2. After Sales Service:

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

3. Training:

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

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

a) The cost of Comprehensive Maintenance Contract (CMC) which includes preventive maintenance including testing & calibration as per technical/ service/operation manual of the manufacturer, labour and spares, after satisfactory completion of Warranty period may be quoted for next 3 years on yearly basis for complete equipment (including X ray tubes, Helium for MRI, HT cables, probes, electrodes, detectors, batteries for UPS, other vacuumatic parts wherever applicable) and Turnkey (if any). The supplier shall visit consignee(s) site as recommended in the manufacturer's technical / service/ operational manual, but at least once in six months during the CMC period.

b) The cost of CMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any

such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.

c) Cost of CMC will be added for Ranking/Evaluation purpose.

d) The payment of CMC will be made on six monthly basis after satisfactory completion of said period, duly certified by end user on receipt of bank guarantee for 2.5% of the cost of the equipment as per Section XV valid till 2 months after expiry of entire CMC period.

e) There will be 98% uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.

f) During CMC period, the supplier is required to visit at consignee's site at least once in 6 months commencing from the date of the successful completion of warranty period for preventive maintenance of the goods.

g) All software updates should be provided free of cost during CMC.

h) Failure of the above [4. e) to 4. g)] by the supplier, may lead to the forfeiture of the Bank Guarantee for Annual CMC.

i) The payment of CMC will be made as stipulated in GCC Clause 21.

Turnkey:

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

Besides, bidders must take into consideration in its bid, costs to be incurred for any additional work pertaining to civil, electrical, plumbing, sanitary, radiation protection as per Govt. regulations, furniture, servo stabilizers, UPS etc. required for successful installation, testing and commissioning of the system/item and should include all such costs and suppliers to execute the contract on turn-key basis as per laid down specifications of AERB including all civil, electrical, air-conditioning & allied requirements for the equipment at the site allocated by consignee.

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

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

Technical Compliance : This information to be filled in as per the following format by all the bidders for each equipment bid by them and duly signed and to be submitted alongwith the techno-commercial bid:

Item Ref. (1)	Name of the Equipment with Tender Specifications (2)	Compliance of parameter/ specification (3)	Non-Compliance of parameter/ specification (4)	Remarks for Sr.No.(4) (5)

The information given above is factual & based on product specification details as per the latest catalogues/ product data sheets and technical literature enclosed.

Signature of the bidder & seal:

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 certification
- c . any other

08 Details of staff
- a. technical
- b skilled
- c unskilled

Signature and seal of the Tenderer

Section – IX
Qualification Criteria

01. The Tenderer must be a Manufacturer or its authorized Agent.

02. (a) The Manufacturer should have supplied and installed in last **five** years from the date of Tender Opening, atleast 100% of the quoted quantity of the similar equipment meeting major specification parameters which is functioning satisfactorily. The foreign Manufacturer satisfying the above criteria should also have supplied and installed in last **five** years from the date of Tender Opening, at least 100% of quoted quantity of similar model which is functoning satisfactorily any where outside the country of manufacture.

02. (b) The Tenderers quoting as authorized representative of the manufacturer meeting the above criteria 02 (a) should have supplied and installed in last **five** years from the date of Tender Opening, atleast 100% of the quoted quantity of similar equipments which is functoning satisfactorily, any where in India of the same manufacturer.

Note

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

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

2. The Tenderer shall furnish a brief write-up, packed with adequate data explaining and establishing his available capacity/capability (both technical and financial) to perform the Contract (if awarded) within the stipulated time period, after meeting all its current/present commitments. The Tenderer shall also furnish details of Equipment and Quality Control in the enclosed Section VIII.

3. Notwithstanding anything stated above, the Purchaser reserves the right to assess the Tenderer's capability and capacity to perform the contract satisfactorily before deciding on award of Contract, should circumstances warrant such an assessment in the overall interest of the Purchaser.

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

PROFORMA 'A'

PROFORMA FOR PERFORMANCE STATEMENT

(For the period of last five years)

Tender Reference No. : _____

Date of opening : _____

Time : _____

Name and address of the Tenderer : _____

Name and address of the manufacturer : _____

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

Signature and seal of the Tenderer

** The documentary proof will be a certificate from the consignee/end user with cross-reference of order no. and date in the certificate along with a notarized certification authenticating the correctness of the information furnished. If at any time, information furnished is proved to be false or incorrect, the earnest money furnished will be forfeited

Section – X
TENDER FORM

Date_____

To
(Name of Purchaser)

Ref. Your TE document No. _____dated _____

Item Ref. No.:

We, the undersigned have examined the above mentioned TE document, including amendment/corrigendum No. _____, dated _____ (*if any*), the receipt of which is hereby confirmed. We now offer to supply and deliver_____ *(Description of goods and services)* in conformity with your above referred document for the sum of _____ (total tender amount in figures and words), as shown in the price schedule(s), attached herewith and made part of this tender.

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

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

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

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

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

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

_____
(Signature with date)

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

_____

_____

SECTION – XI PRICE SCHEDULE

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

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

Total Tender price in Rupees: _____

In words: _____

Note: -

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

Signature of Tenderer_____

Name_____

Business Address_____

Seal of the Tenderer_____

Place: _____

Date: _____

SECTION – XI PRICE SCHEDULE

B) PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD

1	2	3	4	5									6	
Item No.	Brief Description of Goods	Country of Origin	Quantity (Nos.)	Price per unit (Currency)									Total price on DDP at Consignee's site	
				FOB price at port/ airport of Loading (a)	Amount & % of Indian Agency Commission ** (b)	Net FOB (Excluding Agency Commission) (a-b)	Carriage & Insurance	Net CIP by air/sea at port of entry (c+d)	Custom Duty amount as % of net CIP with CDEC & NMIC as applicable (To be reimbursed by the purchaser) **	Customs Clearance & Handling **	Loading/ Unloading, Inland transportation, Insurance for a period including 3 months beyond date of delivery and Incidental costs till consignee site **	Incidental Services (including Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site **	In foreign currency	In Indian currency
1				(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	5(e)	5(b+f+g +h+i)

**** To be quoted in Indian currency**

** To be paid in Indian Currency

Total price at consignee's site

(A) In foreign currency : 5(e)------ ----------(In figures & words) plus

(B) In Indian Rupees : 5(b+f+g+h+i) ----------(In figures & words)

Note: -

1. *If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.*
2. *The charges for Annual CMC after warranty shall be quoted separately as per Section – XI – Price Schedule C*
3. *The Tenderer will be fully responsible for the safe arrival of the goods at destination (consignee site) in good condition as per terms of contract*
4. *The bidders break-up of prices under various columns is for comparison of prices up to delivery of goods at consignee's site for tender evaluation.*
5. *The quoted price should be supported with original proforma invoice from the foreign manufacturers. The proforma invoice should indicate the percentage of Indian Agency Commission included in FOB prices. Indian Agent to be paid in Indian currency*
6. *All the components of DDP price will be paid by the tenderer. The purchaser will make the payment of DDP price after receipt of goods at consignee's site in good condition as per payment terms in the contract*
7. *The prices quoted in foreign currency in column 5(b) shall be converted in Rupees at the selling rate of exchange applicable on the date of price tender opening. The custom duty amount so worked out as percentage of net CIP value in rupees will be taken for evaluation & comparison of tenders.*

.

Signature of Tenderer_____

Place: _____ Name_____

Date: _____ Business address _____

Seal of the Tenderer_____

SECTION – XI PRICE SCHEDULE

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

1	2	3	4			5
Item 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	

* 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. *The cost of CMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.*
4. *Cost of CMC will be added for Ranking/Evaluation purpose.*
5. *The payment of CMC will be made as per clause GCC clause 21.1 (D).*
6. *The uptime warranty will be 98 % on 24 (hrs) X 7 (days) X 365 (days) basis or as stated in Technical Specification of the TE document.*
7. *All software updates should be provided free of cost during CMC period.*
8. *The stipulations in Technical Specification will supersede above provisions*
9. *The supplier shall keep sufficient stock of spares required during Annual Comprehensive Maintenance Contract period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.*

Place: _____
Date: _____

Signature of Tenderer _____
Name _____
Business address_____
Seal of the Tenderer_____

SECTION – XI PRICE SCHEDULE
D) PRICE SCHEDULE FOR TURNKEY

Item No.	BRIEF TURNKEY DESCRIPTION OF GOODS	CONSIGNEE	Turnkey price

NOTE: -

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

Place: _____
Date: _____

Signature of Tenderer _____
Name _____
Business address_____
Seal of the Tenderer_____

SECTION – XII
QUESTIONNAIRE

Fill up the Section XIX – Check List For Tenderers and enclose with the Tender

1. The tenderer should furnish specific answers to all the questions/issues mentioned in the Checklist. In case a question/issue does not apply to a tenderer, the same should be answered with the remark "not applicable"

2. Wherever necessary and applicable, the tenderer shall enclose certified copy as documentary proof/ evidence to substantiate the corresponding statement.

3. In case a tenderer furnishes a wrong or evasive answer against any of the question/issues mentioned in the Checklist, its tender will be liable to be ignored.

SECTION – XIII
BANK GUARANTEE FORM FOR EMD

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

(1) If the Tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.

(2) If the Tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-

a) fails or refuses to furnish the performance security for the due performance of the contract.
or
b) fails or refuses to accept/execute the contract.
or
c) if it comes to notice that the information/documents furnished in its tender is incorrect, false, misleading or forged

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition(s).
This guarantee will remain in force for a period of forty-five days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

_____
(Signature of the authorised officer of the Bank)

_____
Name and designation of the officer

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

SECTION – XIV
MANUFACTURER'S AUTHORISATION FORM

To
(*Name of the purchaser*)

Dear Sirs,

Ref. Your TE document No _____, dated _____

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

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

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

Yours faithfully,

_____

[*Signature with date, name and designation*]
for and on behalf of Messrs_____

[*Name & address of the manufacturers*]

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

2. Original letter may be sent.

SECTION – XV
BANK GUARANTEE FORM FOR PERFORMANCE SECURITY/ CMC SECURITY

To
(*Name of the Purchaser*)

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) (hereinafter called "the contract").

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

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

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

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

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

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

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

SECTION – XVI
CONTRACT FORM - A
CONTRACT FORM FOR SUPPLY, INSTALLATION, COMMISSIONING, HANDING OVER, TRIAL RUN, TRAINING OF OPERATORS & WARRANTY OF GOODS

_____
(Address of the purchaser's
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:

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

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

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

_____
(Signature, name and address
of the purchaser'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 Purchaser)

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

a) The Contract of Annual Comprehensive Maintenance is hereby concluded as under: -

1	2	3	4			5
Item 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, HT cables, probes, electrodes, detectors, batteries for UPS, other vacuumatic parts wherever applicable) 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 consignee's site for preventive maintenance including testing & calibration as per the manufacturer's service/ technical/operation 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.

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/Transporter:_____

(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:

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

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

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

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

SECTION – XIX
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 item?			
b.	Have you enclosed tender document fee of required amount in case the tender document has been downloaded from websites? In case the tender document is purchased from HSCC office, have you enclosed the receipt?			
c.	In case EMD is furnished in the form of Bank Guarantee, has it been furnished as per Section XIII?			
d.	In case Bank Guarantee is furnished, have you kept its validity of 165 days from 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?			

Sl No.	Activity	Yes/ No/ NA	Page No. in the TE document	Remarks
4.a.	Have you submitted satisfactory performance certificate as per the Proforma for performance statement in Sec. IX of TE document in respect of all orders?			
b.	Have you submitted copy of the order(s) and end user certificate?			
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.a.	In case of Indian Tenderer, have you furnished Income Tax Account No. as allotted by the Income Tax Department of Government of India?			
b.	In case of Foreign Tenderer, have you furnished Income Tax Account No. of your Indian Agent as allotted by the Income Tax Department of Government of India?			
9.	Have you intimated the name and full address of your Banker (s) along with your Account Number			
10.	Have you fully accepted payment terms as per TE document?			
11.	Have you fully accepted delivery period as per TE document?			
12.	Have you submitted the certificate of incorporation?			

Sl No.	Activity	Yes/ No/ NA	Page No. in the TE document	Remarks
13.	Have you accepted the warranty as per TE document?			
14.	Have you accepted terms and conditions of TE document?			
15.	Have you furnished documents establishing your eligibility & qualification criteria as per TE documents?			
16	Have you furnished Annual Report (Balance Sheet and Profit & Loss Account) for last three years prior to the date of Tender opening?			

N.B.

1. **All pages of the Tender should be page numbered and indexed.**
2. **The Tenderer may go through the checklist and ensure that all the documents/confirmations listed above are enclosed in the tender and no column is left blank. If any column is not applicable, it may be filled up as NA.**
3. **It is the responsibility of tenderer 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 – XX
Consignee List

Consignee Code	Medical Institutions	Contact Address.	Tel No
01	District General Hospital, Dickoya/Hatton, Sri Lanka	District General Hospital, Dickoya/Hatton, Sri Lanka	

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