BID DOCUMENT

Procurement of Equipment for the 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe, Myanmar

INTERNATIONAL COMPETITIVE BIDDING

BID REFERENCE: IFB No. HSCC/PUR/MEA - Myanmar/Equipment/2012 -13 dated 03.10.2012

Ministry of External Affairs, Government of India

through

HSCC (I) LTD.
(A Govt. of India Enterprises)
Plot No. 6-A, Block-E, Sector-1, NOIDA (U.P.) – 201 301.
Website http://www.hsccltd.com
Tel: 0120-2540153
Fax: 0120 - 2542447

Date: 03.10.2012

FORWARDING LETTER

To
(Prospective Bidder)_____

_____

_____

Our Ref.: IFB No. HSCC/PUR/MEA - Myanmar/Equipment/2012 -13

SUBJECT: Invitation for Bids for Supply, Installation, Testing & Commissioning of Medical Equipment for Equipment for the 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe, Myanmar

Sir

1. Enclosed please find bid document for various items.

2. The date for the Bid receipt and opening will be as per Invitation of Bid (IFB). However, in the event of the day of receipt and opening of bid being declared a holiday, the due date of receipt and opening of bids will be the following working day at the same time.

3. The bidder is eligible to quote only for the Packages for which the Bid Security is submitted as per the relevant Clause of Instructions to Bidders.

4. Pre-bid meeting will be held on 15.10.2012 at 1100 Hrs at HSCC (I) Ltd., E-6(A), Sector 1, Noida . Bidders are requested to bring with them any clarifications required in writing and submit the same during the Pre-bid meeting/discussions. Response to the queries, amendments/corrigendum/modifications, if any shall be displayed only on website **http://www.hsccltd.com or http://www.mea.gov.in or http://www.eprocure.gov.in** by within one week from the date of pre bid conference.

   Kindly acknowledge the receipt of the Bid Document.

Joint Secretary – (DPA-III)

Encl:

1. Annexure-A – Important Clauses in brief.
2. Invitation for Bids (IFB) – Details
3. Section-I - Instructions to Bidders (ITB)
4. Section-II - General Conditions of Contract (GCC)
5. Section-III - Special Conditions of Contract (SCC)
6. Formats
7. Description & Specification

CONTENTS OF THE BIDDING DOCUMENT

Annexure-A

Important Clauses in Brief, For Quick Reference only, (BIDDER MUST REFER ALL TERMS & CONDITIONS ETC. ENCLOSED WITH THE BID DOCUMENT IN DETAILS)

Instruction to Bidders (ITB)

1. Bid Security Amount	-	As given in IFB Details.
2. Price Bid	-	Please refer Clause 6 of ITB. Quoted price must include cost of 2 years Comprehensive Warranty **.**
3. Statutory Variation	-	As per Clause 6.4 of ITB, any variation in the Statutory Levies / Taxes/ Duties/ Cess or any new Levies/ Taxes/ Duties/ Cess on end product shall be payable at actual provided documentary evidence of the prevailing rate quoted at the date of submission of bid and changes at the time of actual supplies (within stipulated delivery period) is furnished.
4. Optional Items	-	As per Clause 6.6 of ITB, Bidder in their own interest should quote separately for any Optional Items of the Technical Specifications. In case the Optional items of the bid Specifications are not quoted explicitly, then the rate quoted shall be considered for the tendered main item and accordingly price comparison shall be done. No benefit shall be considered for inclusion of Optional Items in the Tendered Item.
5. Manufacturer's Authorization	-	As per Clause 7.2 (a) of ITB. In case of a Item in a package comprising group of items, then Bidder may give Manufacturer's authorisation for main equipment from the Principals and other equipment from other manufacturer's of his choice (indigenous/ imported) for which Bidder shall submit Manufacturer's Authorization as per the format given in the bid document. However the bidder has to give Manufacturer Authroisation of all the items mentioned in the package.
6. Bid Document Fee	-	See Clause 9 [B] of ITB.
7. Bid Validity	-	**180** days as per Clause 10.1 of ITB
8. Amount of Performance Security	-	10% as per Clause 24 of ITB.

9. Preliminary Examination	-	As per Clause 17 of ITB, the Bid Form, signed by the Bidder which stipulates acceptance of all the terms & conditions of bid document and shall supersede all other terms & conditions given by the bidder in their bid.

General Conditions of Contract (GCC)

10. Delivery and Installation	-	Delivery and installation of equipment/ goods shall be within 2 Months from the date of placement of order for (Package no. 1 to 30,32 – 56, 58-60) and 5 months for the (Package no. 31, 57) as per Clause No.9 of GCC
11. Insurance	-	110% of Order Value as per Clause No.10 of GCC.
12. Payment Terms	-	80% & 20%, as per Clause No. 12 of GCC.
13. Liquidated Damages	-	1.0% per week upto 10% as per Clause No.15 of GCC.
14. Warranty	-	As per Clause 26 of GCC.

Minimum Qualification Criteria as per Clause 4 of SCC

15. Minimum Qualification Criteria	-	As per Clause 4 A (iv) of SCC. Bidders should have in the past 5 years (1st June 2007 – 31st May 2012), satisfactory executed for the package items offered, at least one single order of like nature of item and quantity not less than 25% of quantity of package item offered by bidder. The bidders shall furnish "End User Certificates/Client Certificates "indicating contact details i.e. name of person, phone/fax/mobile nos. etc. End User Certificates/Client Certificates should be for those Purchase Order only for which Copies are submitted by the bidder.
16. Other eligibility requirements	-	As per Clause 4 B (ii) of SCC. The Bidder should submit audited Balance Sheets and Profit & Loss Accounts along with audited reports for the last 3 years (2008-2009, 2009-2010 and 2010-2011) to enable the purchaser to assess the financial capability of the bidder or positive net worth of the bidder.

17. Bid Form - To be submitted as per Clause 6 of SCC in the given format.

19. Components & Quantities - All components/ quantities of the line item must be quoted as per Clause 9 of SCC.

20. Turnkey activities - The offer should be on turn-key basis including all costs incidental to the same as per Clause 12 & 15 of SCC.

GOVERNMENT OF INDIA
MINISTRY OF EXTERNAL AFFAIRS

INVITATION FOR BIDS (IFB)

Dated 01.10.2012

Joint Secretary (DPA-III) Ministry of External Affairs Government of India on behalf of President of India through HSCC invites sealed bids in Single stage two bid systems for Supply, Installation, Testing & Commissioning of various Medical Equipment and Oxygen Concentrator for (1) Yangon Children Hospital, Yangon (2) Sittwe General Hospital, Sittwe, as per following:

IFB Reference: HSCC/PUR/MEA - Myanmar/Equipment/2012 -13

S. No.	Name of the Department	Types of items
1.	Operation Theater	9
2.	Medicine	5
3.	Psychiatric	1
4.	Dental	2
5.	ENT	4
6.	Pediatric	3
7.	Gynae/Obst	5
8.	Radiology	7
9.	Laboratory	6
10.	Ophthalmology	6
11.	Orthopedic	28
12.	Blood Bank	1
13.	Supply of Ambulances	1

For detailed IFB and downloading of Bidding Documents (available from 03.10.2012 onwards) please log on to www.hsccltd.co.in or www.mea.gov.in or www.eprocure.gov.in. A complete set of Bidding Documents in English may also be purchased from 03.10.2012 by any interested bidder from 1000 Hrs. IST to 1630 Hrs. IST on all working days on the submission of a written request to the HSCC (I) Ltd., Plot No. E-6 (A), Sector- 1, NOIDA, U.P and upon payment of non-refundable fee of Rs. 3500/- in the form of cash or Demand Draft from any nationalized bank drawn in favour of HSCC (India) Ltd. payable at New Delhi / Noida. The schedule of sale of Bidding Documents, Pre bid Meeting, date of submission and opening of bids has been given in the Bidding Documents. The detailed IFB, corrigendum/modification/amendments, if any, will only appear on websites www.hsccltd.co.in or www.mea.gov.in or www.eprocure.gov.in.

Joint Secretary (DPA-III)

Ministry of External Affairs, Government of India

INVITATION FOR BIDS (IFB)

IFB Reference: HSCC/PUR/MEA - Myanmar/Equipment/2012 -13

Joint Secretary (DPA-III) Ministry of External Affairs Government of India on behalf of President of India through HSCC invites sealed bids from eligible bidders, only in Single stage two bid system, for Supply, Installation, Testing & Commissioning of Medical Equipment for Equipment for the 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe, Myanmar having details as per following:

Package No.	Equipment	Qty	Bid Security in Rs.
	Operation Theater		
1.	Boyles Anesthesia Machines With CVP Monitor	2	26000
2.	Diathermy- Uni Polar/Bipolar	4	16000
3.	Multiple Parameter Patient Monitor	3	18000
4.	OT Table – General surgery	1	12000
5.	OT sky lamp (Twin)	3	110000
6.	Suction Machine	4	3200
7.	Defibrillator with recorder	1	6000
8.	Infusion Pump	1	1000
	Medicine		
9.	ECG machine	1	1920
10.	Pulse Oxymeter	4	4000
11.	Nebuliser (Adult)	2	600
12.	Fiber Optic Gastroscope (Complete)	1	60000
13.	Transcutenous Bilirubinometer	1	3000
	Psychiatric		
14.	ECT	1	1000
	Dental		
15.	Light Cure Machine	1	6000
16.	Ultrasonic scaler	1	880

Package No.	Equipment	Qty	Bid Security in Rs.
	ENT		
17.	ENT Operation Microscope	1	30000
18.	Flexible Laryngoscope with camera	1	10000
19.	Endoscopic Sinus Surgical set	1	13000
20.	Mobile OT Light	1	8000
	Pediatric -I		
21.	Open Care System Transport Incubator	1 1	18000
	General Miscellaneous		
22.	Air Conditioner (Split) for Pediatric Department	5	5000
23.	Patient Trolley for Operation Theater	4	2400
	Gynae/Obst		
24.	Labour Table	4	32000
25.	Fiber Optic Spot Light	2	4000
26.	Vacuum extractor	1	3000
27.	Mid Straight Forceps & Low Forceps	2	520
28.	Neonatal resuscitation table	2	8000
	Radiology –I		
29.	Portable Ultrasound	1	60000
30.	Portable X ray machine	1	7200
31.	CT Scan (64 Slice)	2	2400000
32.	C arm with I TV	1	33600
33.	500 ma X-ray machine with Fluoroscopy	1	120000
34.	Dark Room Accessories Cassette with intensifying screens 61/2*8, 8*10, 10*10, 12*15, 14*17	30 (06 of each size)	16000
	i. Safe Light	1	
	ii. Instant Developer Three tanks	1	
	Film Drier	1	

Package No.	Equipment	Qty	Bid Security in Rs.
	Laboratory -I		
35.	Microtom	1	14000
36.	Calorimeter (Computerised)	1	7000
37.	ABG Analyser	1	10000
38.	Auto Analyser	1	40000
39.	Hemotocrit Centrifuge	1	1000
	Ophthalmology		
40.	Phaco emulsion with instruments	1	15000
41.	Operating Microscope	1	24000
42.	B Scan Ultrasound Unit	1	20000
43.	Auto Keratometer	1	10000
44.	Bipolar Cautery	1	300
45.	Basic Cataract Eye Instrument	3	6000
	Orthopedic		
46.	Cervical collars	4	
	Gardenwells Tongs	4	
	Spinal Boards	4	
	Pneumatic Splints	4	5000
47.	External Fixator Set	1	2000
48.	Orthopedic Fracture Table	1	60000
49.	Pneumatic Tourniquets (For Upper Limb, For Lower Limb, For Children)	1	
	Esmarch Tourniquets	3	10500
50.	Basic Bone set	1	
	Plating Set	1	
	Hip Hemiarthroplasty	1	
	Interlocking intramedullary nailing set	1	
	Wiring Set	1	
	Hand set	1	
	Spine set	1	105000

Package No.	Equipment	Qty	Bid Security in Rs.
51.	Power Drills and Drill bits	1	36000
52.	Oscillating Saws	2	12000
53.	Amputation Set	1	6000
54.	Dermatone Set	1	8400
55.	K Wire	1	
	K Nail	1	
	Interlocking nails and screws	1	
	Dynamic Compression Plates	1	
	Cyclage wire	1	
	Hip Prosthetics	3	
	Dynamic Hip Screw Set	1	
	Dynamic Condyl Screws set	1	
	Spinal implants (rod and pedicle screws)	1	45600
	Blood Bank		
56.	Blood Bank Refrigerator	1	6000
	RADIOLOGY -II		
57.	MRI Scan (3 Tesla)	1	2200000
	LABORATORY -II		
58.	Flowcytometer	1	110000
	PEDIATRIC -II		
59.	Multiple Parameter Monitor (neonatal)	4	16000
	AMBULANCE		
60.	Ambulance (Transport)	2	100000

Details of the schedule and venue of various bid related activity are as per following:

Table - B

S. No.	Description	Schedule details
1.	Can be Purchased from	HSCC India Ltd. , E-6(A), Sector -1, Noida – 201301 during the working days from 03.10.2012 to 01.11.2012 between 10.00 hrs. to 16.30 hrs.
2.	Bid document can be downloaded from	**www.hsccltd.com**, **www.mea.gov.in or www.eprocure.gov.in** from 03.10.2012 to 01.11.2012
3.	Pre-bid meeting date & time	15.10.2012 at 1100 hrs.

4.	Venue of pre-bid meeting	HSCC (I) Ltd., E-6(A), Sector -1, Noida
5.	Pre-bid meeting query response date & time on the website mentioned above	22.10.2012 at website **www.hsccltd.com, www.mea.gov.in or www.eprocure.gov.in** only
6.	Last date & time for submission of bid	Package 1-20 :- 02.11.2012 by 1130 hrs. Package 21-39 :- 05.11.2012 by 1130 hrs. Package 40-60 :- 06.11.2012 by 1130 hrs.
7.	Techno-commercial opening of bids	Package 1-20 :- 02.11.2012 from 1200 hrs. Package 21-39 :- 05.11.2012 from 1200 hrs. Package 40-60 :- 06.11.2012 from 1200 hrs.
8.	Venue of bid opening	HSCC (India) Ltd., E--6A, Block-E, Sector-1, NOIDA (U.P.) Ph No. 0120-2540153

Please log on to **www.hsccltd.co.in** or **www.mea.gov.in** or **www.eprocure.gov.in** for copy of invitation for bids, items, detailed specifications, quantity, terms & conditions of tendering, Bid Security, consignee and all other relevant details like date of bid opening, last date for submission of bid etc.

1. Bid evaluation will be made on the basis of total "All inclusive lump sum price" to be offered for each package. Any part/incomplete offer in respect of a particular package shall be rejected.

2. Bidders may quote for any one or more package. but must quote for full quantity of all the items in a package otherwise bid of the bidder will be rejected. Bid Security should be given separately for each package as indicated.

3. A specimen copy of the 'Bid Document' is kept available for the inspection (Free of cost) at HSCC (I) Ltd. E-69A), Sector-1 , Noida for the benefit of the prospective bidders.

4. The bidders should quote for each package as a separate bid.

5. Bids shall be evaluated separately for each package.

6. In case goods of imported origin, a foreign manufacturer can quote through their authorized Indian agent. For the Goods of Indian Origin Indigenous Manufacturer to quote themselves or through their authorised agent

7. A complete set of Bidding Documents in English may be purchased as per schedule specified in the above table by any interested bidder from 10.00 hrs to16.30 hrs on all working days on the submission of a written request to the Chief General Manager (FA & Proc.), HSCC (India) Ltd., Plot No. 6(A), Block E, Sector-1, Noida, (U.P.) and upon payment of non-refundable fee of Rs. 3500/- in the form of cash or Demand Draft from any nationalized bank drawn in favour of HSCC (India) Ltd. payable at New Delhi / Noida. Bidding Documents requested by mail shall be promptly dispatched by Courier /Speed Post on payment of an extra amount of Rs. 200/-. HSCC will not be responsible for postal delay, if any, in the delivery of the document or non receipt of the same. Bidder

may also download the bid document from the website **www.hsccltd.co.in** or **www.mea.gov.in** or **www.eprocure.gov.in** and submit its bid by utilising the downloaded document, along with required non – refundable fee of Rs.3500/- in favour of Rs. 3500/- in the form of Demand Draft from any nationalized bank drawn in favour of HSCC (India) Ltd. payable at New Delhi / Noida. The bidder must submit the above mentioned bid document fee along with its bid failing which the bid submitted by the bidder shall be ignored. The bidder must refer ITB clause 9(B) of the bid document for details regarding payment of the bid document fee.

8. **The last date and time for submission of bid for various packages are also specified in the Table - B above at HSCC (India) Ltd., E-6(A), Sector -1 , Noida**. The Techno-Commercial bid shall be opened on the same day from **12.00** hrs. in the presence of participating Bidders or their representatives who chose to be present.

9. In the event of any of the above mentioned dates being declared as holiday/closed day in the purchaser's organization, the bid document will be sold/received/opened on the next working day at the appointed time.

10. A pre – bid conference will be held in the office of HSCC (India) LTD. E- 6(A), Sector-1 , Noida , U.P.on at 10.00 Hrs IST.

11. In case of difficulty in downloading the Bid Document from the website, the prospective bidder(s) may please contact to the HSCC (India) LTD. E- 6(A), Sector-1 , Noida , U.P.

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

The details advertisement & all subsequent updates, amendments, corrigendum's etc related to this tender will only appear on HSCC/MEA/Govt of India eprocure website.

Joint Secretary – (DPA-III)

SECTION - I

INSTRUCTIONS TO BIDDERS (ITB)

This bid document should be read in conjunction with the Press Tender Notice/Invitation for Bid, Ref. No. **HSCC/PUR/MEA - Myanmar/Equipment/2012 -13 ,** a copy of which is enclosed in this document and all clauses to be read in conjunction with any other instruction given else, where, in this document, on the same subject matter of the clause.

1. **THE BIDDING DOCUMENTS:**

CONTENT OF BIDDING DOCUMENTS:

1.1 The Goods required, bidding procedures and bid & contract terms are prescribed in this Bidding Document and includes (i) Annexure -A (ii) IFB , IFB (Details) (iii) Section I (ITB), (iv) Section II (GCC), (v) Section III (SCC), (vi) Section IV- Description & Specifications of Equipment, (vii) Section V - Formats for Bid Form and Price Schedule, Performance Statement Format, Contract Form, Manufacturer's Self Authorisation form & Manufacturer's Authorization forms, Technical Compliance, Bid Security Form, Performance Security Form (viii) Section VI - Consignee Receipt Certificate, Consignee Acceptance Certificate (ix) Section –VII - Schedule of Requirement (x) Section – VIII Check List and ECS Format.

1.2 The Bidders are expected to examine all instructions, terms & Conditions, specifications etc. of the Bid Document. Failure to furnish information required by Bid Document or submission of a Bid not in compliance to the Bid Document will be at the Bidder's risk and may result in rejection of its Bid.

1.3 COST OF BIDDING:

The Bidder shall bear all costs associated with the preparation and submission of its Bid, and Ministry of External Affairs, hereinafter referred to, as "The Purchaser" acting through M/s HSCC (I) Ltd., hereinafter referred to, as "Consultant" will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

2. **CLARIFICATION IN BIDDING DOCUMENTS:**

A prospective Bidder requiring any legitimate clarification of the Bidding Documents may notify the Purchaser in writing at the consultant mailing address indicated in the Invitation for Bids. The Purchaser will respond to any request for clarification of the Bidding Documents that it receives no later than fifteen (15 days) prior to the deadline for the submission of the bids . Purchaser response (including explanation of the query but without identifying the source of inquiry)

will be displayed on the HSCC website **www.hsccltd.co.in** or **www.mea.gov.in** or **www.eprocure.gov.in**.

3. **AMENDMENT OF BIDDING DOCUMENTS :**

3.1 At any time prior to the deadline for submission of Bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder modify the Bidding Document by amendment.

3.2 The amendment will be notified on the web-site **www.hsccltd.co.in** or **www.mea.gov.in** or **www.eprocure.gov.in**.

3.3 In order to afford prospective Bidders reasonable time to take the amendment into account in preparing their Bids, the purchaser may, at its discretion, extent the deadline for the submission of Bids.

4. **LANGUAGE OF BID :**

4.1 The Bid prepared by the Bidder and all correspondence and documents relating to the Bid exchanged by the Bidder and the purchaser, shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as it is accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the Bid, the English translation shall govern.

5. **DOCUMENTS COMPRISING THE BID :**

The two-part Bid, that is, Techno-commercial bid and Price bid prepared by the Bidder shall comprise the following:

a) Techno-commercial Bid (un-priced bid): This should interalia include the following:

i) Bid Security furnished in accordance with Clause 9 of ITB.

ii) Detailed technical specifications of **items** quoted, along with Catalogue / Literature fabrication drawings, make and model of the equipment offered with prices blanked (without indicating the prices).

iii) Statement of deviations parameter-wise from Tendered Commercial conditions.

iv) Statement of deviations parameter-wise from tendered Technical specifications (Compliance Statement) if any.

v) Authority Letter from manufacturer in case Bid is submitted by Agents;

vi) Bidders to indicate Name and Address of their Bankers; and

vii) Audited balance sheets in original or a Photostat copy thereof.

viii) Documentary evidence established in accordance with Clause 7 of ITB that the Bidder is qualified to perform the contract if its Bid is accepted and clause 4 of SCC the minimum qualification criteria.

ix) Performance statement along with the relevant copies or orders and the end user's satisfaction certificates.

x) Documentary evidence established in accordance with Clause 8 that the Goods and Ancillary to be supplied by the Bidder are eligible Goods and Services and conform to the Bidding Documents;

xi) Proof of payment of Bid Document Fee as per clause 9[B].

xii) Documents as per the check list.

b) Price Bid: The information given at Sr. No. 5 (a) (ii) above should be reproduced but with prices indicated. The prices shall be all inclusive lump-sum prices as per description given at Clause No. 6 of ITB.

N.B.

1. All the pages of the bid document should be page numbered and indexed.
2. It is the responsibility of the bidder to go through the bid document to ensure furnishing all required document in addition to above, if any

6. BID PRICE:

6.1 (a) The Price bid for the **package** to commensurate with scope of supply indicated against the **items of the package** and should indicate all inclusive lump sum price offered for each equipment/store in a **package** including cost of the stores, freight, insurance, transit cum erection insurance, packing forwarding, VAT, Excise duty, Basic Custom Duty upon production of CDEC, Inspection/Inspection certificate charges (ISO certified inspection agencies), road permit costs etc. and including charges whatsoever applicable, for equipment delivery, installation and commissioning at the designated consignee place with all the men and material required for the same and including charges, for two years comprehensive warranty service with spares with downtime not more than 1 week,. The all inclusive lump sum price should be on **CIP destination i.e** 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe, Myanmar **,** for the above and inclusive of all charges stated herein above. **The all inclusive lump sum price needs to be accompanied by a statement indicating a clear "break up" of all inclusive lump sum price of its various components constituting it along with values/amount indicating against each of such components adding to arrive at all inclusive lump sum price.** The prices are to be kept valid for acceptance up to 180 days from the date of the opening of bids. No other charges in addition will be payable on any account over and above

the lump sum price quoted. The prices should be given both in figures and words. Offers with price variation clause will not be accepted, the rates quoted in ambiguous terms such as “freight on actual basis” or “taxes as applicable extra” or “packing forwarding extra” will render the bid liable for rejection. VAT, whichever applicable will be incorporated in the above all inclusive lump sum price. Custom duty exemption certificate and octroi exemption certificate will be issued by MEA/ Government of Myanmar and price to be quoted accordingly.

Bidders in their own interest shall ascertain the eligibility of whatsoever concessions and exemptions eligible and applicable and shall advice the purchaser and quote accordingly. Bidders shall indicate the actual amount of Octroi, basic custom duty, etc. which becomes otherwise payable in the extreme event of consignee not in a position to release certificates like CDEC, Octroi Exemption Certificate etc**.**

6.1(b) **Offer for Import Origin Goods**

Offers for Import origin goods shall clearly indicate firm, "All inclusive lump sum price" and giving its break up of as FOB (Free on Board), Insurance, **CIP** (Carriage and Insurance paid to, named placed of destination), custom duty, custom clearance charges, examination, stamp duty, local transportation and Insurance etc. and all other charges for services to be rendered as explained under offer for Indigenous goods. Customs handling & clearance will be the responsibility of Bidder/Indian agent at his cost. CDEC will be provided by MEA/Government of Myanmar.

6.1 (c) The payments to both indigenous supplies as well as import supply shall not exceed the All Inclusive lump sum price.

6.2 The purchaser will evaluate Bids based on all inclusive lump sum prices quoted for each **package**.

6.3 Any variation in the Statutory Levies / Taxes/ Duties/ Cess or any new Levies/ Taxes/ Duties/ Cess on end product shall be payable at actual provided documentary evidence of the prevailing rate quoted at the date of submission of bid and changes at the time of actual supplies (within stipulated delivery period) is furnished.

6.4 The bidder shall bear all taxes / duties/ incidental charges for the parts replaced or supplied during the Warranty period.

6.5 Bidder in their own interest should quote separately for any Optional Items of the Technical Specifications. In case the Optional items of the Tender Specifications are not quoted explicitly, then the rate quoted shall be considered for the tendered main item and accordingly price comparison shall be done. No benefit shall be considered for inclusion of Optional Items in the Tendered Item.

7. **DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION:**

7.1 The Bidder shall, furnish, as part of its Bid, documents establishing the Bidder's qualifications to perform the contract if its Bid is accepted.

7.2 The documentary evidence of the Bidder's qualifications to perform the contract if its Bid is accepted, shall establish to the Purchaser's satisfaction:

a) that, in the case of a Bidder offering to supply Goods of import origin under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorised by the Goods manufacturer or producer to supply the Goods. Indigenous Manufacturers to quote themselves or through their Sole selling Agent duly authorised by them. In this regard, the Bidder should submit an Authority Letter from their manufacturers.

In case of a Item of package comprising group of items, then Bidder may give Manufacturer's authorisation for main equipment from the Principals and other equipment from other manufacturer's of his choice (indigenous/ imported) for which Bidder shall submit Manufacturer's Authorization as per the format given in the bid document.

b) The Purchaser will determine to his satisfaction whether the Bidder selected is qualified as per requirement of minimum qualifying criteria to satisfactorily perform the contract;

c) The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder as well as such other information as the Purchaser deems necessary and appropriate;

Notwithstanding anything stated above, the Purchaser reserves the right to assess the capability and capacity of the Bidder to perform the contract, should the circumstances warrant such as assessment in the overall interest of the Purchaser.

8. **DOCUMENT ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS:**

8.1 The Bidder shall furnish, as part of its Bid, documents establishing the eligibility and conformity to the Bidding Documents of all Goods and services that the Bidder proposes to supply under the contract.

8.2 The documentary conforming evidence of the Goods' and Services' conforming to the Bidding Documents may be in the form of literature, drawings and data, and shall comprise of:

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

b) **a clause-by-clause commentary on the Purchaser's technical specifications demonstrating the Goods and Services substantial**

responsiveness to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

8.3 For purpose of the commentary to be furnished pursuant to clause 8.2(b) above, the Bidder shall note that standards for workmanship, material and equipment, and reference to brand names or equipment, and reference to brand names or catalogue numbers designated by the Purchaser in its Technical Specification are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its Bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions are substantially equivalent or superior to those desired & designated in the Technical Specification.

9. BID SECURITY

9.1 The Bidder shall furnish, as part of its Bid, Security as indicated in Invitation for Bids (IFB) Table - A/ Press Tender Notice, in a separate single sealed envelope and shall be marked as given under clause 12.0 of this ITB.

9.2 The Bid Security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the security's forfeiture, pursuant to para 9.7.

9.3 The Bid Security shall be in the form of a demand Draft drawn in favour of "HSCC (I) Ltd., payable at New Delhi from a Nationalised/Scheduled bank. Bid Security can also be in the form of Bank Guarantee drawn in favour of HSCC (I) Ltd., E-6(A), Sector -1, Noida. Bid Security shall remain valid for a period of 45 days beyond the bid validity period. EMD/Bid Security Form Format has been enclosed.

9.4 Any Bid not secured in accordance with paras 9.1 to 9.3 will be rejected by the purchaser as non-responsive pursuant to Clause 17 and following which both the techno-commercial & price bid will be treated as invalid.

9.5 Unsuccessful Bidder's Bid Security will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of Bid Validity prescribed by, clause 10.

9.6 The successful Bidder's Bid Security will be discharged upon the Bidders furnishing the performance Security, pursuant to Clause 23 & 24.

9.7 The Bid Security may be forfeited:

a) if a Bidder withdraws or modifies its Bid during the period of Bid validity; or

b) in the case of a successful Bidder, if the Bidder fails:

i) to sign the contract in accordance with Clause 23 ;

ii) to furnish Performance Security in accordance with Clause 24.

iii) if the bidder does not accept an error correction pursuant to clause 17.2

9.8 No interest will be payable by the Purchaser on the Bid Security.

9 [B] **Bid Document Fee**:

Bid Document Fee is Rs.3500/-. Bid Document Fee paid is non-refundable and the Bid Documents are non-transferable. Bidders will deposit the Bid Document Fee at HSCC office at Noida. Fee can be deposited either in cash or through crossed account payee Demand Draft drawn in favour of HSCC (I) Ltd. drawn on any nationalized/Scheduled bank payable at NOIDA/New Delhi, before date & time of submission of bid. The Bids will not be accepted without proof of payment of the Bid Document Fee.

A bidder can quote for one or more packages by paying just once for the bid document fee of Rs.3500/-.

However, separate bid shall be submitted for each package.

The bidder can contact Consultant, for any clarification in the matter.

10. **PERIOD OF VALIDITY OF BIDS:**

10.1 **Bids shall remain valid for 180 days** after the date of Bid opening prescribed by the Purchaser, pursuant to Clause 13. A Bid expressed to be valid for a shorter period may be rejected by the Purchaser as non-responsive.

10.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing or by cable. The Bid Security provided under Clause 9 shall also be extended suitably. A Bidder may refuse the request without forfeiting its Bid Security.

A bidder granting the request will not be required nor permitted to modify its bid.

11. **PREPARATION AND SIGNING OF BID:**

11.1 The Bidder shall prepare single stage Two part bids, i.e. Techno Commercial Bid (unpriced) in duplicate and Price Bid in duplicate clearly marked as 'original' and 'copy' in addition shall enclose Bid Security in a single sealed third envelope.

11.2 The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or persons duly authorised to bind the Bidder to the contract. The later authorisation shall be indicated by written power-of-attorney accompanying the

Bid. All the pages of the Bid must be page numbered, initialled and stamped by the person or persons signing the Bid.

11.3 The Bid shall contain no inter-lineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.

12. **SUBMISSION OF BIDS:**

12.1 SEALING AND MARKING OF BIDS:

The Bidders shall seal the Bid in an inner and an outer envelope duly marking the envelopes, separately as “Techno-commercial Bid (un-priced)”, “Price Bid” and “Bid Security & Copy of Proof of payment of Bidding Document Fee” in a third envelope and all these three envelopes enclosed in another sealed envelope duly marked.

12.2 The inner and outer envelopes shall be:

(a) Addressed to Chief General Manager (FA & Proc.), HSCC (I) Ltd., Plot No. E-6 (A), Sector - 1, NOIDA – 201 301 as indicated in IFB:

(b) bear (the Project name), the Press Tender Notice reference, and the words "DO NOT OPEN BEFORE……..(the bidder has to put the date and the time of bid opening)

12.3 The inner envelope shall indicate the name and address of the Bidder.

12.4 If the outer envelopes is not sealed and marked as required in Para 12.2, the Purchaser will assume no responsibility for the Bid's misplacement or premature opening.

13. **DEADLINE FOR SUBMISSION OF BIDS i.e. TECHNOCOMMERCIAL BID (UNPRICED) AND PRICE BID INCLUDING BID SECURITY**

13.1 As indicated in the Press Tender Notice/IFB.

13.2 Bids must be received by the Purchaser on the specified date and time as mentioned in the bid document. In the event of due date being declared a closed holiday then the due date for submission of Bids and the opening of Bids will be the following working day at the appointed time.

13.3 The Purchaser may at its discretion extend this deadline for the submission of Bids by amending the Bidding Documents in accordance with clause 3, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

14. LATE BIDS & MODIFICATIONS/WITHDRAWAL OF BIDS

14.1 Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the purchaser, pursuant to clause 13 will be rejected.

14.2 The Bidder may modify or withdraw its bid after the bid's submission provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.

14.3 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of ITB Clause 12. A withdrawal (but not modification) notice may also be sent by cable or fax but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.

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

14.5 No bid may be withdrawn or modified in the interval between the deadline for submission of bids and the expiry of the period of bid validity withdrawal or modification of a bid during this interval may result in the Bidder's forfeiture of its security, pursuant to ITB Clause 9.7.

15. OPENING OF BIDS BY PURCHASER:

15.1 The Purchaser will open the Techno-commercial bid only, in the presence of Bidder's representatives who choose to attend, in the HSCC office, on the due date and time as mentioned in the IFB. The Bidder's representatives who are present shall, sign a register evidencing their attendance. The Bidders' representatives shall furnish letter of Authority as per bidding document format from their principals to attend the Bid opening.

15.2 The Bidders' names, the presence or absence of the requisite Bid Security and such other details in brief as the Purchaser, at its discretion, may consider appropriate will be announced at the bid opening.

15.3 Price Bid of bidders whose offers (Techno-commercial bid) are found technically and commercially suitable and comply with the Bid will only be opened on a date to be intimated later to these bidders.

15.4 Bids that are not opened and read out at bid opening shall not be considered further for evaluation irrespective of the circumstances. Withdrawn bids shall be returned unopened to the bidders.

15.5 Non-submission of Bid Security & Bid document fee by any bidder will render the bidder invalid and such bidder’s bid will not be opened.

16. **CLARIFICATION OF BIDS:**

16.1 To assist in the examination, evaluation and comparison of Bids the Purchaser may, at its discretion, ask the Bidder for a clarification of its Bid.

16.2 Clarifications sought & reply received to be all in writing, no change in price or substance of Bid permitted.

17. PRELIMINARY EXAMINATION:

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

17.2 Arithmetical errors will be rectified on the following basis: - If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected (unless in the opinion of the purchaser there is an obvious error in the unit rate, in which case the total price against item would prevail and unit rate shall be corrected accordingly). If the supplier does not accept the correction of the errors, its Bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.

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

17.4 Prior to the detailed evaluation, pursuant to ITB Clause 18, the Purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Without prejudice to the generality of the foregoing deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 6) Warranty (GCC Clause 26). Force Majeure (GCC Clause 17), Applicable law (GCC Clause 22) and Taxes & Duties (GCC Clause 24) will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself.

In case of any deviation to the Warranty (GCC Clause 26), Force Majeure (GCC Clause 17), Applicable law (GCC Clause 22) and Taxes & Duties (GCC Clause 24) in the Techno-commercial/ Price Bid, the Bid Form, signed and accepted by the Bidder, which stipulates acceptance of all the terms & conditions of tender document, shall supersede all other terms & conditions given in the tender by the Bidder.

17.5 In normal circumstances if a bid is not substantially responsive, it will be rejected by the purchaser.

18. **EVALUATION AND COMPARISON OF BIDS:**

18.1 The Purchaser will evaluate and compare the Bids on the basis of techno-commercial evaluations followed by price bid evaluation.

19. **CONTACTING THE PURCHASER:**

19.1 Subject to Clause 16, no Bidder shall contact the Purchaser on any matter relating to its Bid from the time of the Bid opening to the time the contract is awarded.

19.2 Any effort by a Bidder to influence the Purchaser in the Purchaser's bid evaluation, Bid comparison or contract award decisions may result in the rejection of the Bidder's Bid.

20. **AWARD OF CONTRACT:**

20.1 **AWARD CRITERIA:**

Subject to Clause 22, the Purchaser will award the contract to the successful Bidder whose Bid has been determined to be techno commercially acceptable and lowest, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

21. **PURCHASER'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD:**

The Purchaser reserves the right at the time of award of contract to increase/decrease the total quantity of Goods and services for which bids have been invited by up to 25% of their value (rounded to the next whole number).

22. **PURCHASER'S RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS:**

The Purchaser reserves the right to accept or reject any Bid and annul the Bidding process and reject all Bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds of the purchaser's action. The purchaser is not bound to accept the lowest or any bid.

23. **NOTIFICATION OF AWARD AND SIGNING OF CONTRACT:**

23.1 Prior to the expiry of the period of Bid validity, the Purchaser will notify the successful Bidder by registered post/speed post/courier/fax that its Bid has been accepted by enclosing detailed order copy in duplicate. This will constitute the formation of the contract and date of the contract shall be the date of each notification.

23.2 Upon the successful Bidder's returning back one copy of the order within 10 days duly stamped and signed as token of acceptance of the order on the said laid out terms and conditions and also furnishing to Performance Security i.e. Security Deposit pursuant to Clause 24, the Purchaser will promptly discharge Bid

Security of successful bidder, pursuant to Clause 9, and also discharge Bid Security of unsuccessful bidders, pursuant to clauses 9.5.

24. **PERFORMANCE SECURITY:**

24.1 Within 10 days of the date of notification under Clause 23.1 the Successful Bidder shall furnish the Performance Security/Security Deposit for 10% of the contract price in the form of a Demand Draft/ Bank Guarantee drawn in favour of HSCC (India) (I) Ltd. payable at Noida or New Delhi from a Nationalised/Scheduled bank.

24.2 Failure of the successful Bidder to comply with the requirement of Clause 23 and Clause 24 shall constitute sufficient grounds for the annulment of the award and the Contract and forfeiture of the Bid Security, and in such event the Purchaser may go for re-tendering.

25. **LOCAL CONDITIONS:**

It will be imperative on each Bidder to fully acquaint himself of all the local conditions and factors that would have any effect on the performance of the contract and cost of the Goods. The Purchaser shall not entertain any request for clarifications from the Bidder regarding such local conditions. No request for the change of price, or time schedule of delivery of Goods shall be entertained after the Purchaser accepts the Bid.

Joint Secretary – (DPA-III)

SECTION - II

GENERAL CONDITIONS OF CONTRACT (G.C.C.)

1. **DEFINITIONS:**

1.1 In this contract, the following terms (whether or not spelled with an initial capital letter) shall unless the context otherwise requires be interpreted as indicated.

(a) "The contract" (or "this contract") means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein and includes the Instructions to Bidders (ITB).

(b) "The Contract Price/All inclusive lump sum Price" means the price payable to the supplier under the contract for the full and proper performance of its contractual obligations;

(c) "The Goods" means all of the equipment, machinery, and/or other materials, which the Supplier is required to supply to the Purchaser under the contract;

(d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services;

(e) "The Purchaser" means the organisation purchasing the Goods i.e., Ministry of External Affairs , Government of India, South Block, New Delhi acting through their Consultants HSCC (I) Ltd.

(f) “Consultant” shall mean M/S. HSCC (INDIA) LTD, having its Corporate Office at E-6(A), Sector-1, Noida (U.P.)-201301 and registered at 205, East End Plaza, Plot No.-4, D.D.A.- L.S.C., Center-II, Vasundhra Enclave, Delhi- 110 096

(g) "The Supplier" means the individual or firm supplying the Goods and services under this contract;

(g) "Consignee" means where the Goods are required to be delivered at the destination, i.e. 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe, Myanmar

2. **APPLICATION:**

2.1 These General "Conditions" shall apply to the extent that provisions in other parts of contract do not supersede them.

3. **STANDARDS:**

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

4. **USE OF CONTRACT DOCUMENTS AND INFORMATION:**

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

4.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any documents or information enumerated in para 4.1 except for purposes of performing the contract.

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

5. **PATENT RIGHTS:**

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

6. **CONTRACT PERFORMANCE SECURITY (SECURITY DEPOSIT):**

6.1 Within 10 days after the Supplier’s receipt of award notification and order copies of the contract, the Supplier shall furnish performance Security to the Purchaser in the amount specified (IFB) in the document.

6.2 The Performance Security as deposited by the supplier shall be used by the purchaser as compensation for any loss or any dues recoverable from the supplier (including liquidated damages where applicable) resulting from the Supplier's failure to complete its obligations under the contract. The Purchaser may retain the whole or such part of it as it considers to be sufficient compensation for such loss. In such an event the balance amount (if any) shall be returned to the supplier not later than the expiry of the period stated in clause 6.3.

6.2 The Performance Security unless deposited under GCC clause 6.2 will be discharged by the purchaser not later than 30 days following the date of

completion of the suppliers performance obligations, including the warranty obligations under the contract.

7. **INSPECTION & TESTS:**

7.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the contract. The Special Conditions of Contract and/or the Technical Specifications specify what inspection and tests the Purchaser requires and where they are to be conducted then such specification shall be complied with for the Goods to which it applies. The Purchaser shall notify the Supplier in writing of the identity of any representative retained for these purposes.

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

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

7.4 The Purchaser's right to inspect, test and where necessary reject the Goods after the Goods' delivery to the Consignee shall in no way be limited or waited by reasons of the Goods having previously been inspected, tested and passed by the Purchaser or his representative prior to the Goods, shipment.

7.5 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 26.

Nothing in Clause 7 shall in anyway release the Supplier from any warranty or other obligations under this contract.

8. **PACKING:**

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

8.2 The packing marking shall show the description of quantity of contents, the name of the consignee and address, the gross weight of the packages, the name of the supplier with a distinctive number of mark sufficient for purposes of identification. Each package shall contain:

(a) a packaging note quoting the name of the purchaser
(b) the number and date of order
(c) nomenclature of the goods
(d) schedule of parts for each complete equipment giving part number with reference to assembly

8.3 Not withstanding anything stated in this clause, the supplier shall be entirely responsible for loss, damage, deterioration, and depreciation of the goods due to faulty protective & insecure packing and shall arrange for prompt replacement.

9. DELIVERY and INSTALLATION:

9.1 Delivery and Installation of the Goods upto the site shall be made by the Supplier as per following from the date of placement of order or from the date of establishment of Letter of credit in favour of principals in case of imported origin Goods unless specified in IFB :

S. No.	Package No	Time Period
1	1 to 30,32 – 56, 58-60	2 months
2	31, 57	5 months

In case spare parts and tools are also ordered with the Goods, the Bidder will undertake to offer spare parts and tools for delivery along with the main Goods only and not before. The name of consignee are : 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe.

10. INSURANCE:

10.1 The Goods supplied under the contract shall be fully insured including transit insurance against various risks as required or approved by the Purchaser arising out of transportation, storage, delivery, erection, installation, testing and commissioning at his cost up to delivery and installation at site. Insurance policy shall be valid upto date of Installation and commissioning of equipment. Proof of Insurance shall be made available before issuance of dispatch clearance.

10.2 For delivery of goods at site, the insurance shall be obtained by the supplier in an amount equal to 110% of the value of the goods from "Ware house to ware house" {final destination(designated consignee place)} on "all risks" basis including war, risks, strikes, erection, storage etc. In any event the Goods are at the suppliers risk until delivery, Installation & Commissioning at designated consignee place. The claimant of the insurance shall be HSCC (I) Ltd., Noida.

11. **TRANSPORTATION:**

To be arranged by the supplier up to consignee duly insured as per clause 10.

12. **PAYMENT:**

Both for Indian origin goods and for import origin goods. To be read in conjunction with clause 6.0 of ITB.

12.1 The Supplier's request (s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing as appropriate, the Goods delivered and Services performed and by shipping documents, such Goods to be duly certified and wherever applicable supported with documentary evidence in support there of Satisfactory installation duly certified by authorized personnel of 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe./MEA authorities shall accompany for release of balance payment.

12.2 FOR INDIGENOUS GOODS & IMPORTED ORIGIN GOODS QUOTED IN INDIAN RUPEES:

Both, for Indian origin goods quoted directly by Indian manufactures only as well as for imported origin goods quoted in Indian Rupees by Indian Agents duly authorized by foreign manufacturers as per tender conditions. To be read in conjunction with clause 6.0 of ITB.

i) **80% of the invoice value** will be made within 30 days as per provisions in Clause GCC 15 on receipt of following necessary documents:

1). Country of Origin Certificate.
2). Quality & Quantity Certificate.
3). Packing List.
4). Internal Factory Inspection Report.
5). Warranty Certificate.
6). ISO 13485 & 9001 Certificates.
7). Copy of Airway Bill/Bill of Lading (in case of imported goods).
8). Copy of Bill of Entry (in case of imported goods).
9). Insurance certificate valid up to installation & commissioning of equipment at site
10). ISO Certified Third Party Inspection Report for conformity to contract specifications.
11). Invoice.
12). Dispatch Clearance Certificate of MEA/HSCC.
13). Consignee Receipt Certificate from Medical Superintendent of 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe.
14). Transportation Invoice.

ii) **Balance 20% payment** subjected to clause 6.1 of ITB will be released within 30 days, upon receipt of satisfactory Installation & Commissioning Certificate from consignee. Invoice as per provisions in Clause GCC 15.

All such Invoices/Certificates/Reports as mentioned above shall be addressed as: **Ministry of External Affairs, Government of India, South Block, New Delhi through HSCC (I) Ltd., Noida**

12.3 **FOR IMPORT ORIGIN GOODS:**

Payment will be made by opening of Irrevocable Letter of Credit (LC) in favour of the Foreign manufacturer, covering 100% of the Net FOB value of the equipment with the condition of remittance of **80% of net FOB value + Freight & Insurance charges** through LC on shipment and on submission of the following necessary documents from foreign manufacturer:

1) Country of Origin Certificate
2) Quality & Quantity Certificate
3) Packing List
4) Internal Factory Inspection Report
5) Warranty Certificate
6) ISO 13485 & 9001 Certificates
7) Airway Bill/Bill of Lading
8) Insurance certificate valid up to installation & commissioning of equipment at site
9) ISO Certified Third Part Inspection Report for conformity to contract specifications
10) Invoice of LC amount
11) Dispatch Clearance Certificate of MEA/HSCC
12) Consignee receipt certificate as per the bid document format

Balance 20% of the net FOB value shall be released to foreign manufacturer through Irrevocable Letter of Credit after receipt of satisfactory Installation & Commissioning Certificate and Consignee Acceptance Certificate from Medical Superintendent of 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe.

For equipment quoted in foreign currency, payment shall be made through LC at an exchange rate prevailing on the date of negotiation of LC. The LC will be opened by the HSCC (I) Ltd. through its accredited bank.

Indian Agency Commission along with other charges (wherever applicable) towards turnkey activities, local supplies, custom duty, custom clearance, local transportation, Installation etc. shall be released within 30 days upon after receipt of following necessary documents:

1). Satisfactory Installation & Commissioning Certificate and Consignee Receipt Certificate from Medical Superintendent of 1. Yangon Children Hospital, Yangon Myanmar and 2. Sittwe General Hospital, Sittwe/MEA
2). Transportation Invoice

3). Bill of Entry
4). Proof of Custom Duty & Custom clearance charges
5). Invoice
6). Warranty Certificate
All such Invoices/Certificates/Reports as mentioned above shall be addressed as:
Ministry of External Affairs, Government of India, South Block, New Delhi through HSCC (I) Ltd., Noida
Indian Agency Commission shall be paid considering the exchange rate prevailing on the
date of placement of Order/Notification of Award.

12.4 **The stores (both Indian & Import origin goods) should be dispatched only after ensuring prudent inspection carried out from ISO Certified third party Inspection Agencies viz. LLOYDS/SGS/CSIO/ERTL etc. and proof of such documents submitted to HSCC for the goods inspected. Inspection Agency shall carry-out testing of equipment and submit test reports along with confirmation of point-wise technical compliance of the equipment with respect to tender specifications. MEA/HSCC on receipt of such documents shall issue Dispatch Clearance Certificate.**
To enable MEA/HSCC to issue Dispatch Clearance Certificate, supplier/manufacture is to furnish following documents:

1. Country of Origin Certificate
2. Quality & Quantity Certificate
3. Packing List
4. Internal Factory Inspection Report
5. Warranty Certificate
6. ISO 13485 & 9001 Certificates
7. ISO Certified Third Party Inspection Report for conformity to contract specifications

All such Certificates/Reports as mentioned above shall be addressed as:
Ministry of External Affairs, Government of India, South Block, New Delhi through HSCC (I) Ltd., Noida

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

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

12.5 Payment for turnkey activities, local supplies, custom duty, custom clearance, local transportation, Installation etc. (wherever applicable) shall be released as per Clause GCC 12.3

13. **PRICES:**

13.1 Prices charged by the Supplier for Goods delivered and Services performed under the contract shall not vary from the prices quoted by the Supplier in its Bid.

13.2 In receipt of offer in foreign currency, the exchange rate prevailing on the date of opening of bid (Techno Commercial bid) shall be taken for comparison of bid prices.

14. **DELAYS IN THE SUPPLIER'S PERFORMANCE:**

14.1 The time and the date specified in the Contract for the delivery and installation commissioning & training of the Goods shall be deemed to be the essence of the Contract.

14.2 Delivery, installation and commissioning & training of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.

14.3 An unexcused delay by the Supplier in the performance of its delivery, installation& commissioning Training obligations and performance of Services shall render the Supplier liable to any or all of the following sanctions, forfeiture of its Performance Security in accordance with Clause 6.2, imposition of liquidated damages and/or termination of the Contract for default.

14.4 If at any time during performance of the Contract, the Supplier or its sub-Supplier (s) should encounter conditions impending timely delivery of the Goods and performance of the Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice the Purchaser shall evaluate the situation and may at its discretion extend the supplier's time for performance by such period as the purchaser may think fit and shall in the case of Force Majeure extend such time by such period as the Purchaser shall consider fair and reasonable. Clause 14.1 stands extended to include this.

15. LIQUIDATED DAMAGES:

15.1 Subject to force majeure, if the Supplier fails to deliver, install and commission & training any or all of the Goods or perform the Services within the time period(s) specified in the Contract and during the warranty period_ the Purchaser shall, without prejudice to its other remedies under the Contract or extended under clause 14.3, deduct from the Contract price, as Liquidated Damages, a sum equivalent to 1.0% of the price of the delayed Goods or unperformed Services for each week of delay until actual delivery or performance, up to a maximum deduction of 10% of the value of the delayed portion of work. Once the maximum is reached, the Purchaser may consider termination of contract.

16. TERMINATION FOR DEFAULT:

16.1 The Purchaser may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, terminate the Contract in whole or in part.

(i) If the Supplier fails to deliver any or all of the Goods within the time period(s) specified in the Contract, or any extension thereof granted by the purchaser pursuant to Clause 14, or
(ii) If the Supplier fails to perform any other obligation(s) under the Contract.
(iii) If the supplier, in the judgment of the Purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract

For the purpose of this clause

"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.

"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 Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non- competitive levels and to deprived the Borrower of the benefits of free and open completion.

16.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to para 16.1, and without prejudice to the Purchaser's other remedies, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered or unperformed and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods. However, the Supplier shall continue performance of the Contract to the extent not terminate.

17. FORCE MAJEURE:

17.1 Notwithstanding the provisions of Clauses 6,14,15,16, the Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages or termination for default if and
to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

17.2 For purposes of this clause and clauses 14.3, 15.1 & 17.3 "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault of negligence and not foreseeable. Such events may include but are not restricted to, acts of the Purchaser either in its sovereign or contractual capacity, wars or sovereign or contractual capacity wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

17.3 If a Force Majeure situation arises, the supplier shall promptly notify the purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

17.4 In case of Force Majeure event the purchaser is unable to fulfill its contractual commitment and responsibility, the purchaser will notify the supplier accordingly and subsequent actions taken on similar lines described in above sub-paragraphs. In such event, supplier shall not raise any claim against the Purchaser.

18. TERMINATION FOR INSOLVENCY:

18.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, without compensation to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent (which events shall of themselves be a breach of the contract on the part of the supplier), provided such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

19. TERMINATION FOR CONVENIENCE:

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

19.2 The goods that are complete and ready for shipment within 20 days after the Supplier's receipt of notice of termination shall be purchased by the Purchaser at the Contract terms and prices. For remaining Goods the Purchaser may elect:

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

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

20. RESOLUTION OF DISPUTE

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

20.2 If, after thirty (30) days from the commencement of such informal negotiations, the Purchaser and the Supplier have been unable to resolve amicably a Contract dispute either party may require that the dispute be referred for resolution to the Indian Arbitration by Indian Council of Arbitration in accordance with the Arbitration & Reconciliation Act 1996 with latest amendments if any.

20.3 Venue of Arbitration shall be at **New Delhi**.

20.4 The language of the Arbitral proceedings shall be English.

21. **GOVERNING LANGUAGE:**

21.1 The Contract shall be written in the language of the Bid (English Language) as specified by the Purchaser. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in that same language.

22. **APPLICABLE LAW:**

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

23. **NOTICES:**

23.1 Any notice given by one party to the other pursuant to the contract shall be sent in writing or by telegram or cable and confirmed in writing to the address specified for that purpose in the Special Conditions of Contract.

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

24. **TAXES AND DUTIES:**

24.1 Supplier shall be entirely responsible for all taxes, duties, license fees etc. incurred until delivery of the contracted Goods to the Purchaser.

25. **The Bid Security of successful bidders will be released after receipt of contract performance security and contract formation under clause of 23.1 of ITB.**

26. **WARRANTY (For Equipment, Accessories, Software & Hardware):**

26.1 The supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent of current models and incorporate all recent improvements in design and materials **both in Hardware and Software**, unless other wise provided in the Contract. The supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship or from any act or omission of the Supplier that may develop under normal use of the supplied Goods in the conditions prevalent in India.

26.2 This warranty shall remain valid (subject to clause 26.4) for 24 months after the Goods have been satisfactorily installed & commissioned as duly certified by the

appropriate authority, whichever is earlier. The comprehensive Warranty shall include free services and free provision of spares. It shall be the responsibility of supplier (or their principal) to ensure all consumables/reagents/necessary spares are available continuously without interruption.

26.3 The Purchaser shall promptly notify the supplier in writing of any claim arising under this warranty.

26.4 Upon receipt of such notice, the supplier shall, with all reasonable speed, repair or replace the defective Goods or parts thereof, free of cost at the site. The Supplier shall take the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the purchaser for the replaced parts thereafter. The warranty period will stand extended accordingly. The supplier shall ensure a minimum uptime guarantee of 95% for the equipment.

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

26.6 The Purchaser reserves the right to reject any set of equipment found defective within 30 days after the date of acceptance of equipment. The cost towards replacement will have to be borne by the supplier.

26.7 During the Warranty period, the supplier is required to visit the consignee's site at least once in 6 months commencing from the date of installation for preventive maintenance of the goods.

26.8 Nothing in this clause 26 shall affect the Purchaser's other rights under the Contract or in Law.

27 <u>INSPECTION & TEST PROCEDURES:</u>

(i) The Stores will be inspected at MEA/HSCC's sole discretion before packing at the manufacturer's premises and on receipt at site by MEA/HSCC nominated representatives. The decision of MEA/HSCC (I) Ltd. in the matter of acceptability of the stores will be final and binding. In case MEA/HSCC desires, the demonstration/inspection and trials/testing will have to be got conducted at site at no extra cost.

28 SUPPLY, INSTALLATION AND COMMISSIONING AND WARRANTY SERVICING: (IN RESPECT OF EQUIPMENTS)

The Supply, Installation and Commissioning of the equipment & trial run have to be done at site by the supplier/or his authorised agent. No additional charges for installation and commissioning will be paid. The Supplier and Indian agent shall be liable for this service for goods of import origin.

29 TRAINING:

Free demonstration, operational and maintenance training will have to be provided at the site of installation to the assigned personnel, during trial period.

For high end equipment like CT Scan and MRI training and hand holding should be provided for radiologists and technicians for a period of 3 months onsite at the expense of supplier and the supplier has to depute its technical person onsite for three months for the above purpose.

30 MANUALS:

The Supplier has to provide **three sets (two in hard copy and one in CD)** of operation manuals and maintenance manuals along with each equipment to each consignee and one set of Operation & Maintenance Manual is to be provided to Purchaser while claiming 80% payment. The maintenance manual should give details up to component level and the faultfinding procedure with detailed illustrations.

31 JURISDICTION:

All disputes arising out of the contract shall (subject to clause 20) be subject to the jurisdiction of the appropriate court at New Delhi only.

<u>Special Note:</u> (Forming part of SCC).

i) MEA/HSCC is not bound to accept the lowest tender or any tender or to assign any reasons for non-acceptance.
ii) MEA/HSCC reserves right of selection of equipment without restrictions to price factor alone.
iii) Deleted

Joint Secretary – (DPA-III)

SECTION – III

SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever, there is a conflict, the provisions herein shall prevail over the General Conditions of Contract.

1. The Performance Security unless deposited under GCC Clause 6.2 will be discharged by the purchaser not later 30 days following the date of completion of the supplier's performance obligations, including the Warranty obligations under the contract.

2. Insurance: For delivery of goods at site, the insurance including transit and installation & commissioning insurance shall be obtained by the supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destination – designated consignee place) on "all risks" basis including war, risks, strikes, erection, storage etc. In any event the Goods are at the Supplier's risk until delivery and installation & commissioning at site.

3. For Import origin goods quoted, the Supplier or the Indian agent shall have to arrange at his own cost for all import/custom clearance handling formalities. Purchaser upon advance notice from supplier shall only provide the CDEC (Custom Duty Exemption Certificate), Octroi Exemption Certificate, etc. wherever required.

4. A. Minimum Qualification Criteria (For Equipment):

Qualifying Minimum Requirements:
(To be supported with documentary evidence strictly as per instructions given as foot-note under Proforma for Performance Statement)

i) Bidder should be a regular manufacturer or an authorised Indian agent for the type of stores offered.

ii) An authorised Indian agent could be for (a) an imported origin equipment duly authorized by the foreign principal quoting through the Indian agent (b) Sole selling Agent duly authored by the Manufacturer for Indian origin equipment.

iii) Indigenous Manufacturers to quote themselves or through their Sole selling Agent duly authored by them.

In case of item of a package comprising group of items, then Bidder may give Self Manufacturer's authorisation for main equipment and for associated equipment from other manufacturers of his choice (indigenous/imported) for which Bidder shall submit Manufacturer's Authorization as per the bid format.

iv) Bidders should have in any of the the past 5 years (1st June 2007 – 31st May 2012), satisfactory executed for the **Package** offered, at least one single order of like nature of item and **quantity not less than 25%** of quantity of **Items in the**

package offered by bidder. The bidders shall furnish "End User Certificates" indicating contract details i.e. name of person, phone/fax/mobile nos. etc. Bidders shall also certify that they have not supplied equipment with similar specification to any other organisation, at prices lower than the rates offered in response to the present IFB.

v) Foreign bidder's performance report shall include same Indian agent by which this current bid is quoted.

vi) Alternatively foreign bidder's performance in India could be seen in isolation in the event of quoting through new Indian agent duly authorized by him.

B. Other eligibility requirements:

i) Bidder should have a present installed capacity/sales capacity to match the delivery requirements.

ii) The Bidder should submit <u>audited balance sheet and Profit & Loss Account along with auditor's report for the last 3 years</u> (2008-09, 2009-2010 and 2010 - 2011) duly signed and stamped by the Chartered Accountant with their member number to enable the purchaser to assess the financial capability of the bidder or positive net worth of the bidder.

Not withstanding anything stated above, the purchaser reserves the right to assess the capability and capacity of bidder to perform the contract.

iii) Clause 13 shall apply for the relevant items.

Note: The purchaser reserves the right to ask for a free demonstration of the quoted equipment at a predetermined place acceptable to the purchaser for technical acceptability as per the tender specifications, before the opening of the price bid.

5. Five years (1st June 2007 – 31st May 2012)Performance Statement: Bidders should give performance statement of orders for similar Package items satisfactorily executed to sizeable value both in quantity & cost in comparison to Package items offered in the price bid.

6. **Bid Form: To be submitted by all bidders as per format enclosed. In case Bid Form is not submitted by the Bidder as per format, their bid shall be liable for rejection.**

8. Deleted

9. Miscellaneous:

a) While quoting for the **package**, all components and quantities specified in the **package** must be quoted. The purchaser will evaluate bid on Package wise basis. **The bid shall stand rejected if all the components and quantities specified in the pacakge are not quoted.**

b) Evaluation will be made on the basis of total all inclusive lump sum price value offered for the each package.

c) The break up of "all inclusive lump sum price" of the **package items**; is also to be furnished in the price offered by bidder.

d) i) Bidders are requested to quote for the proven and time tested renowned brands of equipment/accessories having countrywide reputation and acceptance. The Purchaser, however, reserves the right to decide on it's own as to which of the brand/makes quoted by the bidders are to be considered or not to be considered as proven/reputed, for the purpose of evaluation.

ii) No bidder for the purpose of offering lowest price shall quote for local brands/refurbished/ reconditioned stores, which are not time tested, as these would be liable for rejection.

iii) Although bidder may quote for more than one brand for the same price, the purchaser shall have the right to select the brand amongst alternatives quoted and its decision will be binding on the bidder.

iv) **Bidder in their own interest can quote for items and services separately if in the view of bidder, the purchaser unknowingly omitted or expressively not indicated the requirements of items/services without which, the commissioning or acceptance or otherwise of the equipment of the bidder will be a doubtful proposition.**

e) The Supplier directly or through his Indian agent wherever applicable will be liable for the contractual obligation including delivering the ordered goods and for undertaking satisfactory installation and commissioning etc. including warranty servicing.

10. Bidders are to inspect the site premises and the proposed place of installation of equipment and certify their satisfaction that the proposed site is suitable and compatible for the installation of the offered unit. Bidder may take up with consignee for their site visit.

11. Bidders are to ascertain normal power supply fluctuation range and to certify that it is compatible with the offered unit of equipment. A guarantee to such effect should be offered by each bidder along with details of electrical appliances proposed to be deployed for taking care of such fluctuation.

12. Bidder's offer should be on a "Turn Key" basis for inclusion of all costs incidental to the same.

13. For X-Ray and related equipment in any **package** only such of those bidders who have the approval/authorisation of BARC/AERB shall only be considered and this clause to be read in conjunction with qualifying criteria clause.

14. The substantial responsiveness of bidder will be determined as per MEA/HSCC'S own qualitative internal assessment in consultation with client/consignee, and with reference to bidders reasonable level of compliance to various stipulated terms and conditions in

the Bid Document, Compliance to submission of various documentary supporting evidence, other related information along with the bid, the degree of performance status, and high order value execution for prestigious good clients etc. weight age given to bidder on qualitative basis by the evaluation committee, besides other merits of the bidder such as proven source market reputation, past experience and feed back gained in respect of bidder etc. Accordingly, in line with the above, the purchaser reserves the right as not liable to bidder on account of this prudent internal assessment and that bidder shall have not claims whatsoever.

15. 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. regulation, furniture, servo stabilisers, U.P.S. etc. required for successful installation testing and commissioning of the system and the "All inclusive lump sum price" should include all such costs, each **package** is to be considered a package in itself and suppliers to execute the order package on a "turn key basis" including all civil, electrical, air – conditioning & allied requirement for the equipment, at the site.

16. Every effort has been taken to put forth general specifications in this bid documents. If inadvertently, any of the specification drawn happens to match with the specifications of any one particular firm's product only, in respect of critical parameters, than it will not automatically mean that this particular firm's offer is only technically suitable. In general, the specifications offered by other firms will be assessed in their own entirety to ascertain whether or not the broad functions in general expected of the equipment are available with reasonable tolerance on the desired requirements of the purchaser and accordingly the offers would be considered based on prudent assessment of the purchaser.

17. Bidders who have paid the Bid Document Fee as per Clause 9[B] of ITB & Bid Security as per Clause 9 of ITB are only eligible to quote.

18. The supplier/manufacturer shall be responsible for organising timely clearance/delivery of the equipment from the custom authorities by appointing custom agent, if necessary, and shall also arrange to transport the equipment to the destination including installation and commissioning of the same at the designated consignee site. Necessary insurance strictly as per the instruction given in the relevant clause (GCC 10) of this bid shall also be arranged by the supplier/manufacturer covering all these activities including transit cum erection insurance from destination to destination (designated consignee site).

19. The following clause needs to be read in conjunction with Clause 6 of ITB and Clause 26.2 of GCC & will prevail upon the description given for warranty elsewhere in the bid document/ with Equipment Specifications.

Warranty for Equipment:

"Supplier/ Manufacturer should provide 2 years full onsite comprehensive warranty with spares from the date of installation. Warranty will start only from the date of final acceptance of the machine at the department and price quoted inclusive of these criteria.

The HSCC/MEA shall enter into agreement with the principal manufacturer and the agent for warranty as per enclosed format. The principal Manufacturer and the agent shall adhere to it.

20. Bidders should provide list of consumables and standard spare parts separately in the Techno-commercial Bid along with details of source of supply.

Joint Secretary – (DPA-III)

SECTION - IV

Description & Specifications of Equipment

1. BOYLE'S APPARATUS WITH NEW GENERATION HALOTHANE /ISOFLOURANE / SIBO FLUORANE VAPORIZER

Anesthesia Machine of Stainless Steel Structure with antistatic four castors wheels having front with brakes.

230 mm long rotating bobbin flow meters, (rotameters) with color coded control Knobs, calibrated in Standard multiple scales for accurate reading.

For oxygen: 100ml / min to 8 LPM & For Nitrous Oxide: 200 ml / min to 12 LPM.

Gas specific, gas blocks pin indexed yokes, two each for Oxygen & Nitrous.

Fitted with pressure gauges 100mm diameter mounted for O2 and N2O cylinder (2 each) for clear visibility with cylinders.

Bain Circuit, Magill Circuit (1 Each) with 3 Face Mask No. 1, 3 & 5. Vaporizer for Ether (Plenum type) and Halothane Vaporizer / isoflourane.

Fitted with regulators and non-return cum pressure release valves for gases.

Two Nos. Oxygen Pneumatic power outlets operating at 50 psi to operate ventilator.

Extended rear platform for mounting two nos. additional 10ltr. Water capacity cylinders.

Breathing Circuit to include elephantine tubing reservoir bag, connections & Facemasks etc.

Circle absorber double chamber type with appropriate connections for changeover from opens to closed circuit and vice versa.

Drawer for keeping instruments. In other respects the equipment shall comply to IS 11378-1985.

With multi parameter fixed configuration SPO2, NIBP, ECG and Temp., CVP, PCO2, IABP

Anesthesia ventilator electric pneumatic driven.

Safety Features:

Automatic cut off of Nitrous Oxide in case of oxygen supply fails

Pneumatic device with audible alarm Mechanical (Not Electrical) when oxygen supply pressure falls to 10-15psi.

Hyoxic safety device to ensure that the patient is never subjected to pure N20 in flow doses (Shall ensure protection against singular flow of N20) until a minimum flow of 1ltr / 1.5 ltr oxygen is released.

There shall be provision for adequate supply of oxygen to the patient even if the flow meter knobs are fully turned ff.

Unit shall conform to relevant safety standards and general safety standards as per IS 8607.

CVP Monitor Set – Accessories

Disposable, single use

Packed in PVC double pack

Pre sterilized- ETO / Gamma sterilization

2. Electro Surgical Unit (ESU) - Diathermy

1 Description of Function

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

2 Operational Requirements

Sl	Name
2.1	Microprocessor/Microcontroller technology

3 Technical Specifications

Sl	Name
3.1	Should be Compatible with Argon Plasma Coagulator
3.2	Should provide monopolar output for cut, coagulation (fulguration & spray) & blend
3.3	Should have bipolar cut and coagulation in multiple levels with automatic bipolar coagulation.
3.4	Activation by foot switch and hand switch should facilitate under water procedure.
3.5	Activation of bipolar by foot switch and automatic start/stop system
3.6	Auto diagnosis on switching on and during working to continuously monitor all parameters
3.7	Automatic stoppage of output in case of malfunction with acoustic and visual signal with display of error code should have large easy to read display.
3.8	Output powers adjustable automatically or manually from the control panel should have recall feature for same power and same mode.
3.9	Programmable memory for output settings
3.10	Simultaneous access to mono and bipolar by 2 or more users
3.11	Should be usable with laparoscopic monopolar and bipolar instruments, for which programmes and accessories must be available
3.12	System for neutral plate safety by continuous monitoring of contact quality and connection
3.13	System for monitoring and control of leakage current
3.14	Frequency leakage on the patient should be less than 10 micro Amp.

4 System Configuration Accessories, spares and consumables

Sl	Name
4.1	System as specified

4.2	The accessories should include (a) trolley, (b) mains cable with power plug for standard Indian sockets, (c) foot switches for different outputs, (d) reusable and single use neutral electrode for adults and children along with cable for neutral electrode and fixation device wherever required, (e) sterilizable and disposable electrode handle with and without finger switch with cable for electrode handle, (f) set of electrodes (long and short) with electrode container with holder, (g) tip cleaner, (h) bipolar forceps with cable, (i) cable for connecting to standard mono polar and bipolar laparoscopic instruments, *The accessories and their quantity will be chosen as upon actual requirement*.
4.3	The system should be capable of accepting standard accessories of major international brands, which should be specified and for which suitable adaptor, if required, is to be quoted
4.4	The codes and rates of all possible individual accessories should be quoted separately with clear mention of period of validity of rates

5 Environmental Factors

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

6 Power Supply

Sl	Name
6.1	Power input to be 220-240VAC, 50Hz fitted with power-plug (as used in Burma)
6.2	Electronic Voltage corrector/stabilizer of appropriate ratings meeting BIS Standards/Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)

7 Standards & Safety

Sl	Name
7.1	Should be FDA , CE, UL or BIS approved product.
7.2	Manufacturer and Supplier should have ISO certification for quality standards.
7.3	IEC 60101-1 Medical Electrical Equipment, General Requirements for safety
7.4	Shall meet internationally recognised standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2 :latest edition Or Equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended
7.5	Certified to be compliant with IEC 60601-2-2 Medical Electrical Equipment Part 2-2: Particular requirements for the safety of High Frequency Surgical Equipments: latest edition

8 Training

Sl	Name

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

9 Warranty & Service

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

10 Documentation

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

3. Specifications for Multi Channel Monitor

More than 12 inch TFT/ LCD Display
Facility to display upto 4-6 waveforms
Atlcast 6-12h hrs graphical and numerical trending
Battery backup at least 1 hr.
Should he Modular in design.
Should have facility for measuring following parameters:
i. ECG (5 leads) / NlBP/ SP02 / Temp/ Resp
SpO2 measurement with plethysmograph- adult and infant SpO2 sensors
NIBP measurement with adult. child and infant cuffs;
Audio visual and graded alarming system
Should be mountable above the bed.
Each monitor should be supplied with

1. 1Pediatric & 2 adult SPO2 probes
2. 3 pediatric & 2 adult NIBP cuffs
3. 3 ECG Cables

4. Operation Table: Hydraulic

1 Description of Function

Sl	Name
1.1	Hydraulic operating Tables are simple tables for performing surgical procedures and they work without electrical power.

2 Operational Requirements

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

3 Technical Specifications

Sl	Name
3.1	a. Four/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

Sl	Name
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 2nos. b. Anaesthesia screen with clamps 1 nos. c. Side supports: pair with clamps 2nos. d. Shoulder supports: pair with clamps 2nos. e. Knee crutches for lithotomy position: pair with clamps 2 nos. f. X-ray cassette tray 2nos. g. Kidney bridge 1nos. h. Patient Restraint Strap 4nos. i. All Accessories for operating in prone position 1set

5 Environmental factors

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

6 Standards & Safety

Sl	Name
6.1	Should be FDA , CE, UL or BIS approved product
6.2	Manufacturer and supplier should be ISO certfied for quality standards.
6.3	International Safety standards like IEC 60601-2-46 or equivalent if applicable

7 Training

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

8 Warranty & Service

Sl	Name
8.1	Comprehensive warranty for 2 years.

5. Operation Theatre Light

1 Description of Function	
1.1	Surgical lights illuminate the surgical site for optimal visualization of small, low-contrast objects at varying depths in incisions and body cavities.
2 Operational Requirements	
2.1	The light should comprise of 2 units, One major dome and one satellite dome. Each unit should have a facility of brightness adjustment from 30 – 100 % . Should be shadow free .
3 Technical Specifications	
3.1	1. Should be LED based microprocessor control technology ceiling mounted 2. One major dome and one satellite dome. 3. Intensity at 1-meter distance at least 1,60,000 lux for major dome and 1,10,000 for satellite dome. Total intensity of light should be 2,70,000 lux or more. 4. Colour Temperature: 4500-5000 K. 5. Having on off switch and light intensity control 6. Homogenous luminous field with lowest possible amount of shadow. 7. The contrast between the lighted area and the surrounding should not cause stress to the surgeon's eye. 8. Depth of illumination should be 120-140 cms. or more. 9. Illuminated field diameter should be approx. 20 cms. 10. Temp. Increase in temperature near head should be specified and should not be more than 1 degree C. 11. Color rendering index (CRI) should be 93 – 98. 12. Height adjustment more then 1 meter. 13. LED life span 25000 or more Hrs. 14. Light field adjustment by sterilisable handle. 15. Control panels on the light assembly as well as away from it for adjustment of light intensity, illuminated area and for switching on and off 16. The light head should be so constructed as to provide optimum conditions for laminar flow. 18. It should have provision for using it during minimally invasive surgery maintaining the correct vision of the screen.
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 :220-240V/ 50 Hz AC Single phase fitted with appropriate Indian plugs and sockets.
6.2	Electronic Voltage corrector/stabilizer of appropriate ratings meeting BIS Standards/Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)

7 Standards & Safety

7.1	Should be FDA , CE,UL or BIS approved product
7.2	Manufacturer should be ISO certified for quality standards.
7.3	Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standard)
7.4	Shall meet internationally recognised standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2 :latest edition Or Equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended
7.5	Certified to be compliant with IEC 60601-2-41: Particular requirements for the safety of Operation Theatre Light or equivalent if applicable

8 Training

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

9 Warranty & Service

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

10 Documentation

10.1	Product Literature in original along with that of accessories and indigenous components if any. Photocopies/computer generated copies are not acceptable
10.2	Statement of compliance with tender specifications with clear and unambiguous links to relevant portions of product literature/authentic document, which should be highlighted. Alternatives provided for noncompliant specifications with justification must be described in detail with supporting literature.
10.3	Certificate of compliance with standards and approvals stated above
10.4	Certificate of manufacturer/principal regarding authorisation of service facility provided by the supplier
10.5	List of Equipment available in the Service Centre for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
10.6	List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing.

10.7	Terms and conditions of warranty including schedules of visit by service personnel with check list of services to be carried out
10.8	Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book.
10.9	List of users of quoted model with performance certificate from major institutions

6. SUCTION MACHINE

It should have the following Specifications

1. Voltage 210-250v AC/50Hz
2. Current 2-3 amp
3. Leakage current: Less than 1 milli amp.
4. Rating : continuous running
5. Maximum vacuum :700-750mm of Hg
6. Vacuum Control: Regulator/needle type for high and low vacuum with dust collector (0-750mmHg with 50mmHg increment)
7. Suction capacity 25 ltr/min
8. Vacuum Guage ; Graduated in mm upto 750 mm of Hg
9. Suction tubing : 5 mtr, non collapsible
10. Castors: antistatic
11. Lubrication : continuous high lubrication
12. Suction Jars 2 bottles(unbreakable) with more than 4 ltrs capacity
13. Safety device T safeguard against flow of fluid from second bottle into the pump. (Mechanical overflow protection system)
14. Noiseless suction unit with fast vacuum build up
15. Controls: on the body with optional foot switch control.
16. Fitted with stand ON/OFF switch (added)

7. DEFIBRILLATOR WITH Monitor

1 Description of Function			
1.1	Defibrillator is required for reviving the heart functions by providing selected quantum of electrical shocks with facility for monitoring vital parameters.		
2 Operational Requirements			
2.1	Defibrillator should be Bi- Phasic, light weight (< 8kg) and latest model		
2.2	Should monitor vital parameters (ECG, NIBP, HR, SPO2 and EtCO2[optional] and display them		
2.3	Should print the ECG on thermal recorders.		
2.4	Should work on Manual and Automated external defibrillation (AED) mode. Manual selection maximum upto 360 J.		
2.5	Should be capable of doing synchronised & asynchronised cardioversion		
2.6	Can be operated from mains as well as battery		
2.7	Should have defibrillator testing facility		
2.8	Demonstration of the equipment is essential.		
3 Technical Specifications			
3.1	Should be a Low Energy Biphasic defibrillator monitor with Recorder, within a maximum energy of 360 Joules		
3.2	Should monitor ECG through paddles, pads and monitoring electrodes and Defibrillate through pads and paddles. Should have Automatic Lead switching to see patient ECG through paddles or leads		
3.3	Should measure and compensate for chest impedance for a range of 25 to 1500hms		
3.4	Should have a built in 50mm strip printer/ thermal recorder		
3.5	Should have charging time of less than 5 seconds for maximum energy. Charging indicator should be there.		
3.6	Should have Display- TFT coloured LCD at least 8” diagonal for viewing messages and ECG waveform of 5 seconds		
3.7	Should have external paddles with paddles contact indicator – for good paddle contact. Both Adult and paediatric paddles should be available.		

3.8	Should have event summary facility for recording and printing at least 250 events and 50 waveforms.		
3.9	Machine should be compact, portable with built in rechargeable battery with weight of total machine not more than 6.5 Kg, have a battery capable of usage for at least 120 minutes and/or 30 discharges.		
3.10	Should be capable of printing Reports on Event summary, configuration, self test, battery capacity etc		
3.11	Should have facility for self test/check before usage and set up function		
3.12	Should have SP02 and NIBP integrated facility with EtCO2		
3.13	Should be capable of delivering energy in biphasic technology having energy selection of 1-200 joules		
3.14	Should have user friendly 1,2,3 color coded operation.		

4 System Configuration Accessories, spares and consumables

4.1	Defibrillator -01		
4.2	Paddles Adult (pair) -01		
4.3	Paddles –Paediatrics(pair) -01		
4.4	Patient cable -02		
4.5	ECG Rolls -50		
4.6	Disposable pads-10 nos.		
4.7	NIBP Cuff Adult - 02 NIBP Cuff Paediatrics- 02 NIBP Cuff Infants- 02		
4.8	SPO2 Finger Probe-Adult -02 SPO2 Ear Probe - -02		
4.9	Complete set of ECG Leads- 02		
	Price of all the items should be quoted separately.		

5 Environmental factors

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

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
6.2	Resettable overcurrent breaker shall be fitted for protection

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-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms . (OR EQUIVALENT BIS Standard)
7.3	Drop Test-Withstands 1 meter drop to any edge, corner or surface.
7.4	Should conform to international test protocols on exposure to shock forces and to vibration forces. The standard should be documented.
7.5	Should meet IEC 529 Level-2 (IP2X) for enclosure protection solid foreign object ingress.
7.6	Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection , water ingress.
7.7	Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.
7.8	Comprehensive warranty for 2 years

8 Documentation

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

8.7	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		
8.8	Must submit user list and performance report within last 5 years from major hospitals.		

8 Syringe Infusion Pump

1 Description of Function

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 continuous flow rate for precise delivery of I.V. medication in critical medical care.

2 Operational Requirements

2.1	The syringe pump 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	Demonstration of the equipment is essential.

3 Technical Specifications

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 available infusion rate units should be Mg/Kg/h, mg/kg/min,ig/kg/h, ig/kg/min
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	Should have big display indicating maximum information in one time. Display of Drug Name with a provision of memorizing 10~15 names by the operator. Selector of drug and provision of adding new drugs should be possible.
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. Indication of residual life be present.		
3.12	Should have user selectable syringe brand set, should be possibility to include new brands of syringe, should be syringe size detectors, should have syringe insertion (loading) sensor. Should have option of rate calculation over time and volume to be infused. Possibility to define bolus rate limits up till 1500 ml/h. Available bolus rate unit: mg/hand ig/h, possibility to program bolus rate within the bolus rate limits, possibility to infuse bolus automatically, possibility to program automatic bolus dose from 0.1 – 99.9 ml. Available bolus unit : mg/kg, ig/kg. Possibility to infuse bolus manually.		
3.13	Possibility to lock key pad during the infusion to prevent accidental change by unauthorized person of the infusion parameters is desirable.		
3.14	Should have following indicators: Connected to mains operation from internal battery, infusion in progress		
4 System Configuration Accessories, spares and consumables			
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			
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			
6.1	Power input to be 220-240VAC, 50Hz		
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-60601-1 General Requirements		

7.3	Manufacturer should be ISO certified for quality standards.		
7.4	Certified for meting IEC60601-2-24:Particular requirements for the safety of infusion pumps and controllers		
7.5	Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection , water ingress.		
7.6	Electrical Safety Classification Class I/II, Type CF and Internally powered equipment.		
7.7	Certified for meeting IEC 60601-1-4 Medical electrical equipment - Part 1-4: General requirements for safety - Collateral Standard: Programmable electrical medical systems		
7.8	Comprehensive warranty for 2 years.		
7.9	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 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 description of the hospital technician and company service engineer should be clearly spelt out.		
8.6	List of important spare parts and accessories with their part number and costing.		
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.		

9. ECG Machine (12 channel) with Interpretation

. Description of function

1.1 ECG Machine is primary equipment to record ECG Signal in various configuration. 12 channels with interpretation is required for recording and analyzing the waveforms with a special software.

Operational requirements

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

Technical Specifications

3.1 Should acquire simultaneous 12 lead ECG for both adult and pediatric patients

3.2 Should have Real time Colour 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 100 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 using thermal sensitive paper.

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 of 640x480 pixel resolution.

3.13 USB Support (optional) for Storage on external portable memories.

3.14 Multimode of ECG Storage capability on Floppy(min 2), 150 ECG on Internal Flash Memory

System Configuration Accessories, spares and consumables

4.1 ECG Machine 12 Leads with Interpretetion - 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.
4.7 The cost of the consumable should be quoted in advance.

Environmental factors

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

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

Standards and safety

7.1 Should be FDA or CE 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)

Documentation

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

10. Pulse Oximeter

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	A pulse oximeter is a medical device that indirectly measures the amount of oxygen in a 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

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Suitable for all types of Patient range :Adult, pediatric, infant, and/or neonate		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Display- LCD, Backlight illuminated, display clarity at a distance of 6 ft.		
3.2	Parameters and waveform displayed- SpO2, pulse rate, system status, plethysmogram, menus for user settings		
3.3	SPO2 range- 60-100 %		
3.4	Accuracy of SPO2 ± 2-3%		
3.5	Pulse rate range should be 30-240 bpm		
3.6	Audiovisual Alarms- High/low SpO2 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.		
3.12	Should have technology for elimination of motion artifacts.		
3.13	Should be able to function in local perfusion state as well.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		
4.2	SpO2:Adult SpO2 sensor with cable- two nos per monitor and Pediatric SpO2 sensors- one no. per monitor, Neonatal Sensor-01 per monitor		
4.3	The cost of consumables as per units should be quoted.		

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 or should comply with 89/366/EEC; EMC-directive.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Should work on 220-240V AC as well as rechargeable batteries. Mains 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

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be FDA , CE,UL or BIS approved product		
7.2	Manufacturer/Supplier should have ISO certification for quality standards.		
7.3	Comprehensive warranty for 2 years warranty		
7.4	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of important spare parts and accessories with their part number and costing		

11. NEBULISER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
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

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Heavy duty compact Nebuliser is required.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
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

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

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 or should comply with 89/366/EEC; EMC-directive.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		

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	UPS of suitable rating with voltage regulation, spike protection and maintenance free batteries for 60 minutes back up		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be FDA, CE, UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Comprehensive training for lab staff and support services till familiarity with the system.		
7.4	Comprehensive warranty for 2 years warranty including UPS.		

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	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 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.		

12. FIBEROPTIC VIDEO GASTROSCOPE

The flexible Gastro scope should have a high resolution color CCO scanner with minimum 4,80,000 pixel. It should have wide angle field of view and extremely high depth of field. The control and processing unit should have a brilliant sensor system to provide uniform illumination even in poor lighting conditions. The shaft of the video Endoscope should be tension free and should have stable turning insertion tube. It should meet the technical specifications as follows.-

Flexible Video Gastro scope should have resolution of 4,80,000 pixels
Should have field of view of 140 degree or more.
Should have depth of field from 2-200mm
Should have a working length of 1100mm or more.
Should have biopsy channel diameter of 2.8mm
Should have a Carrying case.
Should have ETO Cap.
Should have a leakage tester
Should have a biopsy Forceps, oval cup dia 2.3 mm and length of 1800mm
Should have a cleaning brush dia 2.3mm 1800 length.
Video processor with integrated light source.
The design of video processor should have the latest digital technology to show the finest tissue structures with increased resolution.
This should improve the color while providing excellent image quality.
Should have matrix combo pal, 230V having high resolution.
It should be easy to operate high sensitivity in low light conditions.
It should be digital Signal processing.
It should automatic Light sensitivity Adjustment with the mode function.
It should have freeze frame function.
Should have integrated 150 W Halogen Light source with built in spare lamp.
Should have Ethernet digital communication port for transfer of endoscopic still image to PC (Since PC is going to be used for generating endoscopy report.
Should have image storage and retrieval settings on the front panel and able to be retained even the power is turned off (Like Colour , structure Enhancement. White balance, iris etc.)
It should have recalling and registered scope information (Scope ID function)
Should have image freezing capability on the scope.
Should have picture in picture (PIP) facility.

<u>Colour Video Monitor (Medical Grade)</u>

Should have at least 2 RGB input/output.
Should have an automatic colour temperature capacity of at least 10000k.
Should have 14” (33cm) picture diagonal.
Should have under scan capacity for full vision.
Should have high resolution Trinitron tube.
Should have high resolution of600 TV lines

13. TRANSCUTANEOUS SERUM BILIRUBINOMETER

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

14. ECT Machine- Bidirectional Square Wave (fixed)

1 Description of Function	
1.1	The main aim of Electroconvulsive Therapy is to cause a massive convulsion in the brain (a massive epileptic fit). This is achieved by giving the brain an electric shock using an ECT Machine. ECT machines are, basically, transformers which modify Mains Current so that it is transmitted to the patient's skull in timed pulses.
2 Operational Requirements	
2.1	1.The unit should have Parameter Display on LCD/LED 2. Should have AUTO Stimulus Voltage 3. Should have Auto Impedance Check 4.Should provide Output Display in joules & millicoulombs and EEG-ECG Monitoring on Thermal paper
2.2	The equipment should meet all the numerical data in a tolerance of +/- 10 %.
3 Technical Specifications	
3.1	Technical data stimulus: 1. Bidirectional Square Wave 2. Current : 0.8 Amp. Constant 3. Frequency Range : 70 Hz (Fixed) 4. Pulse Width : 1 ms (fixed) 5. Mode : Auto & Manual 6. Stimulus Duration in Auto mode : 0.1 to 5.9 sec. in step of 0.1 sec. 7. Cerebral Stimulation 0 to 40 volts
4 System Configuration Accessories, spares and consumables	
4.1	System as specified
4.2	Integrated or standalone compatible printer should be supplied.
4.3	All the accessories to make equipment functional as per specifications should be supplied.
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	1.Power input to be 220-240VAC, 50Hz fitted with plug used in Myanmar. 2.UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up

7 Standards, Safety and Training

7.1	1. Should be FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive warranty for 2 years. 5. Certified to be compliant with Electrical Safety Standard for Medical Equipments- IEC- 60601-1-1 OR equivalent BIS OR international standard for electrical safety.

8 Documentation

8.1	1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer service/ maintenance manual. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, without which it will not be considered.

15. Digital Light Cure Unit

1. LED based light cure unit
2. Instant-on, No wait, No warm-up time
3. Should have strong optical out put power, greater than 1200MW/cm2
4. Should have a digital timer with a time setting of 0-60 sec.
5. Should have 5 watt Led light
6. Digital display of time on the hand unit
7. Should he provided with additional tips and shields.
8. Should offer a clear view and enhanced patient comfort
9. Angulated light guides should revolve 360degrecs.
10. Should be easy to clean
11. Should have no heat build-up on teeth & main unit

Relative Emission Intensity
It should emit the light 430~ 470nm light for curing the dental restoratives.
Power Requirements
l. Power input to be 220~240VAC, 50Hz
2. Voltage corrector/ stabilizer of appropriate ratings meeting ISI Specifications (Input 160-260 V and output 220-240 V and 50 Hz)
3. Resettable over current breaker shall he fitted fur protection

16. Dental Scaler

1 Description of Function

1. 1 Dental Scaler is required for removing the supragingival and subgingival calculus.

2 Operational Requirements

2.1 Microprocessor based system

3 Technical Specifications

3.1 Based on piezoelectric technology
3.2 Having torque tool for tightening of the tip
3.3 High power turbo mode and low power mode
3.4 Should have LED light in scaler handpiece
3.5 Automatic smart power feedback control
3.6 Minimum vibration frequency of 28-36 KHZ and
3.7 Ten tips for scaler, one endodontic kit and one set of perio-curette tips
3.8 Foot pedal
3.9 Separate control for water and tip vibration
3.10 Should be supplied with two autoclavable hand pieces.
3.11 It should have self contained tank of 300 ml capacity

4 System Configuration Accessories, spares and consumables

4.1 System as specified

5 Environmental factors

5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2 The unit shall be capable of operating 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 Servo Voltage 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 comply with Medical Device class II type BF, in conformity to the requisites of Directive 93/842/CEE for the SCALER unit
7.2 Should be FDA/ CE approved product
7.3 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 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

17. ENT OPERATING MICROSCOPE

FLOOR STAND

1. Roll able heavy Floor Stand with locking device.
2. Manipulation to any position with locking for trouble free operation

MICROSCOPE BODY

1. Motorized Zoom Magnification system with apochromatic optics
2. Magnification 2.1X to 21.5 or better activated by hand grip and foot control with manual override
3. Eye piece 12.5X
4. Internal Motorized fine focusing system, activated by hand grip and foot control continuously
5. Adjustable working distance from 200 mm to 500 mm or more without exchange of objective lens, manual override, integrated continuously variable illumination field spot size
6. integrated beam splitter with two additional output inbuilt for connection of co-observation device and video
7. Stereo co observation system for assistant surgeon/ teaching purpose

BINOCULAR TUBE

1. 180 Degree or more tilt able binocular tube with focal length f= 180 mm or more
2. Graduated knob for continuous adjustment of inter- papillary distance from 55 mm to 75 mm.

EYE PIECE

1. Pair of wide field push in eye piece 12.5 X with magnetic locks
2. Diopter setting from -8 D to +5 D

ILLUMINATION SYSTEM

1. Coaxial xenon illumination minimum 180 Watt with a back up lamp changer Xenon or halogen bulb

HANDGRIPS

1. Easily removable handgrips with adjustable keys for zoom and focus
2. Four freely programmable keys for setting illumination intensity, controlling the video camera

FOOT CONTROL PANEL

1. Control keys for zoom, focus, movements and light intensity

DIGITAL VIDEO CAMERA SYSTEM

1. 3 CCD advanced digital camera with adapter
2. LCD monitor compatible with camera- 21 inches
3. Compatible recording device preferably a digital one with USB Port.

Above microscope should be compatible for LASER use

Compatible CVT should be supplied for protection from voltage fluctuation

Power requirement 220-240 volts50Hz

Any Other accessory must for smooth functioning of the equipment

Sterile drapes - 20 numbers

Comprehensive Warranty of 2 years

Trolley for above accessories (3 CCD Cameras, LCD Monitor, Recording device, CVT

Installation & Demonstration must spare parts, repair, authorized service centre should be locally available.

18 FIBEROPTIC LARYNGOSCOPE

Tender Requirements:

1) FLEXIBLE FIBEROPTIC LARYNGOSCOPE
2) COLOUR VIDEO MONITOR AND DIGITAL RECORDER
3) VIDEO PROCESSORS
4) COLD LIGHT SOURCE

FLEXIBLE FIBEROPTIC LARYNGOSCOPE

1. The working length of the fibre scope should be less than 40 cm to allow mounting of end tracheal tube on the scope before performing Laryngoscope & examination of vocal cords.
2. The outer diameter should not exceed 3.0 mm and allow a 3.5 tube to be mounted on the scope (lesser diameter preferable).
3. Range of bending at the tip should be minimum 120 degree up and 60 degree down.
4. Outer Channel-3.0 mm or less
5. Compatible colour CCD camera
6. Leak test facility

COLOUR VIDEO MONITOR:

a. Portable integrated digital video monitor cum recorder compatible with the camera system provided.
b. Ability to record video digital format
c. Monitor size at least 15”
d. Ability to output video in DVD / CD

VIDEO PROCESSORS:

· Should provide flicker and blue free images
· 3 CCD technology to provide perfect colour reproduction
· Provision for still image capturing / Digital recording of images
· At least 1.2 or more mega pixels stored images.

LIGHT SOURCE:

· Compatible light source for CCD Video scope system
· Automatic light adjustment to maintain optimum brightness

RECORDER:

· Storage of video sequences of CD ROM
· Battery powered cold light source, compatible with the Flexible Fiber optic Laryngoscope

TROLLY From OEM

Demonstration is must
Should have local service facility

19 Instrument set for Functional Endoscopic Sinus Surgery

1 BLAKESLEY rhinoforce nasal forceps. Straight 13cms working length, sizes 2,3
2 BLAKESLEY rhinoforce nasal forceps 45 deg upturned 13cms working length, sizes 2
3 BLAKESLEY rhinoforce nasal forceps 90 deg upturned 13cms working length, sizes 2
4 Mackay- Grunwald rhinoforce nasal forceps
5 Through cutting, tissue repairing
(a) straight, size2, length13cms
(b) upturned, size2, length 13cms
6 Stammberger antrum punch
(a) right side backward cutting, length 10cms
(b) left side backward cutting, length 10cms
7 EICKEN maxillary antrum cannula
(a) long curved, out side 3mm length 12.5cms
(b) short curved, outside 3mm length 12.5cms
8 Takahashi nasal forceps
9 Cup shaped forceps, size 2, 13 cms
10 Stammberger rhinofore forceps
11 Cupped jaws, vertical opening 65 deg upturned working distance 12cms, cupped jaws with diameter 3mm.
12 Mushroom punch forceps for sphenoid sinus opening enlargement
(a) straight
(b) curved
13 Kerrisons through cutting punch, straight, size 2mm, 3mm
14 DCR – Kerrisons punch, size 2mm, 3mm
15 Side biting maxillary sinus ostium enlarging forceps, size 3mm
16 Endoscope 0°, 30°, 45°, 90° (2.7mm and 4 mm)
17 Sickel Knife standard size
18 Curette – Frontal Sinus/Maxillary Sinus (cup)
19 Antrol guide drill probes-front sinus & maxilla sinus

20 Operating Theatre Light: Mobile

1 Description of Function	
1.1	Mobile operating light is required for illuminating the operating field in an emergency environment and the system can be moved from place to place.
2 Operational Requirements	
2.1	State of the art system with shadow less light
3 Technical Specifications	
3.1	a. Mobile light on lockable castors b. Should be LED based microprocessor control technology c. Light output 1,00,000 Lux or more d. Colour temperature 4500K 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%
3.2	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 back up
4 System Configuration Accessories, spares and consumables	
4.1	System as specified
4.2	The rates for all the accessories should be quoted individually and separately
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 : 220-240V/ 50 Hz AC Single phase fitted with appropriate Indian plugs and sockets.
7 Standards & Safety	
7.1	Should be FDA , CE,UL or BIS approved product
7.2	Manufacturer should be ISO certified for quality standards.

7.3	Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standard
7.4	Shall meet internationally recognised standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2 :latest edition Or Equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended
7.5	Certified to be compliant with IEC 60601-2-41: Particular requirements for the safety of Operation Theatre Light or equivalent if applicable

8 Training

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

9 Warranty & Service

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

10 Documentation

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

	description of the hospital technician and company service engineer should be clearly spelt out in the log book.
10.9	List of users of quoted model with performance certificate from major institutions

21 OPEN CARE SYSTEM ON TROLLEY WITH DRAWERS, WITH RADIANT WARMERS, O2-PROVISIONS

Technical Specifications:

- Mobile newborn resuscitation table with fixed- height radiant warmer
- Antistatic castors, 2 with breaks
- Table surface with mattress with infant head/ shoulder support
- Mattress-padding: foam density approx. 21 - 25 kg/ m3
- Mattress cover: removable with zipper, waterproof, washable, resistant to cleaning with chlorine based solution and flame retardant
- Side boards transparent acryl, drop down and lockable
- Under table 2 storage drawers
- Side rails allow for mounting of accessories
- Hood suspended above the table integrates heating element and overhead light
- Overhead light: 2 x 50W halogen spot, with dimming function
- Integrated support for two 10 L oxygen bottles
- Control unit has flow meter and displays pressure
- Heating element: emitter with parabolic reflector and protected by metal grid
- Control unit allows air and skin temperature preset (LED indicator) and drives radiant heater output (servo and manual)
- Integrated timer: 1 to 59 min, with count-up and count-down feature
- Temperature range, skin: 34 to 38°C (user pre- settable)
- Monitoring of skin temperature by means of sensor, range: 30 to 42"C
- Heater output: a to 100 % in Increments of 5 %
- Control unit: audiovisual alarms according to timer and temperature presets avoiding overheating
- Display reports systems errors, sensor failure
- Power requirement: 220 V /50 Hz
- Power consumption: 800 W
- Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted, further details see "Technical Provisions")
- Device is safety certified according CE 93/42, FDA 51 Ok or equivalent (Certificate to be submitted, further details see "Technical Provisions")

Supplied with

1 x mattress
1 x skin temperature probe (including connection cable)
1 x spare skin temperature probe (including connection cable)
1 x spare heating element

2 x empty 10 L oxygen cylinders
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
List of priced accessories
List of priced spare parts
List with name and address of technical service providers
Training and installation at end user site
2 year warranty

21 TRANSPORT INCUBATOR, BASIC WITH BATTERY AND O2, W/O VENTILATOR

- Double wall transparent canopy with mattress, mount on stretcher
- Front and head access door, slide-out mattress tray
- With baby restraining straps
- Warm air circulation system
- Bacterial filter to remove air born particles
- Incubator air temperature monitoring and servo control: 25 to 38 C, increments 0.1 C
- Digital displays outside shows air temperature
- Two 10 L integrated oxygen cylinders, regulator and flow meter
- Audiovisual alarms: high/low air temperature, temperature sensor failure, power failure and low battery
- Construction dismantable allows frequent washing and disinfection of the incubator
- Battery and AC supported
- Power requirements: 220 V /50 Hz and internal re-chargeable batteries (autonomy approx 3 hrs, automatic recharge)
- Power consumption: 200 W
- Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted, further details see "Technical Provisions")
- Device is safety certified according CE 93/42, FDA 510k or equivalent (Certificate to be submitted, further details see "Technical Provisions")
- Supplied with:
- 1 x spare air temperature probe
- 1 x spare re-chargeable battery
- 2 x empty 10 L oxygen cylinders
- 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
- List of priced accessories
- List of priced spare parts
- List with name and address of technical service providers
- Training and installation at end-user site
- 2 years warranty

22 Supply, Installation & Commissioning of 2 Ton Capacity Split Type Air Conditioner:

TECHNICAL SPECIFICATIONS:

Capacity: 2 Ton (24,000 BTU / hr)Rotary
Star rating: Min 3 star & above
Cu piping: 5 mtr approx
Electrical cable: 5 mtr approx.
Drain line: 5 mtr approx.
Operation : with remote control
Stand for compressor: Required

NOTE: Quantities mentioned above for Cu piping, Electrical cable, Drain line etc are approximate and will be considered for evaluation for 'L1'. However payment for the same will be made as per the actual length certified by user department. Bidder may please quote rate for extra refrigerant piping on Running Metre basis.

23 Patient transfer trolley

1 Description of Function	
1.1	Required for shifting patients from the operating theatre to the recovery and ICU.
2 Operational Requirements	
2.1	Should be suitable for monitoring sick post – operative patients in the OT recovery room when ICU bed is not available.
3 Technical Specifications	
3.1	SPECIFICATION PATIENT TROLLEY: Should have facility for the patient to be propped up. a. Should offer trendelenburg and reverse positions. b. All the movements of this trolley should be controlled both mechanically and electronically. 2. Should be about 7ft. long, 2 ½ ft. wide and height of 2 ½ ft. with facility for height adjustment. 3. Should be made of sturdy rust proof material with sturdy swiveling castors and locking device for wheels. 4.Should have a swing away type of safety railing, saline rod, oxygen cylinder cage and steel tray to hold patient notes and drugs.
4 System Configuration Accessories, spares and consumables	
4.1	1• Should be provided with at least 8 spare castors and 8 spare saline rods. 2• Price should be quoted with all the accessories so that there is no delay in procuring the equipments once the order is placed.
5 Environmental factors	
5.1	Environmental factors to be complied: 1. shall meet IEC-606-1-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC,EMCdi

	2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 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 220-240 VAC, 50Hz fitted with Indian plug
7 Standards, Safety and Training	
7.1	1. Should be FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive warranty for 2 years.
7.2	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.
7.3	Electrical safety conforms to standards for electrical safety IEC-60601-1 General requirements and IEC-60601-2-23 Particular requirements for the safety of Transcutaneous Pressure Monitoring Equipments
8 Documentation	
8.1	DOCUMENTATION Should include the following: 1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacture. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, will not be considered.

24. LABOUR TABLE

Specifications:

- 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 & Trendeleberg position/ reverse Trendelenberg. Gas Spring assisted /strong mechanism. Pair of detectable padded leg rest. Self locking Traction Handle
- Adjustable I/V rods.
- Swing, away side railing on two sides with mattresses covered with leatherite.
- Size 180 L x 68W x 75 cm (Approx)

25 LED SPOT EXAMINATION LIGHT

Should be with LED Examination light, mounted on a pedestal stand Lux Output 50000

LED lamp with 50000 to 100000 hours lamp life

Cool Beam at similar to that of the day 5500 deg K.

Illumination field 30cm diameter or more.

Arm Flexibility for easy positioning.

Should be CE/FDA standard equipment.

26 VACUUM EXTRACTOR

Specification: 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˚c)

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/EEC on Medical Devices and have CE marking.

Vacuum Extractor should be supplied as complete set in a box with:

3 Bird anterior suction cups complete, stainless steel,

3 different sizes:

40mm opening diameter.

50mm opening diameter.

60mm opening diameter.

3 soft vacuum extractor cups “SILC-CUP” complete,

3 different sizes:

40mm opening diameter.

50mm opening diameter.

60mm opening diameter.

2 extractor handles stainless steel with connected hoze pipe 20cms long.

UPS with one hour backup

27 MID STRAIGHT FORCEPS & LOW FORCEPS

Outlet Forceps (IS
Type Wrigley
Material Stainless Steel
Size 25 cm (10 “)

Mid Cavity Forceps
Low Mid Cavity Forceps (IS 6603, 1972)
Type Simpson
Radius of Cephalic curve 11.25 cm,
Distance in centre 9 cm,
Separation between tips 2.5 cm,
No pelvic curve,
Length 30 cm
Material Stainless Steel.

Mid Cavity Forceps
Stainless Steel
Simpson type
Curved - Cephalic & Pelvic Curve
Maximum distance between closed blades 8.5cm,
Distance between tips 3.5cm,
Pelvic radius 17.5cm,
Total length 37.0cm

28 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

29 PORTABLE ULTRASOUND WITH COLOR DOPPLER SYSTEM

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 paediatric patients.

3. Multiple preloaded as well as user configurable application presets should be available.

4. It should have 1024 or more digital channels for image formation and acquisition.

5. Transducers:
   (1) Convex 5 - 2 MHz for abdominal imaging.
   (2) Linear 13 - 6 MHz.
   (3) Endocavitory 8 - 5 MHz for transrectal ultrasonography and end firing biopsy, one each.

6. All transducers should be lightweight digital phased array broadband type transducers with at least 1024 elements.

7. Detachable needle guide should be available with convex and endocavitory probes.

8. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Power (energy) Doppler and triplex Doppler should be available.

9. Advanced features such as tissue harmonic imaging with contrast media and compound imaging Advance dynamic flow / HD flow should be available.

10. Controls for 2D mode: Total gain, depth, TCG, dynamic range, acoustic power output, number for position of focus.

11. Controls for Colour Doppler: PRF, colour gain, position and size of ROI, steering of ROI, colour maps and colour invert.

12. Controls for pulsed Doppler: variable sample volume size from 1 to 5mm or more, steer, PRF, baseline, gain angle correction, spectral invert, duplex/triplex on/off.

13. Measurements for 2D mode: Multiple distances, area and volume.

14. Measurements for Doppler modes: Stenosis quantification in percentage, diameter, PSV, EDV, mean, PI, RI, floor volume, acceleration time and index. Automatic and manual measurements and display of pulsed Doppler calculations should be possible.

15. Cineloop memory of minimum 10 seconds on all modes.

16. **Monitor**
Flat LCD/TFT monitor of at last 15inchesor more.

17. **Keyboard**
Alphanumeric soft keys keyboard with easy access scans controls and trackball.

18. **Storage**
Onboard storage of atleast 1000 images. Storage in JPEG and AVI format should be possible.

19. Sorting of data base with patient name and date should be possible.

20. USB port connectivity to printer or computer.

21. Facility for storage on CDR should be available.

22. Unit should function with 200-240 V, 50 Hz AC, 5 amp power outlet. Power requirement to be specified.

23. In built battery back up should be at least one hour or more.

24. The unit should be compatible with and should have facilities for interfacing with the hospital LAN.

25. Essential accessories: Black & White Thermal printer and color laser printer, UPS, mobile cart with transducer holder, jelly bottle holder and space for printer.

26. Paper and cartridges for 1000 image printouts should be provided.

27. The unit offered must be sturdy and should be able to withstand accidental hits and falls during transportation.

28. The unit offered in the tender will require technical demonstration.

29. List of users in India/world wide should be enclosed along with the tender.

30. Price of the main unit and accessories to be quoted separately.

31. Warranty:
The unit, transducers and all accessories should be covered with comprehensive on site warranty for Two (2) years commencing from the date of issue of installation certificate.

32. Photocopy of purchase order along with terms and conditions of contract received from any Govt/Public Sector institution in the last five years for supply of the offered equipment must be enclosed with the price bid

33. Company should have an established Registered Service Centre with address and phone numbers at Myanmar.

34. Company should give undertaking regarding the spares availability of the quoted model for next ten years.

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

36. The shortlisted bidders will have to give demonstration of their quoted model before finalizing the evaluation of their bids

30 Low End Mobile X ray machine.

High Frequency mobile x ray machine with output 60 mA or more. The mobile x ray equipment required to perform x ray studies in emergency and trauma centre and bedside in wards and ICU. The unit should be compact, light weight and easily transportable. It should have following specifications

1) The unit should be operative on mains voltage from single phase 170-260 v AC.

2) **Generator:**

i.	Power	: 2.5 kW or more
ii	kVp. Range	: 40 – 100 Kvp
iii	m AS Range	: 200 m As or more.
iv	m A range	: 30 mA to 75 Ma
v	Exposure Time	:3 ms to 4 sec.

3) **X RAY Tube**: Rotating Anode tube. Anode speed 3000 rpm, Thermal capacity 40 KHU or better.

4) **Tube stand** : The tube stand should be fully counterbalanced with rotation in all directions.

5) **calibrator** The unit should have automatic calibrator. It should have auto shut off facility for lamp.

5) **Cassette storage box** : The equipment should have cassette storage box for minimum of 4 cassette.

6) **Ergonomics**: The unit should have small foot print. The height of the column stand should not be more than 150 cm for easy transportation in the lift etc. and areas with small height doors. The equipment should be light weight, not more than 160 kg.

7) **Breaking system**: The unit should have effective breaking system for parking.

8) Warranty **2 Years comprehensive warrantee for complete system including X-ray tubes.**

9) **Installations:** The bidder should have installed same model successfully in India. The copy of the satisfactory performance certificate of same model to be enclosed along-with the bid.

10) **Certification:** System shall have valid AERB certificate or equivalent of the quoted model. The bidder to provide any other certificate required for importing the equipment incase of imported modes.

31. Whole Body Multi Slice CT SCANNER (64 Row Multi Detector CT)

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

Gantry :

1. The CT Scanner should have low Voltage Slip Rings incorporated in the Gantry
2. The Minimum scan time for a 360 Degree rotation should be less than or equal
3.
4. to 0.40 seconds. (400 Milli Seconds)
5. The gantry should have a minimum tilt of 30 degrees on either side and remote tilt should be available as standard.
6. The gantry should be provided with User control panels on either side for easy positioning
7. **The sub millimeter Slice @ 0.63 mm or less in 64 Row acquisition should be available . The system should be in position to perform 64 Slice / Rotation for Cardiac applications and 32/ 16 Slice / Rotation for normal applications. The Systems with direct 64 Slices / Rotation acquisition will have an added advantage.**
8. The Gantry should have 3D Positioning Laser lights.
9. The Scan field of view (FOV) in acquisition mode should be at least from 200 mm to 500 mm with intermediate Steps for scanning different anatomies.
10. Aperture should be at least 70 cm diameter.

X ray Section :

1. The X ray Generator should be compact and inbuilt in the Gantry.
2. The System X ray power should be 60 kw and above
3. **The MA range available should be between 10 to 450 MA or more with increments in steps of not more than 10 ma.**
4. **The X ray Tube should be essentially Dual Focus with capacity of at least 7 MHU. Liquid bearing X ray Tube is desirable. Any special feature of the X ray tube to be highlighted with literature.**
5. Specify the focal Spots of the X ray tube.
6. The X ray tube should have a cooling rate of not less **than 1000 KHU per MIN**
7. The X ray tube Cooler Unit should be in built in the Gantry

Detectors :

1. The Detector Offered should be Solid State. Specify the Material
2. **The Effective Elements/ Channels should be at least 650 per row. The 64/32/16 slice per Rotation should be possible with the detectors in 0.63 mm Mode . The Systems with 64 Physical Rows in the detector will have advantage.**
3. Specify the Fan Angle of the X rays and the geometry The detectors should not require frequent calibration.

Patient Couch :

1. The patient table offered should have a minimum load bearing capacity of at least 200 KG.
2. The Minimum table top height should not be more than 35 cms from the floor level for easy transport of trauma patients.
3. The Floating table top width should be atleast 42 cms for better comfort.
4. The range of metal free scan should be atleast 165 cms.
5. The vertical range should be atleast 55 cms (max height – min height)
6. Specify the reproducing accuracy of the table.
7. Remote UP/DOWN , FWD/BWD of the Patient Couch should be standard

Spiral / Helical Section :

1. **The system offered should have Spiral Capability of at least 100 seconds & above. Real Time Spiral @ 10 f/s should be standard.**
2. The range of Spiral facility in Axial Direction should be more than 100 cms.
3. The Reconstruction Time in Spiral scan should not be more than 100 Milli seconds.
4. The system should have the Smart Prep or equivalent facility & ability to track Contrast medium to trigger scan should be included in the scope of Supply
5. **System should perform Tilt Spiral scan as standard at any of the chosen angles in Multi Slice Mode.**
6. **Hi Res scan package of 0.63 mm or less should be offered as standard**
7. **Multi Slice CT Fluroscopy with at least 3 Slice positions & Reconstruction @ 10 Images / Sec should be available.**

Computer Section:

1. The Computer offered should be the Latest Multi tasking Processors and a menu driven platform with a RAM size of at least 3 GB
2. The Monitor should be the latest Color of at least 18 inches and flat screen. Two Monitor Independent Console preferred. The Twin Monitor system should work on either shared or Common data base.
3. The display matrix should be at least 1024 / 1024.
4. The reconstruction time for a Axial scan should not be more than 100 Milli seconds .
5. The Hard disk Capacity for both Image and Raw data should be more than 500 GB
6. It should have facility to store at least 100,000 Images
7. The system should be supported with archiving facility of DVD & CD Main Console
8. DICOM facility to send , store , print , receive, Query / Retreive , MWM , MPPS etc should be standard .
9. PC Based connectivity should be standard for easy transfer of Images & Report.
10. Additional Work station with at least 4 GB RAM , Archival on DVD / CD with Cardiac Recon , CT Angio graphy , Colonoscopy as well as DICOM Print should be included in the Scope of Supply.

Image Processing section :

1. The system should have standard software like 3D Volume rendering , MIP , CT Angio, .Color Angio Display, Virtual Endoscopy, Colonoscopy, CT Perfusion , Dental scan , Bone Mineral Study should be available as standard on the Main console

2. The following soft ware should be offered as standard (MPR , ROI , VOLUME CALCULATION , CT NUMBER DISPLAY , WINDOW WIDTH , WINDOW LEVEL , TOPOGRAM DISPLAY , CINE DISPLAY , HRCT LUNG, DYNAMIC SCAN)
3. Cardiac Scan Attachment with ECG Gated Segmented Recon , Calcium score , Vessel Flythrough of the Coronaries should be included in the Scope Of Supply either in the Work Station or in the Main Console.
4. Automatic display of MPR Images after scan will be preferred**.**

Resolution :

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

Accessories :

1. Multi size Dry Laser Imager of any reputed make of atleast 600 DPI
2. Color Laser Printer of any reputed make.
3. Lead Glass of at least 2 ft by 4 ft
4. Stabilizer for the Entire system of suitable capacity
5. UPS with One hour back up of suitable capacity to handle CT Computer , Laser Imager , Work Stations , Color Printer .
6. Dual Head Pressure Injector of reputed make with 100 No: Syringes & Tubings.
7. Boyle's anesthesia apparatus for GA

Warranty :

1. Two Years for CT Scanner System including X ray tube and all accessories.
2. The offer should be accompanied by Original data sheet/brochure of the product .
3. All compliance to the Tender should be in the form of Original Data sheet or Original Certificate from the manufacturer. Items under Work in Progress will not be considered.
4. On Site Training and hand holding for the CT Technicians for a period of twelve Weeks/ three months.
5. It shall be responsibility of the Bidder to alter the site towards the installation of the system. Turn key costs towards the installation should be mentioned separately. Turn key includes Site modifications, Wall tiles , Lead lined doors , Lead glass , Air conditioners , Power DP box , PVC flooring , False ceiling , Lights etc

32 C-Arm Image Intensifier (Multispeciality)

1 Description of Function	
1.1	Image Intensifier for Dynamic X-Ray based studies in operation room, radiology etc.
2 Operational Requirements	
2.1	Must be for universal use in Radiology and other services. The fluoroscopy, pulsed fluoroscopy and digital radiography operating modes are to be supported. The C-arm should have on line digital subtraction for use in vascular intervention with Roadmap. The C-arm should be of compact, lightweight design. Must be equipped with a 23 cm image intensifier. (should seek a large option if available) The camera system should be based on CCD technology with a digital imaging system for fluoroscopy and radiography, and Two nos. 17 inch TFT monitors should be provided. Local archiving of single images and scenes for over 10,000 imagers is required. Must be possible to connect the system to a network via an integrated DICOM 3.0 interface. The C-arm should have motorized vertical movement. Please mention the details of orbital movements, swivel and angular movements. The larger range of movements are preferred. The C-am should be fitted with Laser devices for proper radiation free positioning.
3 Technical Specifications	
3.1	Technical Specifications C-Arm 1. General- a) Motorized Vertical travel : MINIMUM 500 mm or more b) Privotal rotation : =/- 12.5 deg. Or more c) Orbital rotation : = 90 deg. – minimum 30 deg. Or better d) Depth/Radius of C-arm : 660 mm or better e) SID : 950 mm or more f) Horizontal travel : 220 mm or better g) Free space between II & X-ray tube : MINIMUM 740 mm or more h) Rotation of C-arm : +/- 270 deg. Or more

i) Total WIDTH of C-arm : MAXIMUM 800 mm or less

2) Image Intensifier

a).Atleast triple field 9"/6"/4" input dia offering resolution (Minimum 64lp/cm or better for 4" input) & contrast ratio (25:1 or better)

3) TV Camera

Ultra Compact CCD camera with high No of pixels (> 450000) and video band width (atleast 20 MHz of better) along with 2 Nos. 17" 625 lines 100 Hz flicker free TV monitors with facility to rotate the image continuously.

4.)Direct Radiography

Radiography should be possible on a cassette to be fitted in a holder for 10X 12 inches cassette. The unit should be complete with one such holder and 1 No. cassettes including high speed intensifying screens.

5.)X- ray generator

High frequency (25- 40 KHz or more) 3.5 to 5.0 KW or even better X-ray generator with high capacity rotating anode X-ray tube of dual foci of 0.3 and o.6 mm (200 KHU) or better.

6.)a. Fluoroscopy output : 40-120 KV in IKV steps
b)mA output : MINIMUM Up to 8. mA or better
c) Snapshort : MINIMUM Up to 12.0 mA or better

d) Pulsed fluoroscopy rate selectable:- 1 image per second to 1 image per 5 second or better

e) Automatic dose rate regulation with KV & mV control
Time totalizer for fluoroscopy with facility to alarm after every 5 minutes of fluoroscopy

7.)a)Radiography output : 40-120 KV in 1 KV steps
-b) mA range : Up to 250 mAs or better
-c) mA max : Up to 90 mA or better

8.Image Memory

	At least 1 (LIH) + minimum 20,000 frames dynamic digital memory on Hard Disk with 576 X 576 matrix or better,. There should be facility to insert patient name through alphanumeric key board. They system must be upgradable to functions of performing REAL TIME digital subtraction angiograpny with acquisition up to 6 frames/sec. or better and Road –mapping functions etc. at any later date for peripheral angiography. 9.Essential Accessories The complete functional system must be quoted with DUAL CHANNEL Laser LIGHT SOURCE ON, X-RAY TUBE UNIT for making a cross to reduce the X-ray dose, Built in DODE AREA PRODUCT meter for disply of X-ray dose, light weight lead aprons (6) required CVT and thermal imaging film printer with 12 film rolls. CD/DVD Writer
4 System Configuration Accessories, spares and consumables	
4.1	4.1C-Arm Main Frame 01 4.2 Table 01 4.3 X-Ray Generator 01 4.4 X-Ray Tube 01 4.5 Image Intensifier &Imaging Chain 01 4.6 3D Rotational Angiography 01 4.7 Data Management Capabilities-01 4.8 Integrated Digital Archieving on CD/DVD 4.9 Lead Aprons 06 4.10 Thyroid Guards 06 4.11 PC with TFT Monitor with table and laser printer 01. 4.12 View Boxes – 02 4.13 TFT Monitor 02
4.2	All the accessories in essential accessories.
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 :220-240V/ 50 Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.
6.2	Appropriate Servo Voltage Stabiliser/ CVT to be provided with the unit. Also spell out the power requirements for the unit

7 Standards, Safety and Training

7.1	1. Company/ supplier Should have a CE, FDA approved certification Should be BEE/NATIONAL GOVT. AGENCY FOR MEDICAL ELECTRICAL EQUIPMENT or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive warranty for 2 years.
7.2	Equipment should be type approved by AERB
7.3	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450

8 Documentation

8.1	1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer service/ maintenance manual. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, without which it will not be considered.

33 500 mA High Frequency x-ray unit with image intensifier.

The unit should be a completely integrated system with x-ray Table, Generator and Tube form the same Principal Company.

The x-ray machine quoted by the firm should have AERB Approval & CEIUS FDA approval.

1. High Frequency Generator with output of 50 KW or more to give 500mA at 100KV.
2. Generator should have KVP Range 40 KV to 150 KV.
3. mAs range should 2-800 mAs.
4. Digital Display of KV and mAs.
5. Integrated console with the table.
6. Fluoroscopy in manual and automatic mode.
7. Dual Focus X-ray Tube with large focus 1.0mm and small focus-0.6 mm or smaller.
8. Collimator with adjustable copper filters.
9. Facility of collimation functionality display on the x-ray tube assembly.
10. Table top transversal travel30cm or more (± 15 ern),
11. Table top longitudinal travel 160 cm or more (± 80 crn).
12. Tiltable table from vertical to -15 Degree or more with automatic stop at Horizontal, Vertical and head down position.
13. Microprocessor Controlled Automatic Spot Film Device with facility of different film formats selections with wide range of division in vertical and horizontal.
14. X-ray table should be able to accept all standard type of cassette including CR cassettes
15. Titling speed $>3^0$/*per* second.
16. Maximum Allowable patient weight 200 kgs.
17. Compressor cone with automatic parking position.
18. Oblique incidence up to *+1/-40°.*
19. All movement controls of the table available on the SFD also.
20. Under table 12 inch image intensifier system with high resolution CCD camera. Overview plus 3 zoom levels 65% DQE & 2 No. Monitors of minimum 17" size and minimum 1024x1024 resolution or better.
21. Last image hold of fluoroscopy and radiography images.

34 Dark Room Accessories

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

35 Microtome

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Rotary microtomes are precision instruments designed to cut uniformly thin sections of a variety of materials for detailed microscopic examination. The microtome operation is based upon the rotary action of a hand wheel activating the advancement of a block towards a rigidly held knife.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Rotary microtome for histopathological section cutting specimen up to 32 x 27 mm		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Rotary high precision manual microtome for paraffin sections.		
3.2	Mechanical automated feeding system.		
3.3	Specimen advance 1 to 30 µm in 1 µm steps		
3.4	Integrated, smooth hand wheel that locks in any position		
3.5	Fine orientation of specimen with specimen tilt		
3.6	Quick charge for all specimen clamps		
3.7	Specimen retraction should occur in return stroke		
3.8	Option to use both standard knife holder and disposable blade holder		
3.9	Section Waste tray		
4.0	Knife holder takes knives from 110 to 185 mm long by 28 to 35 mm wide and has guards for protection both inside and outside clamp		
4.1	Standard accessories to include the following: Object orientation set, Universal Cassette Clamp, universal knife holding base, Std knife holder, sharp blade holder, Waste tray, Dust cover, 50 each low and high profile disposable Microtome blades.		

3.9	Automatic and manual operation.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
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

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.		

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	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)		

7 Standards and Safety

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

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied		
8.2	Certificate of calibration and inspection from factory.		

8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.4	List of important spare parts and accessories with their part number and costing.		

36 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)
Wavelength Selection	:	8-gelatine filters on a switched wheel. Peak wavelength of 340, 430, 470, 490, 520, 540, 580, 600 , 710, & 800nm.
Light source	:	Tungsten filament
Approximate Size	:	300 x 353 x 120 mm
Display System	:	Digital
Input	:	220-240 volt AC
Approval	:	FDA/CE (European) /or ISI approval

37 Specifications of Blood Gas Analyser

1. Fully automatic, upgradeable, fast electrolyte combi analyzer.
2. Essential Measured parameters; pH, pCO2, pO2, SaO2, tHb, Barometric Pressure, Na+, K+, Ca++, Cl-, Bl urea and Sr Creatanine & Blood sugar. All these parameters should be measured simultaneously
3. Calculated parameters should include BE, BE ecf, HCO3, Lactate, Anion Gap etc.
4. Sample volume-less than 100ul.
5. Fast analysis time – less than 60 sec.
6. Maintenance free electrodes with individual electrodes ON/OFF facility.
7. Fully automatic liquid calibration of all parameters at user-defined intervals without the use of Gas calibrated reagents, external gases, tanks or regulators.
8. Continuous reagent level monitoring with graphic display.
9. Data display on well-illuminated, adequate size **LCD color touch** screen display.
10. Data print out on built in graphic printer.
11. Built in auto Quality control facility.
12. Suitable UPS with 30 min backup.
13. Reagents for one year@ 20 samples/day should be provided along with the machine.
14. Cost of reagents to be quoted for comparative evaluation.
15. Stand by blood gas cum electrolyte analyzer in case of breakdown.
16. Should have local service facility
17. Back to back warranty to be taken by the supplier from the principal, to supply spares for minimum 10 years.
18. Must submit User list and Performance report
19. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet
20. Demonstration is required.
21. Warranty for Two years.

38 Auto Analyzer

1 Description of Function	
1.1	For analysis of serum, plasma, urine, cerebrospinal fluid (CSF), hemolysate and whole blood.
2 Operational Requirements	
2.1	Should be open system and fully computerized with random access, selective multi-batch type, providing maximum flexibility in programming
2.2	Should be capable of undertaking 160-200 tests/hr involving fixed time, end point and kinetic chemistry
3 Technical Specifications	
3.1	Optical Requirement Wavelength Range: 340 to 700nm Absorbance: 0.000 to 3.000A Resolution: 0.0001A or better Measurement: Monochromatic & Biochromatic options. Flow cell volume: approx. 50µl Source of light: Halogen lamp
3.2	Reagent Handling System: Pre and Post dilution: Automatic Aspiration volume: 5-1000µl in 0-0.5µl increments Wash Cycles: Programmable for aspiration and sampling probes
3.3	Analytical Requirements: Sample Tray/reaction plate: >50 positions for samples/ standards/ controls Sample cups: 0.5-1ml Reaction types: End point, kinetic- differential and initial rate bichromatic, with & without blank correction Test Parameters: 50 or more, all programmable as per user requirement. Incubation Temp: 37ºC preferably with variable temperature options Cuvette Temp: 37ºC +0.1ºC

	Quality control: Daily and monthly QC, S.D., C.V. Calculated and precision check facility		
3.4	Date Processor: Pentium computer with instrument operating and data management software, windows NT Operating Software ,min 10 GB hard disk, CD-ROM, 17" colored monitor, Laser printer. Storage of 10,000 patients data.		
3.5	Inbuilt printer thermal type with 40 characters/line or better		
3.6	Software :Patient oriented, user friendly and test oriented.		

4 System Configuration Accessories, spares and consumables

4.1	Biochemistry Analyser-01		
4.2	Integrated Printer and computer as specified above-01		

5 Environmental factors

5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%		

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz		
6.2	Suitable Servo controlled Stabilizer/CVT		
6.3	UPS of suitable rating shall be supplied for minimum 1 hour backup for the entire 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		

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	User manual in English		
8.2	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.		
8.3	Certificate of calibration and inspection.		
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 Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.6	Service manual in English		
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.		

39 Hematocrit Centrifuge

1 Description of Function	
1.1	Hematocrit centrifuge is a piece of equipment, generally driven by a motor, that puts an object in rotation around a fixed axis, applying force perpendicular to the axis. The centrifuge works using the sedimentation principle, where the centripetal acceleration is used to separate substances of greater and less density and is used to calculate Hematocrit values.
2 Operational Requirements	
2.1	Hematocrit Centrifuge for Capillary tubes with built in safety system is required.
3 Technical Specifications	
3.1	On-board Capillary positions :24 Samples in capillary at a time
3.2	Timer :Built in Timer for up to 0-15 min
3.3	Safety System:Triple Balance System, Manual Lid Lock, Lift Cover and Power Cut off
3.4	Speed app. 12,000 RPM
3.5	Centrifugal Force :app.15000 G
3.6	Capillary size: 40 mm
4 System Configuration Accessories, spares and consumables	
4.1	System as specified-
4.2	All consumables required for installation and standardization of system to be given free of cost.
4.3	Capillaries- 1000
5 Environmental factors	
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 80%
6 Power Supply	

6.1	Power input to be 220-240VAC, 50Hz fitted with suitable plug used in Myanmar		
6.2	UPS of suitable rating for one hour backup minimum has to be provided.		

7 Standards, Safety and Training

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

8 Documentation

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

40 PHACOEMULSIFICATION MACHINE

1. Phaco- Emulsification unit should work on Venturi & peristaltic pump should provide light weight steel/ titanium hand piece.
2. US power Should have continuous and pulse mode with duty cycle.
3. Two IA straight hand pieces with 4/6 piezo electric crystals.
4. Machine Should have good panel display with digital control good audio, memory set up for surgical parameters
5. Multifunctional foot switch.
6. Machine with good track record will be preferred.
7. Facilities for Bipolar Coagulation, Phacoemulsification, Aspiration and Anterior Vitrectomy
8. Multiple programmability
9. Input power 220-240 Volts; 50-60 Hz
10. Digital LCD panel display of parameters
11. Bipolar Coagulation: 2 to 6 watts; Foot controlled
12. Phacoemulsification:
    a. Ultrasonic tip frequency: 29-60 KHz
    b. Phaco power in both linear and pulse mode
    c. Ultrasound pulse rate 1-14 pulses/sec
    d. Micro flow tip
    e. Auto priming, auto fluidic and auto tuning
13. Aspiration: 0-600 mmHg linear vacuum
14. Anterior Vitrectomy: 30-600 cuts/min (upto 800cuts)
15. Multifunctional foot pedal with a reflux switch
16. Standard spares and accessories
17. Machine should have Standard accessories as mentioned below:
    a. 30 degree US tips: 30
    b. Tubing: 6
    c. Silicon Sleeves: 50
    d. Test chambers: 50
    e. Diathermy cord: 1

f. Vitreating probe 2

18. Machine trolley with wheels
19. UPS

41 OPERATING MICROSCOPE

Specifications:

Magnification : Motorized apochromatic magnification changer with factor 0.40 / 0.6 / 1.0 / 1.6 / 2.5
Fine focusing : Motorized, range : 40 mm with X –Y facility in foot pedal.
Objective Lenses : Objective lens f=200 mm
Binocular tubes : 45 Deg. Inclined / 180 deg. Inclinable widefield binocular tubes with interpuillary distance adjustable from 50 mm to 80 mm
Eyepieces : Push-in high-eyepoint widefield eyepieces 10x / 12.5x with diopter setting from -8D to +5D
Illumination : Fibre optic coaxial illumination with halogen reflector lamp 12V 100W via light guide
Filters : Eye protection filter GG475
Daylight filter KK40
Retinal protection device

42 B SCAN

1.	Gain	25 to 105 dB
2.	TGC	0 to 30dB
3.	Contact Probe	12.5 Mhz (10 Mhz) optional
4.	Immersion Probe with Two transformer	35 Mhz to 50 Mhz
5.	Angle contact probes	20 to 60 degrees
6.	Scan angle for immersion probes	10 to 30 degrees vector density & sampling
7.	Axial Resolution	50 Microns
8.	Lateral Resolution	50 Microns
9.	Datadabase Dimensions	500Kb
10.	Measurement Types	Angle Caliper 1 Caliper 2 and A Scan / B Scan
11.	Capability	A Scan vector available as overlay on B Mode Image
12.	Velocity	Adjustable to tissue or material being image
13.	Recording	AVI formal duration determined by user Image Exporting
14.	Exporting	JPG, AVI. Raw data file system
15.	Main Power	110V / 220V AC frequency:60 / 50Hz Power consumption
16.	Gross Weight	70kg approx .

43 KERATO METER (OPTHALMOMETER! (BAUSCH AND LOMB TYPE)

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

44 BIPOLAR CAUTERY-OPHTHAL

1. Should have use solid state technology.
2. Should have LED indicator for power output.
3. Should have foot control.
4. Should have provision to connect wide range of bipolar forceps and hemostatic erasers to facilitate most ophthalmic surgical procedures.
5. Should be supplied with two sets of reusable, autoclavable cord for bipolar forceps and hemostatic erasers.
6. Should be supplied with one standard bipolar forceps and hemostatic eraser.
7. Should be supplied with 2 bipolar erasor with 18 G tip and one bipolar force tip
8. Should work with input 200 to 240Vac 50 Hz supply.
9. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.

	45 Basic Cataract Eye Instrument IOL/ECCE SURGERY KIT	
1	Baby Jones Towel Clamp (Cross Action)	2 Pcs
2	Hartman Mosquito Forceps (Straight 3 ¾ inch)	2 Pcs
3	Hartman Mosquito Forceps (Curved 3 ¾inch)	2 Pcs
4	Barraquer Wire Speculum (Child)	1 Pcs
5	Barraquer Wire Speculum (Adult)	1 Pcs
6	Troutman - Castroviejo CorneoScleral Scissors (Left)	2 Pcs
7	Troutman - Castroviejo CorneoScleral Scissors (Right)	2 Pcs
8	Westcott Tonotomy Scissors, curved blunt tip	2 Pcs
9	Vannas Capsulotomy Scissors (Curved)	2 Pcs
10	Lims Forceps	1 Pcs
11	Troutman Superior Rectus Forceps (1x2 teeth)	1 Pcs
12	Castroviejo Suturing Fcp with Tying Platform 1 x2 Teeth (Straight)	1 Pcs
13	Bishop Harmon Tissue Forceps 1 x2 Teeth	1 Pcs
14	McPherson Suture Tying Forceps, 5mm Smooth Jaws (Straight)	1 Pcs
15	Pierse Corneal Forceps Straight 1 x1 Pierse teeth	1 Pcs
16	Castroviejo Caliper 20 mm (Straight)	1 Pcs
17	Shepard lens Holding Forceps, curved with serrated lower jaw	1 Pcs
18	Lester IOL Manipulator (Angled)	1 Pcs
19	Castroviejo Synechiae Spatula, Double Ended	1 Pcs
20	Castroviejo Blade Breaker & Holder	1 Pcs
21	Micro Needle Holder (for 10.0 Sutures) straight without lock	1 Pcs
22	Troutman Needle Holder with lock	1 Pcs
23	Rycroft AC cannula, Air Inj/Irr (Angled): set of 30/27/26/25 G	1 set
24	Simcoe I/A cannula Direct with silicon tubing (Gold Plated)	1 Pcs
25	Handle for Cannula	1 Pcs
26	Sterilizing box large with Two Silicone Mats	1 pcs
27	Capsuloshexis Forceps	1 Pcs
28	Unsterile Razor Blade, silicone coated (pack of 100)	1 pack
29	Irrigating Cystotome 25 G (Unit of 100 Pcs)	1 unit
30	10-0 MF Nylon 26cm on 3/8 Circle Micropoint Spatulated 6mm Single	9 box
31	Absorbent Sponge Spears: Inner sterile pack of 5 (Pack of 100)	1 Pack
32	HPMC 2% : 5 ml vial with cannula (unit of 100 Pcs)	1 unit

	CONVENTIONAL CATARACT / ICCE SURGERY KIT	
1	Atkinson Retrobulbar Needle 38 mm 3G	12 Pcs
2	IOP Reducer (Ball Type	1 Pcs
3	Dressing Forceps, Serrated Delicate (Straight)	2 Pcs
4	Baby Jones Towel Clamp (Cross Action)	2 Pcs
5	Barraquer Wire Speculum (Child)	1 Pcs
6	Barraquer Wire Speculum (Adult)	1 Pcs
7	Kalt Needle Holder Straight	1 Pcs
8	5/8 Circle Curved Reverse Cutting 16mm Single Needle (Pack of 6)	1 Pack
9	Hartman Mosquito Forceps (Straight 3¾ inch)	4 Pcs
10	Kelman McPherson Lens Holding Forceps (Cross Action)	1 Pcs
11	Halsted Artery Forceps (Straight 5 ¾ inch)	2 Pcs
12	Halsted Artery Forceps (Curved 5 ¾ inch)	2 Pcs
13	Ernest Nucleus Cracker	1 Pcs
14	Knapp Strabismus Scissors Blunt (Straight)	2 Pcs
15	Heat Cautery Standard copper Ball.	1 Pcs
16	Spirit Lamp	1 Pcs
17	Bard Parker Blade Handle (Double)	1 Pcs
18	Castroviejo Blade Breaker & Holder	1 Pcs
19	Lims Forceps	1 Pcs
20	Troutman -Castroviejo Corneoscieral Scissors (Left)	2 Pcs
21	Troutman Castroviejo CorneoScieral Scissors (Right)	2 Pcs
22	Iris Forceps 1 x2 teeth curved	1 Pcs
23	Deweaker Iris Scissors / angled vamas scissors	2 pcs
24	Graefe Muscle Hook (Size 1)	1 Pcs
25	Graefe Muscle Hook (Size 2)	1 Pcs
26	Rycroft AC cannula, Air Inj/Irr (Angled): set of 30/27/26/25 G	1 set
27	Castroviejo Synechiae Spatula, Double Ended	1 Pcs
28	Troutman Needle Holder with lock	1 Pcs
29	Micro Needle Holder (for 10.0 Sutures) straight without lock	1 Pcs
30	McPherson Suture Tying forceps, 5mm Smooth jaws (Straight)	1 Pcs
31	Instrument Tray with Lid (Stainless Steel)	3 Pcs
32	Lotion Bowl	3 Pcs
33	Sterilizing box large with Two Silicone Mats	1 Pcs
34	Capsuloshexis forceps	1 Pcs
35	Sterilized Surgical Blade No. 11 (Pack of 100)	1Pack
36	Sterilized Surgical Blade No. 15 (Pack of 100)	1 Pack
37	8-0 Virgin Silk 26crn on *3/8* Circle Mp. Spatulated 6mm Single	9 Box

	Needle	
38	Absorbent Sponqe Spears Inner sterile 5(Pack of 100)	1 pack
39	Plastic frame power1 to 8.25 to +12.00 D.sph.	100
40	Cryo Portable with one Cataract Probe with	1 Pcs
41	portable Cylinder for N20/C02	1 Pcs

46 CERVICAL COLLARS

Cervical of different sizes (4each) to accommodate infant, child, adult medium and large.
Collars must be made of semi rigid or rigid nature.

46 GARDENWELL'S TONG

Materials: Stainless Steel
Small, medium
With compatible bits

46 FULL SPINE BOARD

Material- PE or Similar Material with no discharge Contamination
Size- Full Spine Board
(Standard AAOS) with 4 Straps

46 PNEUMATIC SPLINT

The kit should be light weight, anti allergic and transparent.
The zipper should be made of a flexible plastic PVC Sheet.
It should be X ray Compatible.
The kit should contain:-
3 splints of different sizes of Arm, dimensions as 370(L) x 420(b) mm,
640(L) x 460 (b) mm,
740(L) x 530(b) mm,
3 splints of different sizes of Arm, dimensions as 420(L) x 370(b)mm,
695(L) x 370(b) mm,
860(L) x 370(b) mm,
It should contain1 bag made of nylon and divided into 6 compartments for rapid selection of the correct size,
The dimension of the bag should be 425(L) x 65(b) x 335(h) mm,
Weight should not be more than 1.4kg.
It should be manufactured In ISO 13485 certified facility and must comply with (93/42/EEC) and CE mark. / FDI approved.

47 Specifications for RING EXTERNAL FIXATOR SYSTEM

1 Description of Function

1.1 These instruments are used in orthopedic surgery for fixing comminuted fractures, treating gap fracture nonunions, limb length discrepancy etc.

2 Operational Requirements

2.1 As specified

Technical Specifications

3.1 SHOULD BE MADE FOR IMPLANT GRADE STAINLESS STEEL/carbon fibre as specified by user. Some sizes and quantity to vary with user demand.

DESCRIPTION	QTY
STAINLESS STELL 1/2 RINGS FOR 20 NUTS	
80	
100	
120	
140	
160	
180	
200	
220	
240	
CARBON ½ RINGS 60-180 MM WITH 10MM INCREMENT	
THREADED ROD	
4"	
6"	
8"	
10"	
12"	
14"	
16"	
18"	
NUT	

OLIVE WIRE

1.5MM

1.8MM

KWIRE BAYONET TIPS

1.5MM

1.8MM

WIRE FIXATION BOLTS

CANNULATED

SLOTTED

RING FIXATION BOLT

15MM

20MM

25MM

ITALIAN ARCH ASSORTED

1400

1600

1800

2000

OBLIQUE SUPPORT

FEMALE POSTS

2HOLE

3HOLE

4HOLE

MALE POSTS

2HOLE

3HOLE

4HOLE

MALE HINGES

FEMALE HINGES

SHORT CONNECTION PLATE

4 HOLE

5 HOLE

6 HOLE

7 HOLE

8 HOLE

9 HOLE

10 HOLE

11 HOLE

TWISTED PLATES

1 HOLE

2 HOLE

3 HOLE

4 HOLE

THREADED SOCKETS

WASHERS

SINGLE PIN FIXATOR CENTRAL SLOT

SCHANZ PIN

SPANNER 10-11 MM 6

BOX SPANNER FIX 4

BOX SPANNER MOBILE 4

WIRE CUTTING PLIER 2

DYNAMOMETRIC TENSIONER 2

DYNAMEWIRE TENSIONER 2

4. System Configuration Accessories, spare and consumables

a. As specified

5. Environmental factors

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

Parameters:

6. Power Supply

NONE

7. Standards, safety and training

7.1 Company / supplier Should have a license for manufacture by Drug Controller India and conform to the laid down standards by them in this regard.

7.2 Material should be of implant grade steel, carbon fibre, titanium as required.

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

7.4 Comprehensive warranty for 2 years warranty.

8. Documentation

8.1 1. User / Technical / Maintenance manuals to be supplied in English.
2. Certificate of calibration and inspection.
3. List of equipments available for providing calibration and routine preventive maintenance support as manufacturer service / maintenance manual.
4. List of important spare parts and accessories with their part number and costing.
5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description is clearly spelt out.
6. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / oara / number with authenticated catalogue / manual without which it will not be considered.

47 (contd.) Equipment Specifications for TUBULAR EXTERNAL FIXATOR

1 Description of Function

1.1 These instruments are used in orthopedic surgery for fixation of open fractures/comminuted fractures or fracture pelvis externally by pins and rods.

2 Operational Requirements

2.1 As specified

3 **Technical specifications**

3.1 TUBULAR EXTERNAL FIXATOR SYSTEM

3.2 The contents described below are the minimum essential for the set. The quantity and size of the implant may vary with the demand of the user.

3.3 ITEM DESCRIPTION QTY

External Fixator

Universal Clamp
Tubular rods with Caps 6"-18" with 5 cm increment
Sigma Clamps (Twin Clamps)
Tube to Tube Clamp
Drill Bit 3.2/3.5mm , 6-9" length
Schanz Pin 4.5 mm Cortical of different lengths 6,9inch.
Schanz Pin 5 mm Cancellous
Schanz Pin 6.5 mm Cancellous
Transverse Clamp
Inter Connecting Rod Assorted Sizes
Spanner(10-11)
Hinged Box Spanner
Triple Trocar with Sleeves 6.5 mm
T-Handled with Chuck

Forearm/ Small Bone External Fixator

Instrument Set for above:
Drill Bits 2.5 mm
Schanz pin 3.5 mm Cortical
Schanz pin 2.5 mm Cortical with 3.5mm shaft.
Universal Clamp 3.5mm
Spanner No. 8,9
Assorted sized interconnecting rods.

47 (contd.) External fixator for Metacarpal and Phalanges, small tubular bones- radius etc

Instrument for above should consist of following
Small, Medium, large distractors 1.5/2mm/2.5/3.5mm of assorted length
Drill Bits 1.5 mm
Allen Key of suitable size
Threaded/ plain K wires/schanz pins 1.5/2mm/2.5mm/3mm.
Link Joints of various configurations for above wires and pins
Interconnecting rods

3 System Configuration Accessories, spare and consumables

3.1 As specified

4 Environmental factors

4.1 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 Power Supply

None

6 Standards, safety and training

6.1 Should be manufactured by company etc. which are licensed by Drug Controller of India and conform to the standards laid down by Drug Controller of India.

6.2 Material should be of implant grade steel, carbon fibre, titanium as required.

6.3 Shelf Life of more than 2 years.

7 Documentation

7.1 1. User/Technical / Maintenance manuals to be supplied in English.
2. List of important spare parts and accessories with their part number and costing.

48 SPECIFICATION OF HYDRAULIC FRACTURE TABLE

1) Hydraulic Fracture Table should have hydraulic mechanism for changing the height.
2) It should have Radio translucent top suitable for use with C arm with provision (like side rail & adjustable clamp for acceptable accessories .
3) The specification of table top.
    a) Height – 745mm- 1155mm.
    b) Side rail dimension -25 x10mm.
    c) Trendlen burg - 27°
    d) Reverse Trendlenburg -27°
    e) Lateral tilting to both sides -18°
    f) Head section & Foot section should raised to 30 & in it reverse position to 90 from the trunk position.
    g) Base & column fully covered with non- corrosive (S.S –sheet).
    h) Base should be eccentrically placed.
    i) The table should have provision of Ortho paedic Traction attachment..
    j) It should have X- ray cassette channel & frame set for X- ray cassette.
    k) It should have accessories for lower limb & upper limb Traction.
    l) Traction attachment should not interfere with movement of C arm.
4) Traction unit should be attached to the main table.

49 TOURNIQUETS

a. Pneumatic Tourniquet

Good Quality, CE/FDA approved consisting of Three cuffs inflation bag and gauge in carrying case pump

b. Automatic Electronic Tourniquet.

Dual Cuffs Supplied with Two Sets of Cuffs Five sizes Each (Total 10 cuffs for Dual Application)
It is fully automatic to perform IVRA (Bier's Block) procedure
It is electrical operated with battery back up
It has two independent channel operation.
Colour coded cuffs and air tubing.
Parameter settings are independent of each other.
Manual override for cuff deflation during operation.
Cuffs are puncture resistant.
Different cuffs for paediatric, adult, forearm, thigh etc.
Special cuffs for Bier block procedure required for intravenous regional anesthesia.
Specifications
Cuff Pressure: 0 to 500 mm of Hg.
Cuff Pressure Regulation: +/- 8 mm of Hg. Set Pressure.
Online Setting: Allow increase & decrease of set pressure.
Timer: 0 to 5 Hrs.
Timer Least Count: 2 Min.
Internal Least Count:
Alarm: Audible alarm on timer reaching set value. Pressure leakage, Elapsed time 5 min. before Auto Deflate
Quick Release: Pressure is release from the cuff without effecting the timer.
Memory Function: Last Pressure set is store when the tourniquet effecting the timer.
Power: 230 V, AC 50 Hz.
Battery Backup: Battery Backup is provided.
Cuff: Autoclavable Cuff.
Inflation: Motorized Pump.
Deflation: EMV Automatic or Manual Override.
Pressure Output Port: 2 Ports Having quick connect/ Disconnect.
Display: 16x4 Backlit LCD Display.
Operation Method: Micro Controller Based Control.
Elapsed Time Display: minutes, seconds.

49 Esmarch Tourniquet

Material: - Rubber
Sizes: - 4" and 6" (3 each)

50 BASIC BONE SET

1. General Orthopedic Instruments

	QTY.
• Langenback Retractors - 10 each of following	
i. Mini Langenback Retractor 10mm x 6mm	1 each
ii. Mini Langenback Retractor 22mm x 8mm	
iii. Kocher Langenback Retractor 40 x 11 mm x 21 cm	
iv. Langenback Retractor 30 x 11	

	QTY
• Hohmann' s Retractors	
i. 8mm Blade	1 each
ii. 10mm Blade	
iii. 17mmBlade (15-20mm)	
iv. 43mm Blade (40-45mm)	
v. 25mm Blade (20-25mm)	

• 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	1 set
Bone forceps with wire passer (two blunt blades with hole For passing K wire to fix phalanx fractures)	4
• Wire holding forceps	2

- Wire holding pliers

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 of wire extension	5 nos.
ii K-wire double ended 200mm	10 nos.

b) Each set should contain

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

- Bohler's stirrups of assorted size 10
- Bachaus towel forceps 5" 16
- Skin Hooks

  Gillies for size 1 & 3 - 2 each 1 set

- Bone curette

i. Volkman all size	1 each
ii. Maartini curettes all size	2 sets.

- A.O type damaged screw removal set 2

- Small fragment plating instrument with implant

  Set complete 2 sets
  Should consist of following
  i. Small fragment instrument set (3.5mm) in autoclavable box 1 No.
  ii. Small screw box
  Contain the following:
  Cortical screw 3.5mm

10 mm	5 units
12 mm	5 units
14mm to 40mm	8 units each

  Cancellous screws 4mm

10mm to 50mm	2 units each
Screw holding forceps	1
Storage & 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 instruments Set

  Each set should contain
  i. Gigli saw handle 1 pair 2
  ii. Gigle saw wires 100 nos.

- Patella reduction clamp 2

- Patella wire passer 2

- Ring cutter 4

- K-wire cutter (Capacity 4mm) with Replaceable tungsten carbide blades with rubber jaws set should consist of :

  i. K-wire cutter 28mm
  ii.Spare blades 4 pairs with screws
  iii. Spare robber jaws 4 pairs with screws
  iv. Allen keys 4 nos.

- Stienmann pin cutter capacity up to 6mm 10

- Bone curette double ended round / oval

  i. Small 1
  ii. Medium 1
  iii. Large 1

- Loute wire tightener cum wire cutter 1

- Wire bending cum cutter plier length 15cm 1

- Osteotomes

  i. Straight 3/8'', 3/4 " (inches) 2
  ii. Curved 3/8'', 3/4 " (inches) 2

- Gouzes

  ST Thomas 1/4 ", 3/8'', 3/4'' 1 each

- Chisel straight with Teflon handle 2 of each size

  7, 10, 15, 20mm 1 each

- Retractors

  i. Wullstein –weitlaner self – retaining retractor
  3x3 teeth blunt length 13 cm 2
  ii. Weitlaner self –retaining retractor 3x4 teeth blunt
  Length 16.5 cm 2
  iii. Weitlaner self –retaining retractor 3x4 teeth blunt
  Length 26 cm 2
  iv. Adson Self retaining retractor 3x4 teeth blunt
  Length 26cm 2
  v. Gelpi self retaining retractor with balls, blunt
  Length 18cm. 2

- Elevators

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

- Jacobs Chuck with Handle

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

- Screw driver 3.5mm screw 2

- Screw driver 4.5mm screw 2

- Manual Tourniquet set

Should consist of the following
1.Pump 1 No.
2.Pressure regulator 1 No.
3 Small medium and large size of cuffs 2 each

- 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 forceps

i. Liston straight 7'' 1
ii. Liston double action 10-½'' 1

- Sponge holding forceps 25cm 4

- Tissue forceps (Kocker's)

i. 5'' 2
ii. 8'' 2

Lane forceps
i. 5'' 2
ii. 7½'' 2
Allis 6'' and 7½''

Scissor MAYO’ straight 6’’ 2

- Scissor dissecting 7’’ 2

50 (Contd.) Instruments and Implants for 4.5 mm Cannulated Screws 1 Unit

Specification: Following items manufactured to international standard
(equivalent to AO Specification) by reputed multinationals firms)

Instruments for insertion of 4.5 mm self-tapping cannulated screws of AO type in sterilization case with trays consisting of the following items.

- Guide were 1.6 mm dia with spade point **10nos.**
- Drill bit 1.5 mm dia, *110/85* mm **1**
- Drill bit *3.2/1.75* mm dia, *110/85* mm 2
- Drill sleeves *7.0/3.2,3.2/1.6,*
  Double drill sleeve *4.5/ 3.2* ***1 each***

Instruments for insertion of 4.5 mm cannulated screws including tap, countersink, measuring device, stylet, screw driver, sleeves holding clips etc. **Total 13 instruments**

- Cannulated screws 4.5 mm self drilling/tapping 20-54 in 2 mm increments **3 each**
- Cannulated screws 4.5 mm self drilling/tapping 54-72 in 4 mm increments **3 each**
- Washer *10.0/4.6* mm dia, for 4.5 mm screws **5**

The instruments should be made of bio compatible, high quality stainless steel with proven safety and efficacy (imported).

50 (Contd.) Instruments and Implants for 7.0 mm Cannulated Screws 1Unit

Specification: Following items manufactured to international standard (equivalent to AO Specification) by reputed multinationals firms)

Instruments for insertion of 7.0 mm self-tapping cannulated screws of A.O. type in sterilization case with trays consisting of following items-

• Guide wire 2.0 mm diameter, threaded tip, 230 mm long	**10 nos.**
• Drill bits 2.0 mm, 4.5/2.1 mm	1
• Double drill sleeve *4.5./3.2*	*1*

* Instruments for insertion of 7.0 mm cannulated screws including tap, countersink, Measuring devices, forceps, drill sleeves, stylet etc.	Total 15 instruments
• Cannulated screws 7.0 mm self drilling/tapping, thread length 16 mm with following lengths 60-115 mm with 5 mm increments	5 each
• Cannulated screws 7.0 mm, self drilling/tapping, thread length 32 mm having following lengths 60-110 mm with 5 mm increments	5 each
• Cannulated screws 7.0 mm self drilling/tapping full thread length with following lengths 60-110 mm with 5 mm increments	5 each
• Washer 13.0/6.6 mm diameter for screws 4.5-7.0 mm	5

The instruments should be made of bio compatible, high quality stainless steel with proven safety and efficacy (imported).

50 HEMIREPLACEMENT SET-austine moore prosthesis WITH IMPLANTS

1 Description of Function

1.1	A implant may be defined as an artificial organic material that can be surgically implanted into a person's body to replace damaged tissue. Hemireplacement for hip is replacement of femoral head that is half of the hip joint in case of old patient with fracture neck of femur etc.

2 Operational Requirements

	As specified

3 Technical Specifications

3.1	Instrument Set should consist of the following: **quantity as per user demand** Austin Moore Extractor - 1NO. Head Extractor - 1 NO. Head Gauge - 1 No. Aluminum impactor with nylon face - 1 No. Lanes small bone lever - 1 Pair Lanes serrated bone lever - 1 Pair Lanes large bone lever - 1 Pair Moore type rasp – Three all sizes. Lagenbeck retractor Small - 1 Pair Lagenbeck retractor Medium - 1 Pair Lagenbeck retractor Large - 1 Pair Murphy skid - 1 No. Cobra Retractor - 1 No. IMPLANTS AUSTIN MOORE- STERILE PACKED Size 37- five Size 39- Five Size 41,43,45,47,49, Ten Each Size 51, 53 – Five Each

4 System Configuration Accessories, spares and consumables

	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%

6 Power Supply

	None

7 Standards, Safety and Training

7.1	1. Should be manufactured by company which has license of Drug Controller of India and conforms to standards laid down by the Drug Controller of India vide notification of Ministry of Health & family welfare. 3. Comprehensive training for lab staff and support services till familiarity with lthe system on site. 4. Comprehensive warranty for 2 years for instruments and long shelf life of implants.

8 Documentation

8.1	1. User / Technical / Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer service / maintenance manual. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page / para number with authenticated catalogue / manual, without which it will not be considered.

50 INTRAMEDULLARY NAILING SET WITH FLEXIBLE REAMERS

1 Description of Function

1.1 These instruments are used in orthopedic surgery for reaming of bone before fixation of long bones with nails like in thigh, leg, arm etc.

2 Operational Requirements

2.1 **Following are the general guidelines and configuration, quantity may vary with the user with the ultimate aim of femoral intramedullary locked nailing; reconstruction locked nailing; proximal femoral and distal femoral locked nailing.**

2.2 Locking screw appropriated for the nail and site to be provided. As specified

2.3 Anatomic precurvature required as appropriate for different nails as anterior bow, coronal angulation for trochanteric entry nail for femur etc and same apply for tibia.

3 Technical Specifications

3.1 **One System should be capable of providing instrumentation for Femoral, Tibial & Humeral reconstruction and retrograde nailing preferably**

3.2 *General Instruments*

1 ST-PIN 9X1/8IN STYLES 5 1
2 SLAP HAMMER 1
3 RULER RADIOLUCENT 1
4 ANGLED FEMORAL AWL 1
5 FLARED EXCHANGE TUBE 1
6 SKIN PROTECTOR 1
7 TIBIAL AWL 1
8 MALLET 1
9 THREADED DRIVER 1
10 TROCHANTERIC REAMER 1
11 WIRE GRIP T-HANDLE 1
12 THREADED EXTRACTOR 1
13 ANGLED TIP FEMORAL AWL 1

Femoral Instruments

1 9/16IN PIN WRENCH 1
2 PROX TRAGETING GUIDE RADIOLUCENT 1
3 FEM GUIDE BARREL LT 1
4 FEM GUIDE BARREL RT 1
5 OFFSET DRIVER ADAPTOR 1
6 LOCKING BOLT 1
7 FEM PIN/DRILL BUSHING 1
8 FEM DRILL BUSHING 1

9 FEMORAL DRILL BUSHING 1
10 FEM SCREW BUSHING 1

11 BUSHING AWL FEMORAL 1
LARGE 1
COUNTER 1
12 GUIDE PIN 1

PROXIMAL RETROGRADE (RECONSTRUCTION) FEMORAL INSTRUMENT SET
1 PROXIMAL BUSHING 1
2 PROXIMAL BUSHING 1
3 PROXIMAL BUSHING 1
4 PROX DRILL W/STOP MED, 3.2MM 1
5 PROX DRILL W/STOP, LRG 4.5MM 1
6 DRILL, MEDIUM 3.2MM 1
7 DRILL LARGE 4.5MM 1
8 TROCAR MEDIUM 3.2MM 1
9 TROCAR LARGE, 4.5MM 1
10 SCREW DRIVER SHORT HEX, 3.5MM 1
11 TARGELING SET of various sizes 1
12 SCREW DEPTH GAUGE 1

RETROGRADE FEMORAL INSTRUMENT SET
1 SCREW DEPTH GAUGE 1
2 DISTAL TARGETING GUIDE 1
3 CORTICAL NUT COUNTERBORE 1
4 CORTICAL NUT SCREW DRIVER 1
5 FEM PIN/DRILL BUSHING 3.2MM 1
6 FEM DRILL BUSHING 4.5MM 1
7 STENMANN PIN 12 INCH 1
8 LOCKING BOLT 1
9 FEM SCREW BUSHING 1
10 FEMORAL BUSHING AWL 1
11 FEMORAL DRILL, 4.5MM 1
12 T-HANDLE HEXHEAD SCREW DRIVER 3.5MM 1
13 PIN WRENCH, 9/16 INCH 1
14 RETROGRADE INSTRUMENT CASE 1

Tibial Instruments
1 9/16IN PIN WRENCH 1
2 LOCKING BOLT 1
3 PROX TRAGETING GUIDE RADIOLUCENT 1
4 TIBIAL DRILL BUSHING 1
5 TIBIAL SCREW BUSHING 1
6 BUSHING AWL TIBIAL/HUM 1
7 TIBIAL DRILL 1

HUMERAL INSTRUMENT SET

1 PIN WRENCH 1
2 LOCKING BOLT 1
3 PROX TRAGETING GUIDE preferably RADIOLUCENT 1
4 OBLIQUE HOLE ADAPTOR 1
5 HUMERAL PROX TARGETING GUIDE 1
6 HUMERAL OBLIQUE HOLE ADAPTOR 1
7 HUMERAL DRILL BUSHING MEDIUM 3.2MM 1
8 HUMERAL SCREW BUSHING, 8.0MM 1
9 HUMERAL BUSHING AWL 1
10 HUMERAL DRILL, MEDIUM 3.2MM 1

Distal Set Instruments

1 SCREW DEPTH GUAGE 1
2 DISTAL DRILL 3.2MM 1
3 DISTAL DRILL 3.7MM 1
4 DISTAL TROCAR 3.2MM 1
5 DISTAL TROCAR 3.7MM 1
6 T- HANDLE HEX HEAD SCREW DRIVER 1
7 DISTAL SCREW DRIVER 3.5 1
8 DISTAL INSERT 1
9 SET SCREW 1
10 HANDLE 1
11 BUSHING INSERT 1
12 DISTAL SCREW DEPTH G 1
13 DISTAL TROCAR 5MM 1
14 DISTAL DRILL 5MM 1

1 8.0 MM FLEXIBLE REAMERS 1
2 8.5 MM FLEXIBLE REAMERS 1
3 9.0 MM FLEXIBLE REAMERS 1
4 9.5 MM FLEXIBLE REAMERS 1
5 10.0 MM FLEXIBLE REAMERS 1
6 10.5 MM FLEXIBLE REAMERS 1
7 11.0 MM FLEXIBLE REAMERS 1
8 11.5 MM FLEXIBLE REAMERS 1
9 12.0 MM FLEXIBLE REAMERS 1
10 12.5 MM FLEXIBLE REAMERS 1
11 13.0 MM FLEXIBLE REAMERS 1
12 13.5 MM FLEXIBLE REAMERS 1
13 14.0 MM FLEXIBLE REAMERS 1

IMPLANTS configuration and quantity may vary with the user demand with the ultimate aim of stable , locked nailing.

1 *INTERLOCKING NAILS (S.S.)*
A Femoral Nails - Stainless Steel/ titanium
Suitable for interlocking and reconstruction purposes
With facility for dynamization.
Nail should be Cannulated but designed for unreamed insertion if required.

Proximal Drill Guide should be preferably radiolucent especially so in proximal and recon femoral nailing.
Sizes:
Dia 8mm to 14mm Length 24 cm to 46cm
Recon Screws Dia 5.5mm 60mm to 130mm
Low Profile Cortical Locking Screws Dia 4.2mm Length 20 to 90mm
B Tibial Nail - Stainless Steel /titanium
with Proximal Transverse Holes so that fractures close to the joint space can be treated by inserting oblique screws that should not compromise the Tibial plateau posteriorly/ *other stable locked configuration.*
Further distal hole to treat distal metaphyseal fractures.
Proximal Dynamic slot to allow compression.
Should be supplied if possible Sterile Packed
Proximal Drill guide should be preferably radiolucent.
Sizes:
Dia 7mm to 12mm Length 28cm to 42cm
C Retrograde Femoral Nails Stainless Steel/titanium
With Dynamic slot
Three closely located distal holes/other stable locking configuration for Supracondylar fracture

Drill guide should be radiolucent.
Sizes:
Dia 10mm to 14mm Length 16cm to 42cm
D Humeral Nail - Stainless Steel
Suture holes at proximal end
Two holes proximally
distal locking.
Proximal drill guide should be radiolucent.

4 System Configuration Accessories, spares and consumables			
4.1	As specified		
5 Environmental factors			
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%		
6 Power Supply			
	None		
7 Standards, Safety and Training			
7.1	1. Should be manufactured by company which has license of Drug Controller of India and conforms to standards laid down by the Drug Controller of India vide notification of Ministry of Health & family welfare 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive warranty for 2 years and long shelf life for implants . 5. Material should be of high quality used for medical equipments.		
8 Documentation			
8.1	1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer service/ maintenance manual. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual,without which it will not be considered.		

50 WIRE AND PIN CUTTER SET

SPECIFICATIONS

Set consisting of following instruments.

1. Wire cutter small 10 Nos
2. Wire cutter large 10 Nos.
3. Steinman Pin cutter 10 Nos
4. Ring cutter 10 Nos.

50 INSTRUMENT FOR HAND SURGERY

Specifications: Following items manufactured to international standards by reputed multinational firms

The following set of imported instruments made of good quality stainless steel and from reputed manufacturers with tong lasting cutting / working edge .

	ITEMS	QTY
	Artery Forceps Mosquito 5½" Straight	36
	Artery Forceps Mosquito 5½ Curved	24
	Allis Forceps Stainless Steel 4 X 5 Teeth 6" .Long	24
	Kocher's (Rochester - Ochsner) Forceps Curved 5½''	12
	Kocher's (Rochester - Ochsner) Forceps Straight 5½''	12
	Adson Hemostatic Forceps 7" Curved 15mm	12
	Kelly Hemostatic Forceps Half Serrated Jaws 5½'' Straight	12
	Cransford Ligature Forceps Stainless Steel 7" Long	12
	Standard Thumb Tissue Forceps 1 x 2 Teeth Stainless Steel 5"	12
	Standard Dressing Forceps: Serrated Tip Stainless Steel 6¼ (Non - Toothed)	12
	Scalpel Handle No.7	12
	Hardy Scalpel Handle No..9	12
	Standard Tissue Forceps 1 X 2 Teeth Length 4½ " Stainless Steel	12
	Standard Thumb Forceps Serrated Tip 5" Long Stainless Steel	12
	Debakey: Vascular Tissue Forceps, Straight 2.0mm Jaw 6¼ Long	12
	Debakey: Vascular Tissue Forceps, Angled 2.0mm Jaw 6¼ Long	12
	Scissors Mayo Dissecting Straight Beveled Blade 14.5cm Long	6
	Scissors Mayo Dissecting Beveled Blade Curved 14.5cm Long	6
	Metzenbaum Scissors Delicate Curved 14.5cm Long	6
	Scissors Metzenbaum Curved 7" Long	6

Scissors Metzenbaum Straight 7'' long	6
Scissors Metzenbaum Delicate 5¾" Straight	6
Volkman Retractors 4½ ″ Length 2 Prongs Sharp	12
Volkman Retractors 4½ ″ Length 2 Prongs Blunt	12
Volkman Retractors 4½ ″ Length 3 Prongs Sharp	12
Lengenbeck Retractor Distal Blade Tip Slightly Curved, Flat Hand, Length 8¼'' Blade 14mm X 30mm	12
Lengenbeck Retractor Distal Blade Tip Slightly Curved, Flat Hand, Length 8¼'' Blade 16mm X 30mm	12
Gillies Skin Hook 7" Long	24
Guthrie Double Hook 6 ¼" Long	24
Crile Nerve Hook & Dissector 8"	24
Self Retaining Mastoid Retractor	12
Suction Tubes, 2.5-5mm Diameter Curved With Finger Valve Control 19cm Long	6
Olive Green Periosteal Elevator	6
Periosteal Elevator Length 18cm Long Width 3mm	6
Periosteal Elevator Length 17cm Long Width 4mm	6
Periosteal Elevator Length 17cm Long Width 6mm	6
Bone Curette Double Ended Oval/ Round Small (00/0), 13.5cm	6
Bone Curette Double Ended Oval/ Round Small (Size 0/ 1), 13.5cm	6
Bone Awl Stainless Steel 14cm Long	6
Bone Rongeur (Leksell - Stille) 9" Long 8mm Bite	6
Bone Rongeur (Leksell - Stille) 9" Long Narrow Bite 3mm	6
Jacob Hand Drill Chuck & Key Ø6.3mm	6
Bone Lever Small 8mm Wide & 220mm in Length (Hoffman Type)	12
Osteotome 8mm Wide (Teflon Handle)	18
Osteotome 6mm.Wide (Teflon Handle)	18
Osteotome 4mm Wide (Teflon Handle)	18
Pulvertraft Forceps for Tendon Repair 8" Long	6
Tendon Holding Forceps Toothed 6" Long	6
Tendon Stripper Malleable 230mm Long	6
Crile - Wood Needle Holder Stainless Steel 6" Long	12
Handle for Beaver Blades	6

Mayo - Hegar Needle Holder 8" Long	12
Stainless Steel Rule (Scale) 8" Long	12

, Only complete set should be quoted

50 GENERAL SPINE SURGERY INSTRUMENTS

Specifications:
Following items manufactured to international standard by reputed multinational firms

- Weitlenier's self retaining retractors small and large	2 each
- Chest wall self retaining rectractors small and large	1 each
- Walton's malleable retractors	4
- Rib approximator small	2
- Cobb's periosteum elevator small and large	2 each
- Overhault periosteum elevator	2
- Simm's periosteum elevator	2
- Rib Shear	4
Laminectomy Shears	
Liston's type (single action)	2
Double action	2
- Bone Cutter double action	4
Bone nibbler small and large	2 each
- Watson's chynes dissector with probe 8"	4
Fine bone currette small and large	2 each
- Dura protector straight small and large	2 each
Dura protector angled small and large	2 each
Love's retractor small and large	2 each
- Nerve hooks	4
- Bone punch	4
Up cutter (Karisson rongeurs)	
- 3mm bite 40 and 90 degree up, 178 mm length	2 each
- 4mm bite 40 and 90 degree up, 178 mm length	2 each
- 3mm bite 40 and 90 degree up, 203 mm length	2 each
- 4mm bite 40 and 90 degree up, 203 mm length	2 each
- Disc forceps straight and curved assorted size	4 each
Crocodile (Aligator) Punch straight assorted size	4
Rongeurs for disc space preperation (length 178mm)	
- Straight cup size 4xl0mm, 6xl0mm. 6x12mm	2 each
- Curved up cup size 6xl0mm, 6x12nun '	2 each
- Curved down cup size 6x 10 mm, 6x 12mm	2 each
- Crocodile punch curve down	2
- Vertebra Spreader with ratchet (5 inch)	2
Lamina spreader (9 ½ inch)	2
Penfield Dissectors	

- Broad tip size 4-5mm (178mm length) 2
- Narrow tip size 2-3mm (197mm length) 2
- Cervical Vertebral Distractor - complete set 1

51 Electric Power System (Drill & Reamers) for Orthopedic Surgery

Specifications

- Driving Unit Includes Motor, Stand, Foot Control, Flexible Shaft, Tool Kit, Oil Bottle & Special Container -1 No.
- Cannulated Drill Handpiece Max. Speed 1200 RPM & with Fixed Jacob's S.S. Chuck (0-1/4 USA) - 1 No.
- Reaming Handpiece with Max. Speed 400 RPM cannulated & AO Type Quick Coupling - 1 No.
- Pistol Grip Saggital Saw (Set of five blades) - 1 No.
- Flexible Shaft for Driving Unit (Extra) - 1 No.
- Flexible Reamer Shaft 8mm Dia Fixed Head- 1 No.
- Flexible Reamer Shaft for Detacheable Heads upto 12mm- 1 No.
- Reamer Heads from 8.5mm to 12.0mm (Set of Eight) - 1 No.
- Reamer Heads from 12.5mm to 15.0mm (Set of Six) - 1 No.
- Flexible Reamer Shaft for Detacheable Heads above 12mm- 1 No.
- Flexible Reamer Shaft Fixed Head DIA 9MM- 1 No.
- Flexible Reamer Shaft Fixed Head DIA 10MM- 1 No.
- Flexible Reamer Shaft Fixed Head DIA 11MM- 1 No.
- Flexible Reamer Shaft Fixed Head DIA 12MM- 1 No.

Specifications of Drill Bits
Material: Bio compatible Stainless Steel
Sizes: 2.7, 2.8, 3.2, 3.6, 4.0, 4.5
Length of each bit: 125mm
Qty: 10 of each size

52 OSCILLATING SAW

1. Oscillating saw handpieced 01 No.
2. Battery Pack 02 Nos.
3. Oscillating blades
4. Battery Charger 01 No.
5. Power input of charger220 +/- 10 V

53 AMPUTATION SET

- Amputation SA W (Charriere type) 1
- BP Knife handles 3,4, 7 Nos. 1 each
- Jacob chuck with handle open type 1
- Bone holding forceps
  Lanes small, medium and large type
- OSTEOTOME
  Smith Petersen
  (i) Straight 3/8" wide 1
  Straight 9/16" wide 1
  (ii) Curved 1
  3/8" wide 1
  9/16" wide
- Chisel - Smith Petersen
  3/8" wide 8" 1
  9/16" wide 8" 1
- Goug
  ST Thomas type
  ¼ wide 7" 1
  5/16 wide 7" 1
- Backhaus towel clip 5" 12
- Forceps
  Tooth 6" Straight 2
  Plain 6" Straight 2
- Needle Holders
  Heaney needle holder 6" 1
  MAYO's HEGAR 6" 1
- Scissor
  Mayo's Scissor straight 6" 2
  Metzenbaun 8 yrs 8" 2
- Blake Amputation 1
  Flap Retractor

54 ELECTRIC DERMATOME

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

55 K Wire

Material : SS 316 LVM
Diameter 1.5 to 2.5 mm
150mmlength.

55 K NAIL INSTRUMENT SET WITH IMPLANTS

1 Description of Function

1.1 These instruments are used in orthopedic surgery for fixation of fracture of thigh/long bones.

2 Operational Requirements

None	

Technical Specifications

3.1 Instrument Set should consist of the following, quantity may vary with the user demand following are the general guidelines:

. Kuntscher's diamond pointed awl

- Metal Scale
  - 'K' nail extractor with 3 hooks (Different Sizes)- Three Nos. Bone hammer
  - Kocher's bone hook- Two No 'K' nail impactor nail setter- Four Nos.
  - 'K' nail reamer for femur (different sizes) **cannulated/noncannulated** 6-13 with I mm increment
  - Guide wire for 'K' nail Femur - Two Nos.
  - Bone holding forceps - Four Nos. (For reduction)
  - Periosteal Elevator Medium (Two)
  - Large (Two) Box for instruments and implants for sterilization and Storage
  - Sizes (36,37, 38 cm) X 8,9,10,11 - 10 Each (120) Sizes (39, 40, 41, 42 Cm) x 9,10, 11,12 - 10 Each (160)

4 System Configuration Accessories, spares and consumables

4.1 As specified

5 Environmental factors

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

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

Parameters:

6. Power Supply

None

7. Standards, safety and training

7.1 1. Should be manufactured by company which has license of Drug Controller of India and conforms to standards laid down by the Drug Controller of India vide notification of Ministry of Health & family welfare.

2. Material should be of implant grade steel, titanium as required.

3. Comprehensive training for lab staff and support services till familiarity with the system on site.

4. Comprehensive warranty for 2 years warranty of instruments and long shelf life of implants .

8.Documentation

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

2. Certificate of calibration and inspection.

3. list of equipments available for providing calibration and routine preventive maintenance support as manufacturer service/maintenance manual.

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

5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description is clearly spelt out.

6. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page/para/number with authenticated catalogue/manual without which it will not be considered.

55 INTERLOCKING NAILS AND SCREWS

Material: Stainless Steel /

Types

Femoral (Reccon style, universal)

9 mm Dia.	320, 340, 360, 400, 420, 440
10mm Dia	-do-
11 mm Dia.	-do-
12 mm Dia	-do-

Tibital (Reccon style)

8 mm Dia.	280, 300, 320, 340, 360, 380
9 mm Dia	-do-
10 mm Dia.	-do-
11 mm Dia	-do-

Humerus solid and cannulated

6 mm Dia.	200, 220, 240, 260, 280, 300
7 mm Dia	-do-
8 mm Dia.	-do-

55 DYNAMIC COMPRESSION PLATES:

External Small Plates
2, 3, 4, 5, 6, 7, 8 Holes
Small
2, 3, 4, 5, 6, 7, 8 Holes
Narrow
4, 5, 6, 7, 8, 9, 10, 11, 12 Holes
Broad
5, 6, 7, 8, 9, 10, 11, 12, 14 Holes.
One Third Tubular Plates
2, 3, 4, 5, 6, 7, 8 Holes
Semi Tubular Plates
2, 3, 4, 5, 6, 7, 8 Holes

55 CERCLAGE WIRING SET

Made of good quality, toughened metal with following -

1.	Wire tightner/twister standard up to Ø 1 mm wire, 280mm	1 no.
2.	Wire cutter, straight carbide jaws, double action for wire up to Ø 3mm, 220mm	1 no.
3.	wire cutter, angles carbide jaws, double action for wire up to Ø 3mm, 220mm	1 no.
4.	Wire guide, straight, 280mm	1 no.
5.	Wire guide, straight, 35 mm / 50 mm curved	1 no. each
6.	Wire guide, straight, linen phenolic handle 60 mm curved	1 no.
7.	Wire holding forceps, carbide jaws, 185mm	2 no.
8.	taper nose pliers double action, carbide jaws, 190mm	1 no.
9.	parallel grip pliers, double action 185mm	1 no.
10.	power grip pliers, double action 205mm	1 no.
11.	wire cutter, angles carbide jaws, double action	1 no.
12.	wire cutter, angles carbide jaws, double action for wire up to Ø 2mm, 160mm	1 no.
13.	wire tightner pliers. carbide inserts with “catch"- jaws, 180mm	1 no.
14.	cerclage wire Ø 1.0 mm/l.2mm/ 1.4mm	1 no. each
15.	wire with eye Ø 0.8 mm /1.0mm / 1.2mm	1 no. each
16.	sterilization case with tray	1 no.
17.	wire tightner/twister/cutter heavy duty up to Ø 1.6 mm wire, 280mm	1 no.

Note: Only complete set should be quoted.

55 TOTAL HIP PROSTHESIS

1 Description of Function

1.1 Hip replacement, also hip arthroplasty, is a surgical Procedure in which the hip joint is replaced by a prosthetic implant. Such joint replacement orthopedic surgery generally is conducted to relieve arthritis pain or fix severe physical joint damage as part of the hip fracture treatment.

2 Operational Requirements

2.1 Cemented stem should be highly polished collarless and smooth.
2.2 Cementless stem should have good bone ingrowth properties with metal / hydroxyappatite coat which may be variable in length.
2.3 Revision stem with proximal tag holes, variable length of coating, and stem length fixed modular.
2.4 Modularity in neck / stem length with option of varying horizontal/ vertical/ anterior offset.
2.5 Good quality locking mechanism for acetabular shell and liner. And good filling femoral stme in case of cementless total hip prosthesis.
2.6 Head size of 22,28,36mm or as per user demand for longevity of implant.

3 Technical Specifications

3.1 01 Cemented Total Hip Prosthesis with / without disposables for cement gun and low viscosity cement

Sizes of implant and quantity will vary with the user demand & following are the minimum essentials.

A Cemented THR Should consist of:
Femoral Stem of various sizes
Femoral Head of 22.28,36mm as applicable
Acetabular Cup polyethylene/ ULTRA high molecular weight polyethylene with/without pods of different sizes

Cement Restrictor 8mm to 14mm polyethylene
Bone Cement of the required viscosity Normal/low/high viscosity as applicable.
Cement Injector Kit
Stem centralizer

B Bipolar Hemiarthroplasty (cemented) Should consist of:
Femoral Stem of different sizes
Femoral Head of appropriate size
Bipolar Shell with or without seperate Polyethylene Liner for Bipolar Shell of different sizes

Cement Restrictor 8mm to 14mm
Bone Cement of the required viscosity Normal/low/high viscosity as applicable.
Cement injector Kit Disposable
Stem centralizer

02 Cementless Total Hip Prosthesis

A Should consist of:

Cementless Stem of different sizes with metal/ hydroxyapatite coat etc.
Femoral head of different sizes: 22,28,36mm
Acetabular shell with metal/ hydroxyapatite coat etc.
Polyethylene/ UHMWPE liner
Acetabular screws

B Ceramic on ceramic should consist of:
Cementless stem
Ceramic of high quality and fatigue strength with ability to bear cyclical loads femoral head
Acetabular shell
Ceramic liner
Acetabular screws

C should consist of:
Cementless stem
Femoral head
Acetabular shell
Polyethylene liner with metal surface
Acetabular screws

4. System Configuration Accessories, spare and consumables

- Should be of high quality metal/alloy/ceramic to sustain maximum number of cyclical load. Like chromium-cobalt; Titanium alloy/ zirconia etc.
- Polyethylene may be normal or ultra high molecular weight as specified
- Cement of powder and liquid mixing parts – polymethylmethacrylate – antibiotic/ not and of different viscosity. Should be conforming to high international standards/ least damaging.

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

None

7 Standards, safety and training

Company/ supplier Should have a CE, FDA approved certification.

Material should be of implant grade with long life cobalt chromium etc. as required.

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

Long shelf life.

Documentation

1. User/Technical / Maintenance manuals to be supplied in English.
2. Certificate of calibration and inspection.
3. list of equipments available for providing calibration and routine preventive maintenance support as manufacturer service/maintenance manual.
4. List of important spare parts and accessories with their part number and costing.
5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description is clearly spelt out.
6. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page/para/number with authenticated catalogue/manual without which it will not be considered.

55 DYNAMIC HIP SCREW INSTRUMENT SET

Guide Pin 2.5X230mm (with threaded tip)

Angle Guide 135 °

Angle Guide 150 °

T-Handle with Quick Coupling

Wrench for insertion & removal

Centering sleeve for 430.050

Tap 12.5mm

Centering sleeve for tap

Direct Measuring Device

Coupling Screw For insertion of dynamic hip screws

Guide shaft for 430.100

Coupling screw for the removal of dynamic hip screws

Impactor for dynamic hip plates

Triple Reamer for dynamic hip screws (Complete)

Dynamic Hip Screw Implant Set

Compression screw L.36mm –Qty 4

Dynamic hip screw L. 80mm – Qty 2

Dynamic hip screw L. 85 mm – Qty 2

Dynamic hip screw L. 90 mm – Qty 2

Dynamic hip screw L. 95 mm – Qty 2

Dynamic hip screw L. 100mm – Qty 2

Dynamic hip screw L. 105 mm – Qty 1

Dynamic hip screw L. 110 mm – Qty 1

Dynamic hip plate 135° - 4 holes L. 78 mm – Qty 4

Dynamic hip plate 135 °- 5 holes L. 94 mm – Qty 4

Dynamic hip plate 135 ° - 6 holes L.110 mm – Qty 4

55 DYNAMIC CONDYLAR SCREW SET

Material : Stainless Steel

Dynamic Condylar plates with screws

Holes	Length Approximately.
6	100 mm
8	130 mm
10	163 mm
12	198 mm
14	225 mm

Quantity 6. Each Screw should match the holes.

Complete set in sterilizing trays.

55 Pedicle Fixation and Reduction & Cervical plating system

1 Description of Function

1.1 These instruments are used in orthopedic surgery for fixation of unstable spine due to infection, trauma, tumour, degenerative/inflammatory disease .

2 Operational Requirements

2.1 As specified

3 Technical Specifications

3.1 Quantity to vary with user demand and size variation may occur where appropriate To human anatomy.

Broad Specifications

Titanium Mono and Multiaxial Pedicle top loading, top tightening 4.5/5.5/6.5mmscrew fixation system for stabilization / fusion, dislocation, fracture, degenerative & Deformity of Anterior/posterior thoracic, lumbar and/or sacral spine.

Specifications

- System should be of Titanium Alloy and MRI Compatible.
- Should be universal system for anterior and posterior fusion.
- System should have top loading Multiaxial and monoaxial screws
- Long length 5.5mm rod of atleast 50cm.
- Should have single closure top tightening Titanium Break off plugs .
- Should have Adult, Pediatric, laminar , Transverse Process ,Extended Body, Left and right offset hooks
- Titanium Multiaxial Reduction pedicle screws (5.5mm/6.5mm).
- Should have low profile monoaxial and multiaxial Screws in 4.5/5.5,6.5mm Diameter and from 25mm-60mm in length.
- Should have anterior staples for 13/15/17mm
- Should have titanium mesh cages for the cervical ,thoracic , lumbar and interbody fusion.

a) Cervical cages 10X30, 13X70,10X100,10X8MM
b) Thoracic cages 13X30, 16X30,16X60mm

c) Lumbar cages 19X40, 19X90,13X10mm.

d) Cervical plating system plate should be of various shapes with variable angle/locking mechanism screws MRI compatible . complete with of various hole length as required by user. guarded oscillating drill bits, self tapping screws, screw drivers etc.

4. System Configuration Accessories, spare and consumables

As specified

5 Environmental factors

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

Parameters:

6 Power Supply

As per requirement

7 Standards, safety and training

7.1 Company/ supplier Should have CE, FDA approved certification.
7.2 Material should be of implant grade steel, carbon fibre, titanium as required.
7.3 Comprehensive training for lab staff and support services till familiarity with the system on site.
7.4 long shelf life.

8 Documentation

1. User/Technical / Maintenance manuals to be supplied in English.
2. Certificate of calibration and inspection.
3. list of equipments available for providing calibration and routine preventive maintenance support as manufacturer service/maintenance manual.
4. List of important spare parts and accessories with their part number and costing.
5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description is clearly spelt out.
6. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page/para/number with authenticated catalogue/manual without which it will not be considered.

56 Blood Bank Refrigerator

1 Description of Function	
1.1	Blood Bank Refrigerator is used to store blood bags under controlled temperature.
2 Operational Requirements	
2.1	System required with weekly chart recorder and digital displays.
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	Capacity should accommodate 350 or more unit's blood and storage internal volume should be 700 liters.
3.3	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.
3.4	Internal construction should be made up of high grade stainless steel (min 22 G) External construction Corrosion resistant sheet at least I mm thickness.
3.5	5.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 degree C.
3.6	Should have connectivity to computer and data logger
3.7	Door System should lockable double glass doors for better safety
3.8	Safety system: a. system should have large and clear Digital displays for the set/run parameters. b. The system should have weekly inkless chart recorder c. The system should have key operated set point for the added security.

3.9	10.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.		
3.10	Should have adjustments for uneven bases. The adjustments should be easy to use like rotating a screw at the legs in the base.		
3.11	Scratch resistant internal lining of the cabinet (stainless steel or aluminium).		
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 motor ;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 -50deg C and relative humidity of 15-90%		
5.2	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			
6.1	Power input to be 220-240VAC, 50Hz		
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 Automatic Voltage regulator/stabilizer meeting ISI specifications should be supplied. Broad specifications are : Automatic Type Input 150-280V , Output 220 V +/- 7 % , 50 Hz . Single phase , AC with automatic 2-4 sec Cut Off and 6-9 minutes restart delay.. Quick start arrangements for bypassing 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			
7.1	Should be FDA , CE,UL or BIS approved product		

7.2	Should comply with WHO/UNICEF Specification Reference: BTS/RF.1		
7.3	Test and inspections as per WHO Procedure reference: Laboratory Test Procedure: Standard Test Procedure: BTS/Proc/ 3.		
7.4	Should comply with International Electromagnetic Compliance standards like IEC OR EMC Directives. Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450		
7.5	2 years warranty.		

8 Documentation

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

57 3 TESLA MRI SYSTEM

The vendor must quote the latest State-of-the-art MR System, as specified below.

1. Magnet

(a) Field strength : Helium only 3 T superconducting Magnet along with Magnet Power supply Facility for quick shutdown of the magnet in case of emergency.
Mention the RF frequency.
Best homogeneity magnet available with the vendor should be quoted.
Field stability over time Should be <0.1 ppm/hr

(b) Homogeneity : Best homogeneity possible should be given. Specify homogeneity in VRMS at 10 cm, 20 cm, 30 cm and 40 cm DSV and at max. FOV achievable with the quoted scanner. Should be very good for Single voxel and CSI spectroscopy. Automatic shimming in phantom should be better than 4 Hz in l0x 10 x 10 mm3 voxel.

(c) Magnet Bore Magnet bore to be sufficiently wide, after positioning of gradient, shim and RF antenna. Please specify net patient tube aperture.

(d) Active shielding/ Fringe field

(e) Ext. Shielding Ext. interference shield (sufficient to house the Magnet, Anaesthesia and physiologic monitors) should be provided

(f) Magnet Cooling System

I. Specify the boil off rate

II. Devices for helium level monitoring in the magnet should be supplied.

iii. Liquid helium should be supplied during warranty period and Comprehensive AMC.

iv. Cold Head maintenance and replacement during warranty period and Comprehensive AMC.

(g) Shim System

I. High performance and highly stable shim system with global and localized manual and auto-shimming for high homogeneity magnetic field required for imaging (MRI / fMRI), spectroscopy (MRS), and magnetic resonance spectroscopic imaging (MRSI). 3D shimming for volume imaging and CSI.

ii. Auto shim (global and voxel shim) should take minimum time to shim the magnet with patient in position (specifY the time).

iii. Specify number of shim coils including higher order.

2. Patient Table

i. Computer controlled subject table movement in vertical and horizontal direction.

ii. Subject table should be able to take at least 140 Kg load.

Ill . Emergency manual traction of the subject from the magnet.

3. Patient comfort features

I. Patient monitoring devices for ECG, respiratory, pulse rate, oxygen saturation, at the console etc. A comprehensive solution at patient side and at main console capable of gating the sequence protocols with respect to patient's heart and respiratory rates. Remote display of gating signals on magnet and at console.

ii. Two-way Patient communication with headphone, microphone and necessary accessories

Ill. Patient audio alarm

iv. Lighting
v. Music system (complete)
vi. Separate MR compatible patient trolley (to transfer patient to the magnet table) and a wheel chair.
vii. Closed circuit TV and CCD video camera for patient monitoring
viii. Provide other standard patient comfort devices, with quoted system (please specify)

4. Gradient Systems

(a) General

i. Actively shielded gradient system in X, Y, Z planes.
ii. Minimum Gradient Strength should be 40 mT/m or more along each axis
iii. In case of dual gradient systems, please mention the details in each axis separately.
iv. Quote the minimum rise time at 40 mT/m.
v. Slew rate should be::>: 200 T/m/s at 40 mT.
vi. Specify the linearity of the gradients at full FOV.
vii. 100% duty cycle for full FOV.

(b) Resolution parameters

i. Specify the minimum and maximum FOV achievable for the quoted MR system (preferable to have 5 - 400 mm FOV).
ii. Specify min. slice thickness in 2D and 3D modes at 128x128, 256x256, 512x512 and 1024xl024 matrices (quote higher matrix resolution, if available).
Ill. The system should be capable of performing single shot EPI (in 64x64, 128x128, and 256 x 256 matrixes) including conventional and fluoroscopic imaging in the three orthogonal and also oblique planes.
iv. Effective cooling system for gradient coil and power supply. The system should have efficient and adequate provision for eddy current compensation.

5. RF

(a) General

i. Wideband (or modular) transmitter to cover 1 H
ii. Specify max. transmitter RF power available (500 impedance)
iii. Minimum 32 independent RF channels capable of producing 32 independent images. Please provide the coils that use this configuration.
iv. Specify the RF receiver bandwidth for each channel. RF bandwidth to be sufficiently large for 256x256 single shot EPI.
v. The system should have necessary hardware to support for quadrature phased array and flex coils.
vi. Necessary hardware and software interface for adoption and use of home built RF coils (all the required formalities should be completed during installation of the MR system to operationalize the agreement) along with manuals for coil-code programming (if any).

(b) Coils (in addition to the in-built body coil).

The number of channels and number of elements for each coil should be the maximum that the vendor has in their product list.

All coils should be compatible for parallel acquisition

i. Head array coil (32-channel)
ii. Neck array coil (4-channel or more)
iii. Spine array coil (12 Channel or more)
iv. Body array coil / Phased Array coil (8 Channel)
v. Breast array coil (4 Channel or more)
vi. Shoulder array coil (3 Channel or more)
vii. Dedicated wrist coil
viii. Extremity coil (also capable of knee imaging) (8 Channel or more)

6. Computer control system

(a) Host Computer and Array Processors

i. Latest state-of-art computer system with sufficient RAM (~4GB) and computational speed to match the single shot Echo Planar Imaging (EPI), interactive angiogram, multi-planar three dimensional (3D) reconstruction, surface rendering and dynamic imaging, vascular imaging/angiography, and adequate storage for images and other applications.
ii. Necessary image processor with sufficiently large RAM
iii. (>= 4 GB) for ultra-fast image reconstruction, capable of performing real-time image reconstruction.
iv. Total hard disk memory capable of storing minimum of 1,00,000 (one lakh) images.
v. Monitor 19" or more TFT monitor with enhanced graphics accelerator.
vi. One measurement console capable of data acquisition, all online calculations, post processing including MIP, MPR, spectral and tensorial analysis, DTI post-processing and analysis, Tractography, EPI based functional imaging, real-time fMRI, spectroscopy (all licenses, including breast spectroscopy, etc), filming etc. Specify the licenses individually.
vii. Licenses for acquisition, post-processing and for special packages should be given explicitly, listing all the capabilities of the vendor's quoted product (basic standard package, premium packages, etc). The main console/workstation should have pulse sequence software license that may be required to modify and run pulse sequences. Appropriate procedures (like research agreement) should be finalized before the installation of the equipment, so that there is no delay in operation of any requirement.

(b) Additional workstation :

One workstation with colour TFT display (18" or more) with evaluation capabilities like MIP, MPR, surface reconstruction, spectral analysis, perfusion and diffusion studies, tensor mapping, tractography, 4D ventricular function, spectroscopy post-processing (SVS, CSI, metabolic imaging), etc. Specify clearly the algorithms that require extra license and list them whether these have been included or not. Filming also should be possible from this work station.

(c) CD/DVD archival

i. DVD RW drive for writing of images, spectra and raw data along with the necessary software for reading the images and spectra on DVD/CD storing capabilities.
ii. Provision for archival ofk-space data and raw (unprocessed) images.

(d) Networking

10BaseT/I00BaseT/1 GB network.
Protocol - Ethernet TCP/IP standards - based image transfer with DICOM 3.0 over standard Ethernet IEEE 903 (DICOM send, receive and DICOM query modes.

(e) Film Documentation

DICOM interface to hook DICOM compatible, dockable, latest state-ofart
Dry Laser Camera with more than 600 dpi, capable of storing/printing images of 1024 x 1024 (or higher, if available) matrix size in various matrix formats (including 16 format) without loss of digital resolution to be made available on any of the consoles and on the
films.

(g) Data archival for long time storage

Data Archival system (server with hot swappable drives) for archival & storage of image and spectroscopy with s storage capacity of 10 TB. System should have database software for maintaining the demographic patient data and recalling the same. It should also have DVD writer facility for copying specific patient data on DVD/CD.

7. Data Acquisition

a. The system should be capable of 2D and 3D acquisitions in conventional, fast & ultra-fast spin echo and gradient echo modes so that real-time online images can be observed if needed.
b. 2D multi-slice imaging should be possible in all planes (axial, sagittal, coronal, oblique and double oblique)
c. Up to 1024 x 1024 matrix acquisitions preferred for all applications
d. Half Fourier or other techniques to reduce scan acquisition time while maintaining adequate SNR.
e. 3D volume, multiple contiguous slabs, multiple interleaved and multiple overlapping slabs.
f. Slice thickness in 2D and partition in 3D to be freely selectable.
g. Dynamic acquisition (serial imaging) with capability to initiate scan sequences either from the magnet panel or from the console.
h. Dynamic acquisition: number of repeat scans with delay time either identical time interval or selectable
i. Auto slice positioning from the localizer images.
j. Maximum-off center positioning both anterior-posterior and lateral direction and should be selectable.
k. Gating: physiological signals like ECG, pulse, respiratory, external signal triggering (interface for triggering input pulse from external source). The provision should be available at the console also (for MRI, EEG, etc).

l. Simultaneous acquisition, processing and display of image data in 2D multi-slice mode.

m. Selection of voxels from oblique slices should be possible while doing spectroscopy.

n. Artifact reduction/imaging enhancement/image filtering/image subtraction/addition/multiplicationl division techniques:

o. Flow: 1 st and 2nd order flow artifact compensation

p. Presentation slabs: a number of relocatable saturation bands to be placed either inside or outside the region of interest

q. Graphic prescription.

r. Fat saturation techniques: frequency selective RF pulses to suppress fat signals in the measured image FOY. ROI selective (regional) fat suppression should also be given.

s. Magnetization transfer saturation: Off resonance RF pulses to suppress signals from stationary tissue in FOY

t. Phase contrast capability in 2D and 3D mode

u. Image intensity correction

v. Breath hold acquisition

w. EPIMODE

x. Data acquisition in all three standard planes (axial. sagittal, coronal) and oblique and double oblique planes or more oblique planes.

y. Higher matrix acquisition capability in single shot EPI. Acquisition time, TR, TE and slice thickness should be clearly mentioned and supported by data sheet reference.

z. The vendor should offer multi coil acquisition in order to optimize throughput increase and increased effective FOV. Individual acquisition elements of every coil should be mentioned.

8. Imaging Pulse Sequences

i. The system should be capable of selecting TR and TEs as per requirement in majority of the pulse sequences.

ii. Spin echo (SE): multi-slice single echo, multi-slice multi-echo (8 echo or more), SE with symmetrical and asymmetrical echo intervals and fast spin echo. MT -SE imaging sequence.

iii. Inversion recovery (IR): including short TI modified IRSE, FLAIR, DIR (Double Inversion Recovery).

iv. Gradient echo (GE): with transverse gradient/RF spoiling, and transverse gradient re-phasing, e.g., GRASE or equivalent etc. 3D gradient echo with shortest TR and TE, free choice of flip angle selection, while maintaining SNR.

Fast sequences:

v. Fast spin echo and GE sequences in 2D and 3D mode with Tl, T2 and PD contrast capable of acquiring maximum number of slices with a given TR a minimum TE, echo train should be at least 128 or more in fast spin echo mode
vi. Half Fourier acquisition capabilities should be available with/without diffusion gradients and in combination with fast spin echo
vii. Fast inversion recovery with spin echo
viii. Fast gradient spin echo IR multi-slice multi- echo mode with maximum ETL. Sequences should incorporate RF focusing to acquire ultra-fast gradient spin echo.
ix. Fast gradient echo sequence should incorporate RF spoiling and other technique to acquire images in ultra-fast 2D and 3D modes.
x. Fat and water suppressed imaging sequences.
xi. EPI optimized sequences (with and without fat suppression)
xii. For Tl, T2, PD imaging, perfusion, regular diffusion values (atleast 5b, 3 directions) EPI-FLAIR, EPI-JR, EPI-FLAIR diffusion tensor, EPI-MT -FLAIR, tensor diffusion (atleast 16 b values in minimum 32 directions) and diffusion studies. Suitable artifact/fat suppression techniques to be incorporated in the sequence to have optimum image quality. There should be capability of calculating ADC map (isotropic and anisotropy from the regular diffusion and tensor data).

xiii. Optimized sequence package for special applications:

(a) MR angiography: 2D/3D TOF, 2D/3D Phase contrast (with and without gating) and magnetization transfer saturation, black blood angiography for cerebral, pulmonary, abdominal and peripheral vessels.
(b) For peripheral moving table angiography should be offered covering hip to limbs to be examined in one go with high resolution and high SNR.
(c) Bolus tracking software package.
(d) Sequences for breath hold angiography with contrast enhancement.
(e) Sequences for time resolved angiography with contrast kinetics.
(f) Contrast bolus tracking (including single shot whole body MRA, interactive and automatic tracking, etc.).
(g) Deleted
(h) Sequence package for diffusion including DTI (tractography) study in organs like brain, kidney, muscle, heart, spine, breast, prostate, etc.
(i) Perfusion study in organ systems like kidney, brain, heart etc. with TI perfusion with permeability maps, and quantitation of rCBFI rCBY, MIT, etc, with color maps.
(j) There should be capability of calculating ADC map (isotropic and anisotropic from the regular diffusion and tensor data).
(k) MR diffusion tensor imaging package with tractography
(I) MR neuro functional imaging sequence package (incl. Mosaic, etc)
(m) Flow quantification in vessels and CSF, hepatobiliary system
(n) Fly-through facility with Flow analysis including display of various velocity values.
(o) Optimized breath hold sequences for abdominal studies including angiogram.
(p) Sequence for internal ear imaging for visualization of fine structures like cranial nerves (appropriate sequences like crss, etc or equivalence). Mention the sequences provided.
(q) MR Cholangiography and Pancreatography: Specialized sequences and processing to perform MRCP.

(r) Pulmonary 20/30 MRA sequence, including single breath hold sequence.
(s) MR ventriculography and cisternography, myelography.

xiv. Parallel acquisition techniques including new sequences. Specify the technique used and the factor by which the acquisition time is reduced for similar acquisition with and without parallel imaging technique. Mention the sequences.
xv Flow quantification packages for CSF with dynamic CSF flow imaging, aqueduct and spinal canal.
xvi. Radial/Spiral pulse sequences for ultrafast imaging.
xvii. Suitable artifact/FAT suppression techniques to be incorporated in all the sequences to have optimum image quality.
xviii. A sequence for differentiation of fluid and cartilage in ortho applications (sequence like OESS or equivalent)
xix. Susceptibility artifact correction techniques to be incorporated in all the sequences to have optimum image quality.
xx. Sequences for susceptibility imaging
xxi. Sequences for imaging of prostate, breast, etc
xxii. Sequence for in-line motion correction for uncooperative patients/ children (with software and acquisition - sequences like BLADE, PROPELLAR, k-t BLAST or equivalent)
xxiii. Software and hardware along with License to develop and modify pulse sequences, and licensees) and provisions to execute the same on the MR scanner.
xxiv. Sequence with ultra short TE
xxv. Sequence for nullifying CSF pulsation artifacts
xxvi. Sequence enabling prospective motion correction in quick time and in real time during fMRI
xxvii. Sequence employing arterial spin labeling (ASL) technique

9. Special Application Packages

The vendor must provide their specialized and optimized imaging sequences with post-processing packages for (i) neuro, (ii) body, (iii) breast, (iv) oncology, (v) cardiac, (vi) angio, (vii) ortho, (viii) pediatric and other applications. For example, this includes packages like optionallpremium/advanced/application suite/etc.

10. M R Spectroscopy

i. System should have capability to perform proton spectroscopy and multiplanar, spectroscopy along with optimized sequences and software for post processing and evaluation, including single-voxel/ multi-voxel/ global spectroscopic estimation quantitatively.
ii. Sequence for single-voxel acquisition and multi-voxel MRS.
iii. Sequence for simultaneous single-voxel acquisition with multivoxel (CSI).
iv. CSI [2-D and 3-D] and metabolite mapping with all necessary RF sequences and post-processing algorithms.
v. Post processing should include FFT, base line correction, curve optimization, automatic phase correction, metabolite imaging, spectral mapping, magnetic resonance spectroscopic imaging (molecular imaging) with naming and peak integral values for all in-vivo metabolites.
vi. Sequences and full post-processing algorithms for cardiac, prostate, breast, liver, musculoskeletal and neuro spectroscopic packages.
vii. Water and lipid suppression in automated sequences.

11. Post-processing and evaluation.

Licenses of all the postprocessing and evaluation packages should be provided for the main and satellite console/ workstation.

Specify clearly number wise the algorithms that need licenses and a statement whether these have been provided in both the main console and the work station.

Please give details of packages offered.

i. Multiplanar reconstruction (MPR) in any arbitrary plane including curved planes with freely selectable slice thickness and slice increments.
ii. Surface Reconstruction and evaluation on reconstructed images with minimum time.
iii. MIP in 2D and 3 D mode, targeted/segmented MIP in any orthogonal axis with minimum processing time and capable of displaying in cine mode
iv. Deleted
v. Evaluation and display of diffusion images, ADC map, fMRI in reference of EPI optimized sequence.
vi. Voxel-based morphometry for segmentation and quantification.
vii. Perfusion image evaluation with time intensity graph and other statistical parameters.
viii. Evaluation package for calculating rCBV,rCBF;MTT, perfusion map, etc.
ix. Flow quantification and evaluation for vascular (high & low) CSF, bladder outlet and cine display.
x. Evaluation of functional Images of brain with appropriate statistical algorithms, colour display and overlay on base anatomical images.
xi. Software for evaluation of functional mapping [BOLD evaluation] and neurometabolite mapping. Superimposition on Neurotractography geometry and tensor diffusion field on both functional mapping and neurometabolite mapping.
xii. Post-processing package for DTI and tractography.
xiii. Image statistics: Measurement of distance, area, volume, angle, mean, SD, image addition, subtraction, multiplication, division, interpolation, segmentation, threshold, histogram.
xiv. Image filtering and Image fusion software.
xv. Software for co-registering MRIIfMRIIMRS/Metabolite mapping images with images from CT, PET, and SPECT.
xvi. Evaluation features like zoom, rotation, scroll, roaming, image synthesis, multi point Tl and T2 calculation (more than 8) window stretching, text dialogues graphics, sorting, searching, archiving, recalling etc.
xvii. Full post-processing for single-voxel MRS, CSI (multi-voxel MRS), metabolite mapping with colour coding (metabolic images).

12. Quality assurance and Phantoms

1. Phantoms for routine quality assurance for all coils (including body coil)
ii. Spectroscopy phantoms for important short echo time neurometabolites, breast and prostate.
iii. Quality assurance as per AAMP standard for SNR for different coils and nuclei, spatial resolution, magnetic field inhomogeneity, eddy current compensation, RF power and inhomogeneity measurement. Specify the details of the QA package.

13. Accessories

i. Hand held metal detectors (2 Nos.)

ii. MR compatible (min. 2000 Gauss line limit) cardiac and physiological monitor (ECG, NIBP, SP02,) with both pediatric & adult probes with MR compatible ECG electrodes(2000 in number).
iii. MR compatible (min. 1000 Gauss line limit) syringe/infusion pump.
iv. MR Compatible Dual Pressure injector (min. 2000 Gauss line)with 300 spare syringes & tubings.
v. MR compatible anaesthetic system (for Paediatric and adults use) with dual vaporisers (for isoflurane, halothane), and other accessories including MR compatible patient trolley, gas cylinder, I/V stand, pediatric incubator and laryngoscope.

14. Optional Items

(a) Functional MRI package: Complete fMRI solution including audiovisual projection (3D capable) system fitted on the 32-channel head coil, along with stimulus presentation licensed software (like Superlab, eprime, Presentation), with post-processing workstation / server with post-processing software and hardware associated, with
licenses for Brain voyager and licensed operating platform required (like MATLAB, IDL, etc); The package should be from Resonance Technology Inc. (mrivideo.com) or Eloquence or Nordic neurolab or equivalent.

15 . WARRANTY PERIOD

(a) The equipment should have 24 months warranty from the date of handing over the fully functional unit of all coils and the accessories supplied (such as UPS, AC, Generator, etc.) to the Institute, against manufacturing defects of material and workmanship. The Helium Supply and cold head repairs (including replacement, if needed) should be included in the warranty period.

It shall be responsibility of the Bidder to alter the site towards the installation of the system. Turn key costs towards the installation should be mentioned separately. Turn key includes Site modifications, Wall tiles, doors (MRI Compatible), Air conditioners, Power DP box , PVC flooring , False ceiling , Lights, Laying of cable etc. and any other work for the complete installation of the equipment.

58 FLOWCYTOMETER

A Bench Top Cytometer operable at 220V, 50 Hz is required with following specification:

1. Should be equipped with 488 mm Solid State Diode laser with at least 20m W or more power output at the high quality quartz flow cell.

2. The equipment must be able to perform at least five fluorescence parameters along with Forward and Side Scatter simultaneously.

3. Optical filters should be easily changeable by user without having to call service engineers.

4. The equipment should have approx. 20 bit or more data processing with 4 or more decade of data display.

5. The equipment should have sample loading option of automated Multi Carousel tube loading of at least 24 tubes more along with 96 multi- well plate loading. It should also have biohazard contained wash station for thorough rinsing of sample probe.

6. Must have provision for both real-time and List mode (Off-line) full compensation so as to obviate the need for repeat sample runs.

7. The equipment should have an integrated bar-code reader to define the tube & plate holder position to ensure true positive sample identification.

8. Provision for single platform absolute counting is desirable.

9. Software: PC controller Windows based software preferably latest version. Software should display and control instrument processes.
10. Hardware with following configuration or better: Pentium Core 2 Duo Processor, RAM 4 GB, Graphics Card, Hard Drive 160GB, Network ports, DVD with Read-Write Devices, 8 USB ports, 22" Flat Monitor & UPS of appropriate electrical specifications.

11. The company should submit manufacture's original product catalogue with specification details.

12. The bidder may be asked to demonstrate the equipment if required by purchaser.

13. Starter up kit including sheath fluid, calibration kits, cleaning solution and sample tubes to perform 2000 assays.
14. The fluorochromes workable on the system should be able to do a wide range of diverse applications for Cancer Research and Clinical Investigations.

Compatible on line UPS.

15. 2 years comprehensive warranty.

59 Vital Sign Monitor (Neonates-Infants)

1 Description of Function

Sl	Name
1.1	NIBP/Vital Sign Monitor is used to continuously monitor the vital parameters including NIBP of critically ill patients.

2 Operational Requirements

Sl	Name
2.1	Capability of storage of patient data and printing of patient reports.

3 Technical Specifications

Sl	Name
3.1	1) Monitor should be able to monitor ECG (5 Leads, NIBP, Pulse oximeter, body temperature and respiration. 2) Monitor should have min 9"colour TFT/LCD display and should display atleast two traces of different colours. 3) Should have trend and listing facility for all parameters. 4) Alarms should be audio-visual and should have automatic and manual alarm setting for all parameters. Should display alphanumeric alarm messages. 5)Monitor should have inbuilt battery and inbuilt 2 channel thermal recorder. 6) Should have 5 leads ECG (I, II, III, AVR, AVL, AVF and V) HR approx 30 to 250 bpm NIBP approx 20-290mm Hg SPO2 approx 40-100% Temp approx 10 to 45 deg C. – Silencing features for audio alarm – Trend display for 2-24 hour – Pacemaker detection/rejection – Display reports system error, leads end sensors failure and built-in battery status – Unit can be mounted on bed/wall vane or mobile pole/stand – Automatic Switch from mains to batteries in case of

	power failure 7)Should measure NIBP from neonates to pediatrics. Should be supplied with cuffs for Neonates, pediatrics . 8)Should have the facility to record BP when there are rapid circulation changes between the cuff interval measurements . 9) Should also display trend of circulation changes over a period of time. 10) Should have an indicator displaying on screen the increase / decrease in circulation Status and also the normal / alarming range. 11) Should be capable of measuring oxygen saturation even in case of motion artifact. 12) Should have selectable cuff interval preferably upto 3 hours. 13) Should have cuff measurement ending time. 14) Monitor should automatically measure the BP on any alarm condition. 15) Should display the waveform graph and pulse bar graph. 16) SPO2 should be ECG Synchronized. 17) Should have change in pulse tone with rate

4 System Configuration Accessories, spares and consumables

Sl	Name
4.1	Should be supplied with the following accessories: 1.Patient cable(5 Lead Infant /Pediatrics) -10 2. Reusable Pediatric Cuff -10 3.Reusable Neonatal Cuff-10 4. Pediatric Probe SPO2 - 10 5.Finger wrap probe SPO2- 10 6.Ear Probe SPO2- 10 7.Skin Temp Probe(Neonatal) - 10 8.ECG Electrodes(Neonates)-1000(Disposable) 9.ECG Jelly Bottle-(200 ml each)- 10 bottles List of priced accessories and spare parts

5 Environmental factors

Sl	Name
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.
5.2	The unit shall be capable of being stored continuously in

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

6 Power Supply

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

7 Standards, Safety and Training

Sl	Name
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	Comprehensive warranty for 2 years.
7.4	Manufacturer should be ISO ertified for quality standards.
7.5	Training and installation at end user site.

8 Documentation

Sl	Name
8.1	User/Technical/Maintenance manuals with trouble shooting guidance to be supplied in English.
8.2	Certificate of calibration and inspection from factory.
8.3	List of Equipments available for providing calibration and routine 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 descriptin of the hospital technician and company service engineer should be clearly spelt out.

60 BASIC LIFE SUPPORT (BLS) AMBULANCE

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.
II. The specification relating to the fabrication of the ambulance is as under :-

Interiors	- As per Specification (Annexure II)
Electrical System and power back up	- As per Specification (Annexure III)
Central pipe line oxygen system	- As per Specification (Annexure IV)
Stretcher	- As per Specification (Annexure V)
Air Conditioning –Heating	-As per Specification (Annexure VI)
Medical equipment	-As per Specification (Annexure VII)
Miscellaneous gadgets	-As per Specification (Annexure VIII)

ANNEXURE·I

SPECIFICATION OF THE VEHICLE FOR AMBULANCE.

Engine	4 Cylinder, DI, Turbo Charges with Inter Cooler, Electronical Diesel Control, Bharat Stage - IV Compliant
Displacement	2500 - 3500 CC
Max Torque	190 - 200N m@ 1600-2100rpm
Compression ratio	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
Turning Radius	6-8 m
Frame	Monocoque / Chassis (Preferable Chassis based)
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
Alternator	65 Amp @ 12 - 13.5 Volts & 6000 rpm
Starter	12V, 2-3 KW
Fuel Tank	60-90 Litres
Dimensions (M M)	
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 fiber 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. Hitech.

(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 colored 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 operation 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 fro the rear for the purpose of 'getting in' the ambulance.

(xi) (I) Fire extinguisher (2) One each for driver and doctor cabin.
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 1S1 to be installed for use when vehicle in standing idle.

(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 aluminum 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 light 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

I. 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	3 nos.
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

ANNEXURE·VI

(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-VII

(P - I)

MEDICAL EQUIPMENT

Equipment to be placed on BLS Ambulance:

The ambulance will be required to be equipped with, but not limited to (he following:

A Suction Devices battery operated.

l. An engine vacuum operated or electrically powered and battery backup (in built},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,

I. 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,3, 4, 5. Either the disposable or non-disposable types are acceptable.

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 ..

I. Large adult
2. Med. Adult

E. "S" tube type airways may not be substituted for Berman type airways.

F. A "no smoking" sign will be prominently di .play d 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. Bum sheets, two, sterile.

N. Scissors, adhesive tap, vacuum splint (arm-2.legs-2)

O. Cervical color (disposable) be included (adult :-Large & medium.)

(P-lll)

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 lantens.

W. Minimum of one fire extinguishers, *C02* or dry chemical or type ABC.

X. Working gloves, two pair for each crewrnernber.

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.

BB. Additional Equipment Annexure - VIII

Combitude	2
LMA	Laryngeal Mask Ventilation Airway(3,4,5) sizes
Airsplints Complete Set	(U/L & UL)
Automated External Defibrillator (AED)	The vendor should provide training to doctor/nurses and paramedics in pre-hospital care. And use of ambulance equipments, patient transfer and basic life saving modules which include pre- hospital emergency & trauma care.
Suction Apparatus	Portable
Emergency Kit	Ambubag, ET tube, Laryngoscope adult size(Large, extra large &medium), Pediatric Laryngoscope. Magill forceps, Stylet Airways - Oropharyngeal airway (All Sizes – Adults & Pediatrics) (Transport Ventilator) Mini 02 Cylinder Suction unit. battery operated.

SECTION -V

FORMATS

BID FORM

To: (Name and address of Purchaser)
IFB Ref.
PACKAGE Ref.: ……

Having examined the Bidding Documents including Addenda Nos., if any issued _____ , the receipt of which is duly acknowledged, we, the undersigned, offer to supply and deliver…… (Description of Goods and Services) in conformity with said bidding documents.
We, undertake, if our bid is accepted, to deliver the goods in accordance with the delivery and Installation schedule specified in the aforesaid bid document.

If our bid is accepted, we will submit performance security in a sum of equivalent to 10% of the Contract Price for the due performance of the contract.

We agree to abide by this bid for a period of 180 (one hundred eighty) days after the date fixed for bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

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

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We confirm that stipulated Bid Security is enclosed herewith as a part of bid.

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

We accept all your terms and conditions stipulated in this bid document without deviations, both technical & techno-commercial.

Dated this…….. Day of……. 2012……

(Signature) (In the capacity of)

Duly authorised to sign Bid for and on behalf of

_____
Signed

Price Schedule

PRICE SCHEDULE – A) PRICE SCHEDULE FOR DOMESTIC GOODS OR GOODS OF FOREIGN ORIGIN LOCATED IN INDIA

1	2	3	4	5							6
Schedule	Brief Description of Goods	Country of Origin	Qty. (No.)	Ex-factory/ Ex-Warehouse/ Ex-Showroom/ Off the Shelf	Excise Duty (if any) – In % or value	Sales Tax/ VAT/ CENTVAT (if any) – In % or value	Packing & Forwarding charges	Inland Transportation, Insurance, Loading/ unloading,, Incidental Costs till Consignee's Site	Incidental Services (including Insurance, Installation & Commissioning Supervision, Demonstration & Training) at Consignee's Site	Total Unit Price (Rs.) =a+b+c+d +e+f	Total Price (Rs.) 4x5(g)
				5(a)	5(b)	5(c)	5(d)	5(e)	5(f)	5(g)	

Total Tender Price in Rupees:
In words:

Note: 1. If there is a discrepancy between unit price & total price, THE UNIT PRICE shall prevail.
2. The bidder will be fully responsible for the safe arrival of the goods at destination (consignee's site) in good condition.

Signature of the Bidder:
Name:
Business Address:
Seal of Bidder:

Date & Place:

PRICE SCHEDULE

B) PRICE SCHEDULE FOR GOODS TO BE IMPORTED FROM ABROAD

1	2	3	4	5							6
				Price Per Unit							
Item	Brief description of goods	Country of Origin	Qty (Nos)	FOB Price at port/ airport of Loading	CIP Price at port/ airport	Customs Duty with CDEC & NMIC if applicable (To be reimbursed by the purchaser)	Customs Clearance & Handling	Inland Transportation, Insurance, loading/ unloading and incidental cost till consignee's site	Incidental Services (including Insurance, Installation & Commissioning, Supervision, Demonstration and Training) at the Consignee's site	Total Unit Price = a+b+c+d+e+f	Total Price
				5(a)	5(b)	5(c)	5(d)	5(e)	5(f)	5(g)	4x5(g)

Total Tender Price: _____
In Words: _____
Note: -

1. If there is a discrepancy between the unit price and total price THE UNIT PRICE shall prevail.
2. The Bidder will be fully responsible for the safe arrival of the goods at destination (consignee site) in good condition.

Indian Agency commission- _____% of FOB (included/excluded above)
Customs Duty with CDEC & NMIC if applicable: ____% of CIF Value [Column 5(c)]

Signature of Bidder _____
Name _____
Business Address _____
Seal of the Bidder _____

Place: _____ Date: _____

PROFORMA FOR PERFORMANCE STATEMENT
{For a period of last five years (1st June 2007 – 31st May 2012)}

Bid No. _____ Date of opening _____ Time_____ Hours

Name of the Firm _____

Order Placed by (Full address of Purchaser)	Order No. and Date	Description and quantity of ordered equipment	Value of Order	Date of completion of delivery		Remarks indicating reasons for late delivery, if any	Has the equipment been supplied satisfactorily (Attach a certificate from the Purchaser/ Consignee)
				As per Contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____
_____
_____

Note: This form will be considered complete only if duly filled and supported with proof of satisfactory client's certificates along with respective order copies & same shall be applicable for assessing single order execution criteria as per SCC clause 4A (iv) of this document.

Contract Form

CONTRACT FORM

THIS AGREEMENT made the ..... day of .....20..... between [name of Purchaser] of ..... [country of Purchaser] (hereinafter called "the Purchaser") of the one part and .....[name of Supplier] of ..... [city and country of Supplier] (hereinafter called "the Supplier") of the other part :

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz, ... [brief description of Goods and Services] and has accepted a bid by the Supplier for the supply of those goods and services in the sum of .....[Contract price in Words and Figures] (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS :

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

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

   a the Bid No. **HSCC/PUR/MEA - Myanmar/Equipment/2012 -13**

   b Bid Form and the Price Schedule submitted by the Bidder;

   c the Schedule of Requirements;

   d the Technical Specifications;

   e the General Conditions of Contract;

   f the Special Conditions of Contract; and

   g the Purchaser's Notification of Award.

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

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

Brief particulars of the goods and services which shall be supplied/ provided by the Supplier are as under:

Sl. No.	Brief Description of Goods & Services	Quantity to be Supplied	Unit Price	Total Price	Delivery Terms

TOTAL VALUE :

DELIVERY & INSTALLATION SCHEDULE:

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

Signed, sealed and delivered by the

said _____ (For the Purchaser)

in the presence of : _____

Signed, sealed and delivered by the

said _____ (For the Supplier)

in the presence of : _____

MANUFACTURERS' SELF AUTHORIZATION FORM

No._____ dated_____.

To
_____
_____
_____
_____

Dear Sir,

IFBNO._____

Line Item No. _____

We _____ who are established and reputable manufacturers of_____ (name and description of goods offered) having factories at _____ (address of factory) do hereby submit a bid, and sign the contract with you against the above IFB. No. _____

No company or firm or individual other than M/s _____ (name of the manufacturer) are authorised to bid, and conclude the contract in regard to this business, against this specific IFB.

We hereby extend our full guarantee and warranty as per Clause 26 of the General Conditions of Contract for the goods and services offered for supply by us against this IFB.

Yours faithfully,

(Name)

(Name of Manufacturers)

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

MANUFACTURERS' AUTHORIZATION FORM

No._____ dated_____.

To

_____
_____
_____
_____

Dear Sir,

IFB.No. _____

Line Item No. _____

We _____who are established and reputable manufacturers of_____ (Name and Description of Goods offered) having factories at _____ (Address of Factory) do hereby authorize M/s_____ (Name & Address of the Agent) to submit a bid, and sign the contract with you against the above IFB. No._____

No company or firm or individual other than M/s _____ (Name of the Agent) are authorised to bid, and conclude the contract in regard to this business, against this specific IFB.

We hereby extend our full guarantee and warranty as per Clause 26 of the General Conditions of Contract for the goods and services offered for supply by the above firm against this IFB.

Yours faithfully,

(Name)

(Name of Manufacturers)

Note: - This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. Authorisation to be given to the one firm only, otherwise bid will stand rejected.

BID SECURITY FORM

Whereas .....1 *(hereinafter called "the Bidder")* has submitted its bid dated
..... *(date of submission of bid)* for the supply of .....
(name and/or
description of the goods) (hereinafter called "the Bid").
KNOW ALL PEOPLE by these presents that WE ..... *(name of bank)* of .....
(name of country), having our registered office at ..... *(address of bank)* (hereinafter
called "the Bank"), are bound unto **HSCC (I) Ltd., E-6(A) Sector – 1 , Noida***(name of Consultant)* (hereinafter called "the Consultant") in the sum of
_____ for
which payment well 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 Bidder
(a) withdraws its Bid during the period of bid validity specified by the Bidder on the
Bid Form; or
(b) does not accept the correction of errors in accordance with the ITB; or

2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the
period of bid validity:
(a) fails or refuses to execute the Contract Form if required; or
(b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders;

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 of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and **including forty five (45) days after the period**
of the bid validity, and any demand in respect thereof should reach the Bank not later than
the above
Date: (Signature of the Bank)

_____
Name of Bidder

PERFORMANCE SECURITY FORM

To: HSCC (I) Ltd. (Name of Consultant) **WHEREAS**
..... (Name of Supplier) hereinafter called "the Supplier" has undertaken , in pursuance of Contract (Purchase order) 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 recognized bank for the sum specified therein as
security for compliance with the Supplier's performance obligations in accordance with the
Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf
of the Supplier, 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 limit of ..... (Amount of Guarantee) as
aforesaid, without your needing to prove or to show grounds or reasons for your demand or
the sum specified therein.
This guarantee is valid until the .....day of.....20……
Signature and Seal of Guarantors
……..
……..
……..
Date.....20……
Address : ……..
……..

Format of Compliance Statement

TECHNICAL COMPLIANCE FORMAT

This information to be filled in as per the following format by all the bidders for each equipment quoted by them and duly signed and to be submitted along with the techno-commercial bid:

Line Item No. (1)	Technical Specifications as mentioned in the bid document (2)	Technical specifications of equipment offered by the bidder (3)	Compliance w.r.t. bid specification (4)	Deviation w.r.t. bid specification (5)	Remarks (6)

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 - VI

Consignee Receipt & Acceptance Certificate

CONSIGNEE RECEIPT CERTIFICATE

(To be given by consignee's authorised representatives)

The following Goods (Quantity mentioned against each) has/have been received in good conditions along with a copy of inspection report and Purchase Order / Contract copy containing details of the equipment ordered.

1. Name of the item supplied :
2. Product No. :
3. Name of the Supplier/ Manufacturer :
4. a) Quantity supplied :
   b) Quantity supplied in damaged condition, if any
5. Place of destination :
6. Name and Address of the Consignee :
   along with Telephone No. & Fax No.
7. Date of the receipt of stores by consignee :
8. Signature of the Medical Superintendent :
   of Hospital with date
9. Name of the Medical Superintendent :
10. Seal of the consignee
11. Contract No :

CONSIGNEE ACCEPTANCE CERTIFICATE

(To be issued by Purchaser's representative/Consignee's authorised representative)

The following goods/equipment, supplied by the Supplier at this Hospital are as per the specification mentioned in the Purchase Order/ Contract and have been successfully installed, tested and commissioned by the Supplier including imparting training:

1. Description of the item(s) supplied :

2. Name of Supplier :

3. a) Quantity Supplied :

   b) Quantity supplied in damaged condition, if any :

4. Name and address of Consignee :

5. Date of receipt of Consignee :

6. Date of Installation, Demonstration and Training by Supplier :

7. Signature of the Medical Superintendent of Hospital with date :

8 Name of the Medical Superintendent

9. Seal of Consignee :

   Telephone Number of Consignee :

   Facsimile Number of Consignee :

10. Contract No.

SECTION - VII

Schedule of Requirement

Package No.	Equipment	Qty
	A. Operation Theater	
1.	Boyles Anesthesia Machines With CVP Monitor	2 1
2.	Diathermy- Uni Polar/Bipolar	4
3.	Multiple Parameter Patient Monitor	3
4.	OT Table – General surgery	1
5.	OT sky lamp (Twin)	3
6.	Suction Machine	4
7.	Defibrillator with recorder	1
8.	Infusion Pump	1
	B. Medicine	
9.	ECG machine	1
10.	Pulse Oxymeter	4
11.	Nebuliser (Adult)	2
12.	Fiber Optic Gastroscope (Complete)	1
13.	Transcutenous Bilirubinometer	1
	C. Psychiatric	
14.	ECT	1
	D. Dental	
15.	Light Cure Machine	1
16.	Ultrasonic scaler	1
	E. ENT	
17.	ENT Operation Microscope	1
18.	Flexible Laryngoscope with camera	1
19.	Endoscopic Sinus Surgical set	1
20.	Mobile OT Light	1
	F. Pediatric	

Package No.	Equipment	Qty
21.	Open Care System Transport Incubator	1 1
	G. General Miscellaneous	
22.	Air Conditioner (Split)	5
23.	Patient Trolley	4
	H. Gynae/Obst	
24.	Labour Table	4
25.	Fiber Optic Spot Light	2
26.	Vacuum extractor	1
27.	Mid Straight Forceps & Low Forceps	2
28.	Neonatal resuscitation table	2
	I. Radiology –I	
29.	Portable Ultrasound	1
30.	Portable X ray machine	1
31.	CT Scan (64 Slice)	2
32.	C arm with I TV	1
33.	500 ma X-ray machine with Fluoroscopy	1
34.	Dark Room Accessories Cassette with intensifying screens 61/2*8, 8*10, 10*10, 12*15, 14*17	30 (06 of each size)
	i. Safe Light	1
	ii. Instant Developer Three tanks	1
	Film Drier	1
	J. Laboratory	
35.	Microtom	1
36.	Calorimeter (Computerised)	1
37.	ABG Analyser	1
38.	Auto Analyser	1
39.	Hemotocrit Centrifuge	1
	K. Ophthalmology	
40.	Phaco emulsion with instruments	1
41.	Operating Microscope	1

Package No.	Equipment	Qty
42.	B Scan Ultrasound Unit	1
43.	Auto Keratometer	1
44.	Bipolar Cautery	1
45.	Basic Cataract Eye Instrument	3
	L. Orthopedic	
46.	Cervical collars	4
	Gardenwells Tongs	4
	Spinal Boards	4
	Pneumatic Splints	4
47.	External Fixator Set	1
48.	Orthopedic Fracture Table	1
49.	Pneumatic Tourniquets (For Upper Limb, For Lower Limb, For Children)	1
	Esmarch Tourniquets	3
50.	Basic Bone set	1
	Plating Set	1
	Hip Hemiarthroplasty	1
	Interlocking intramedullary nailing set	1
	Wiring Set	1
	Hand set	1
	Spine set	1
51.	Power Drills and Drill bits	1
52.	Oscillating Saws	2
53.	Amputation Set	1
54.	Dermatone Set	1
55.	K Wire	1
	K Nail	1
	Interlocking nails and screws	1
	Dynamic Compression Plates	1
	Cyclage wire	1
	Hip Prosthetics	3
	Dynamic Hip Screw Set	1
	Dynamic Condyl Screws set	1
	Spinal implants (rod and pedicle screws)	1

Package No.	Equipment	Qty
	M. Blood Bank	
56.	Blood Bank Refrigerator	1
	Radiology -II	
57.	MRI Scan (3 Tesla)	1
	Pathology	
58.	Flowcytometer	1
	Pediatric	
59.	Multiple Parameter Monitor (neonatal)	4
60.	Ambulance (Transport)	2

Details of the Package	Consignee
Package No 1-30 & 32- 56 **Package no. 31 (1Qty)**	Sittwe General Hospital, Sittwe
Package No 31 (1 Qty) and 57- 60	Yangon Children Hospital, Yangon Myanmar

Complete Address of Consignee

1. Yangon Children Hospital, Yangon Myanmar

2. Sittwe General Hospital, Sittwe.

Section -VIII

CHECK LIST FOR BIDDERS

(Bidders must fill-up this Section in all respects and submit with un-priced bid)

IFB No:

Package No.:

Sr.	Document	Bidder's Confirmation (confirmed / not confirmed)	Page No. in the bid	Remark
1.	Bid document fee submitted.			
2.	EMD submitted along with details i.e. item no., item description, amount etc.			
3.	Bid form as per the Bid document submitted on the letter head of the company.			
4.	Manufacturer authorization form as per Format given in the Bid document on the letter head of the company.			
5.	Original copy of Power of attorney (on non- judicial stamp paper of appropriate value) of the signatory to the signing Bidding Document.			
7.	Technical Compliance Statement submitted			
8.	Commercial Compliance Statement submitted			
10.	Audited Balance sheet **(duly signed by the auditor) for** the last 3 financial years (i.e. **2008-09, 2009-2010 and 2010- 2011**).			
12.	Full set of Bid document along with its Addendum / corrigendum, has been signed on all pages (with company seal affixed) and submitted with un-priced bid.			
13.	Price schedule has been filled-up strictly as per Format given in bid document.			
14.	Price bid has been submitted separately item wise.			
15.	Copy of price schedule with prices blanked out has been submitted with un-priced bid			
18	Affidavit			

Important Note:

1) All pages of bid submitted should be page numbered are indexed.
2) The bidder may also go through the check list and ensure that all the documents / confirmed listed above are enclosed in the bid and no column if left blank. If any column is not applicable, it may be filled up as NA.

Signature with Date_____

Name & Designation With Company's Seal _____

ECS Format required with every bill for payment of more than Rs.1, 00,000 (Rupees One lakh only).

1. Name of the Beneficiary & address : ----------

2. Name of Beneficiary's Bank : ----------

3. Name of Beneficiary's Bank Branch. : ----------

4. A/c No. Current /Saving : ----------

5. IFSC/RTGS/ECS No. of Beneficiary's Bank Branch. (Please give complete Number) : ----------

6. Account of Remittance : ----------

NOTE:-

1. The Bank should be Computer Based Service

2. Should be on Letter head of the vendor

3. A copy of Bank cheque in case of ECS.

(Signature of Beneficiary)

Name ----------

Designation ----------

Date ----------

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