STATE HEALTH SOCIETY, NRHM – HARYANA
Through
United Nations Office for Project Services, 138 Sunder Nagar, New Delhi-110 003

INTERNATIONAL COMPETITIVE BIDDING

FOR THE

SUPPLY, INSTALLATION, TESTING AND COMMISSIOING (SITC) OF MEDICAL EQUIPMENT FOR MEDICAL COLLEGES OF THE GOVERNMENT OF HARYANA

UNOPS ITB No. UNOPS-HAR-IPO-06-2011

Amendment –I dated December 10, 2011

The following amendments are hereby made to the bid document for the Supply, Installation, Testing and Commissioning of Medical Equipments for Medical Colleges of the Government of Haryana, with reference to above ITB:

Sl.No	Reference	
1.	**Where ever appearing in the bid document, the Time, Date & Place for Sale, Receipt and Opening of Bids shall be read as:** **Last Date, Time and Place of Receiving of Bids** — **1300 Hrs. (IST) on December 22, 2011 at UNOPS India Operations Centre at 138 Sunder Nagar, New Delhi-110003** **Date, Time and Place of Bid Opening** — **1330 Hrs. (IST) on December 22, 2011 at UNOPS India Operations Centre at 138 Sunder Nagar, New Delhi-110003**	
	Where ever appearing in the bid document -	
	FOR	**READ**
2.	**ITB 15: Currencies of Bid** The Bidder shall quote in any freely convertible currency	**ITB 15: Currencies of Bid** The Bidder shall quote in **Indian Rupees** (INR) or any **freely convertible currency**
3.	**ITB 21. Bid Security** **21.2** The Bid Security shall be in original, in favour of UNOPS, *138, Sunder Nagar, New Delhi*, in the amount as provided in the Schedule of Requirements, and denominated in a freely convertible currency...	**ITB 21. Bid Security** **21.2** The Bid Security shall be in original, in favour of UNOPS, *138, Sunder Nagar, New Delhi*, in the amount as provided in the Schedule of Requirements, and denominated in **Indian Rupees** (INR) or any **freely convertible currency...**
4.	**ITB 44. Performance Security** 44.1 Within *14* days of receipt of the Contract from UNOPS, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCG, using for that purpose the Performance Security Form included in Section VIII, Contract forms...	**ITB 44. Performance Security** 44.1 Within ***21*** days of receipt of the Contract from UNOPS, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCG, using for that purpose the Performance Security Form included in Section VIII, Contract forms...

	Where ever appearing in the bid document -	
	FOR	**READ**
5.	**Delivery & Completion Schedule:** **i. Delivery to all Consignees within 45 days from the date of issue of the Purchase Order/Contract as per the Consignee Distribution List (enclosed)** **ii. Installation, training & commissioning:** Installation, Training (Paramedics and end users on proper usage of equipment and maintenance) and Commissioning as per the **Consignee Distribution List within 15 days** from the respective dates of delivery of the goods. *At the time of award of contract bidder will be given 10 days time to visit the site and assess the site preparedness requirement. This is exclusive of and in addition to, the delivery time period specified above.*	**Delivery & Completion Schedule:** **i. Delivery to all Consignees within 60 days from the date of issue of the Purchase Order; see Note below.** ***Note: At the time of award of contract, successful bidders will be given 10 additional days time to visit the site and assess the site preparedness requirement. This is exclusive of and in addition to, the delivery period specified above.*** **ii. Installation, training & commissioning:** Installation, Training (Paramedics and end users on proper usage of equipment and maintenance) and Commissioning as per the **Consignee Distribution List within 30 days** from the respective dates of delivery of the goods. See Note below. ***Note:*** *While installation at the designated site/location and commissioning will be the responsibility of the supplier,, basic readiness of the site enabling such installation will be the responsibility of the consignee*
6.	**Terms of Delivery** **CPT** final destination as per Consignee Distribution List at **Annexure** (also see note below)	**Terms of Delivery** **CPT** final destination as per Consignee Distribution List at **Annexure** (also see note below). Cargo insurance during transit will be provided by UNOPS.
7.	**Clarification 1:** Unless specifically stated otherwise, the product quality requirement in this ICB will be CE ("Conformité Européene") or US FDA or BIS. **Clarification 2:** As part of the technical evaluation of bids, functional demonstration of offered equipment model may be called for by the Purchaser, but the result/outcome thereof shall not be taken as the sole or conclusive evidence of qualification of the bid. Further, all expenses and risks related to such demonstration shall be borne by the bidder. Functional demonstration of the equipment is at the discretion of the Bid Evaluation Committee and its input shall be treated as supplementary / corroborative in nature and will not be a substitute for technical evaluation of the document submitted along with the bid.	

	<u>Clarification 3</u>: With regard to charge of liquidated damages (LD) for delay in delivery of goods, the onus of proof will be on the supplier for establishing that delays were not due to reasons attributable to him, whereas in post-delivery installation, in case of delay, assumption of non-readiness of site at consignee locations shall ordinarily prevail unless there is specific evidence /information/material to the contrary. **<u>Clarification 4</u>:** Unless specified otherwise in the Technical Specifications, all offers should include UPS unit or battery backup of at least one hour, as the case may be, with each equipment.
8.	**Section IV. Bidding Forms - 6. Price Schedule Form** **and** **Section V. Schedule of Requirements** **Sl. No. 1. (List of Goods and Consignee-wise Distribution); Sl. No. 2. (List of Related Services and Delivery & Completion Schedule); and Sl. No. 3. (Technical Specifications) are replaced by the following :** **See Annexure below**

All other terms and conditions of the bid document, except as amended herein above, remain unaltered.

Section IV. Bidding Forms

6. Price Schedule Form

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by UNOPS in the Schedule of Requirements.]*

	BIDDER'S PRICES FOR GOODS (Price & Currency to be entered by Bidder):				
Schedule No. (a)	DESCRIPTION (b)	QTY. (c)	CURRENCY :		
			UNIT PRICE CPT Final Destination (d)	TOTAL PRICE CPT Final place of destination (e) = (c) x (d)	Duties & Taxes (f)
Section A : Anesthesia					
1	SYRINGE INFUSION PUMP	36			
2	SUCTION MACHINES	32			
3	BLOOD GAS MACHINE	4			
4	PATIENT WARMING SYSTEM	8			
5	PATIENT CONTROLLED ANALGESIA SYSTEM (INTRAVENOUS USE)	6			
6	PULSE OXIMETER	12			
Section B : Surgery					
7	MOBILE EXAMINATION LIGHT	10			
8	HORIZONTAL AND RECTANGULAR STEAM STERILISER FOR CSSD	3			
Section C : Biochemistry					
9	SEMIAUTOMATIC CLINICAL CHEMISTRY ANALYSER	6			
10	DE-IONISED WATER PURIFICATION PLANTS	2			
11	ION SELECTIVE ELECTROLYTE ANALYZER	2			
12	SPECTROPHOTOMETER	3			
13 (A)	HIGH SPEED CENTRIFUGE	2			

	BIDDER'S PRICES FOR GOODS (Price & Currency to be entered by Bidder):				
Schedule No. (a)	DESCRIPTION (b)	QTY. (c)	CURRENCY :		
			UNIT PRICE CPT Final Destination (d)	TOTAL PRICE CPT Final place of destination (e) = (c) x (d)	Duties & Taxes (f)
13 (B)	TABLE TOP CENTRIFUGE	10			
	Section D : OBST. & GYNAE.				
14	BIRTHING BED	5			
15	VACUUM EXTRACTOR ELECTRIC	4			
16	VESSELS SEALING SYSTEM	3			
	Section E : Paediatrics				
17	CPAP MACHINE	5			
18	ECG MACHINE	6			
19	ELECTRONIC WEIGHING BALANCE FOR NEW BORNS	8			
20	IRRADIANCE METER FOR PHOTOTHERAPY (FLUX MONITOR)	6			
21	LAMINAR FLOW SYSTEM(CHAMBER)	6			
22	RADIANT WARMER WITHOUT BED	14			
23	TRANSCUTANEOUS BILIRUBINOMETER	3			
24	PULSE OXIMETER	20			
25	LED PHOTOTHERAPY UNIT FOR NEONATAL JAUNDICE	25			
26	OPEN INTENSIVE CARE SYSTEM FOR NEONATES	16			
27	SYRINGE INFUSION PUMP FOR NEOANATES	48			
28	TRANSILLUMINATOR (COLD LIGHT) FOR NEW BORNS	7			
	Section F : EYE				
29	CHART PROJECTORS	4			
30	INDIRECT OPTHALMOSCOPE	3			
31	RETINOSCOPE	4			
32	LENSOMETER	2			
33	MANUAL KERATOMETER	2			
34	A SCAN BIOMETER	2			
35	A AND B SCAN ULTRASOUND	3			

	BIDDER'S PRICES FOR GOODS (Price & Currency to be entered by Bidder):				
Schedule No. (a)	DESCRIPTION (b)	QTY. (c)	CURRENCY :		
			UNIT PRICE CPT Final Destination (d)	TOTAL PRICE CPT Final place of destination (e) = (c) x (d)	Duties & Taxes (f)
36	SYNAPTOPHORE	2			
37	OPTHALMIC REFRACTION UNITS	4			
38	PACHYMETER	2			
39	SPECULAR MICROSCOPE	2			
40	TONOPEN	2			
41	CRYOTHERAPY UNIT	2			
42	VITERECTOMY MACHINE	2			
43	RAPID STERILISERS	3			
44	AUTOCLAVE	2			
45	ULTRASONIC CLEANER	2			
	Section G : Forensic Medicine				
46	AUTOPSY SAW WITH VACUUM DUST COLLECTOR	4			
47	MORTUARY CABINET 9 BODIES [Cabinets for 3 body each]	8			
48	EMBALMING MACHINE	3			
49	SUSPENDED AUTOPSY LIGHTS	3			
50	PORTABLE AUTOPSY ORGAN SCALE(DIAL TYPE) AND SCALE STAND	3			
51	ODOUR CONTROL SYSTEM	4			
52	DEAD BODY AUTOPSY FLOOR SCALE(DIGITAL TYPE)	4			
53	WALL MOUNT AUTOPSY STATION , RIGHT SINK	4			
54	WALL MOUNT AUTOPSY STATION , LEFT SINK	4			
55	WALL MOUNT AUTOPSY STATION , CENTRAL SINK	4			
56	AUTOPSY CART /AUTOPSY CARRIER(USE IN CONJUNCTION WITH THE WALL MOUNT AUTOPSY STATION	4			
57	AUTOPSY INSTRUMENTS SETS	8			
58	AUTOPSY TABLE	8			
59	STAINLESS STEEL GLOVES AND PLASTIC SANI BLOCK HEAD REST	4			
	Section H : Ortho.				
60	SCREW REMOVAL SET	4			

BIDDER'S PRICES FOR SERVICES (Price & Currency to be entered by Bidder):					
Schedule No.	DESCRIPTION OF THE SERVICES	COUNTRY OF ORIGIN	PRICE (a)	Service tax (b)	TOTAL PRICE PER SERVICE (a)+b)
1	*Installation*				
	CMC** for year 1				
	CMC** for year 2……upto 5 years				
2…. ……. upto 60	CMC** for year 1				
	CMC** for year 2……upto 5 years				
	……..				
	……..				
*** There shall be no exemption from any applicable tax or duty; nature and amount of each tax or duty component should be clearly specified.** ****CMC price shall be quoted separately for each year after warranty; CMC column not applicable should not be filled in.**					
BIDDER'S DISCOUNT FOR ACCELERATED PAYMENT **____% of total firm price for each calendar day less than thirty (30) days**					

(i) BIDDER'S DELIVERY DATA		
Country of origin of offered products	Schedule 1	
	Schedule 2	
	Schedule 3	
	Schedule 4	
	Schedule 5	
	Schedule 6	
	Schedule 7	
	Schedule 8	
	Schedule 9	
	Schedule 10	
	Schedule 11	
	Schedule 12 …. Upto 60	
Time required for offering the good for Inspection:	Schedule 1	
	Schedule 2	
	Schedule 3	
	Schedule 4	
	Schedule 5	
	Schedule 6	
	Schedule 7	
	Schedule 8	
	Schedule 9	
	Schedule 10	
	Schedule 11	
	Schedule 12 …. Upto 60	
Time required for delivery and installation after dispatch clearance	Schedule 1	
	Schedule 2	
	Schedule 3	
	Schedule 4	
	Schedule 5	
	Schedule 6	
	Schedule 7	
	Schedule 8	
	Schedule 9	
	Schedule 10	
	Schedule 11	
	Schedule 12 …. Upto 60	

		Gross weight	Total volume	*Containers (if applicable):*	
				Number	Size
'Shipment dimensions of offered products (Including package):	Schedule 1				
	Schedule 2				
	Schedule 3				
	Schedule 4				
	Schedule 5				
	Schedule 6				
	Schedule 7				
	Schedule 8				
	Schedule 9				
	Schedule 10				
	Schedule 11				
	Schedule 12 …. Upto 60				

BIDDER'S SIGNATURE AND CONFIRMATION OF THE ITB

PROVIDED THAT A PURCHASE ORDER IS ISSUED BY UNOPS **WITHIN THE REQUIRED BID VALIDITY PERIOD** , THE UNDERSIGNED HEREBY COMMITS, SUBJECT TO THE TERMS OF SUCH PURCHASE ORDER, TO FURNISH ANY OR ALL ITEMS AT THE PRICES OFFERED AND TO DELIVER SAME TO THE DESIGNATED POINT(S) WITHIN THE DELIVERY TIME STATED ABOVE.

Exact name and address of company

COMPANY NAME_____

ADDRESS_____

_____

PHONE NO._____ FAX NO. _____

EMAIL ADDRESS OF CONTACT PERSON_____

OTHER EMAIL ADDRESSES_____

AUTHORIZED SIGNATURE **DATE**

NAME OF AUTHORIZED SIGNATORY (TYPE OR PRINT)

FUNCTIONAL TITLE OF SIGNATORY

WEB SITE_____

Section V. Schedule of Requirements

1. List of Goods and Consignee-wise Distribution
2. List of Related Services and Delivery & Completion Schedule
3. Technical Specifications

1. LIST OF GOODS and CONSIGNEE-WISE DISTRIBUTION

Section A : Anesthesia

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	**Description of Goods**	**Qty. (In Nos.)**				
1	Syringe Infusion Pump	20	16	**36**	20,000	400
2	Suction Machines	20	12	**32**	20,000	400
3	Blood Gas Machine	1	3	**4**	20,000	400
4	Patient Warming System	6	2	**8**	20,000	400
5	Patient Controlled Analgesia System (Intravenous Use)	4	2	**6**	20,000	400
6	Pulse Oximeter	6	6	**12**	20,000	400

Section B : Surgery

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	**Description of Goods**	**Qty. (In Nos.)**				
7	Mobile Examination Light	6	4	**10**	20,000	400
8	Horizontal And Rectangular Steam Steriliser For CSSD	3	0	**3**	20,000	400

Section C : Biochemistry

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	Description of Goods	Qty. (In Nos.)				
9	Semiautomatic Clinical Chemistry Analyser	4	2	**6**	20,000	400
10	De-Ionised Water Purification Plants	1	1	**2**	20,000	400
11	Electrolyte Analyser	1	1	**2**	20,000	400
12	Spectrophotometer	2	1	**3**	20,000	400
13.A.	High Speed Centrifuge Machine	1	1	**2**	20,000	400
13.B.	Table Top Centrifuge Machine	5	5	**10**		

Section D : OBST. & GYNAE.

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	Description of Goods	Qty. (In Nos.)				
14	Birthing Bed	3	2	**5**	20,000	400
15	Vacuum Extractor Electric	2	2	**4**	20,000	400
16	Vessels Sealing System	1	2	**3**	20,000	400

Section E : Paediatrics

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	Description of Goods	Qty. (In Nos.)				
17	CPAP MACHINE	2	3	**5**	20,000	400
18	ECG Machine	4	2	**6**	20,000	400
19	Electronic Weighing Balance For New Born	5	3	**8**	20,000	400
20	Irradiance Meter for Phototherapy (Flux Monitor)	4	2	**6**	20,000	400
21	Laminar Flow System	4	2	**6**	20,000	400
22	Radiant Warmer Without Bed	8	6	**14**	20,000	400

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	Description of Goods	Qty. (In Nos.)				
23	Transcutaneous Bilirubinometer	2	1	**3**	20,000	400
24	Pulse Oximeter	10	10	**20**	20,000	400
25	Led Phototherapy Unit For Neonatal Jaundice	15	10	**25**	20,000	400
26	Open Intensive Care System For Neonates	10	6	**16**	20,000	400
27	Syringe Infusion Pump For Neoanates & PICU	24	24	**48**	20,000	400
28	Transilluminator (Cold Light) For New Born	5	2	**7**	20,000	400

Section F : EYE

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	Description of Goods	Qty. (In Nos.)				
29	Chart Projectors	2	2	**4**	20,000	400
30	Indirect Opthalmoscope	2	1	**3**	20,000	400
31	Retinoscope	2	2	**4**	20,000	400
32	Lensometer	1	1	**2**	20,000	400
33	Manual Keratometer	1	1	**2**	20,000	400
34	A Scan Biometer	1	1	**2**	20,000	400
35	A And B Scan Ultrasound	2	1	**3**	20,000	400
36	Synaptophore	1	1	**2**	20,000	400
37	Opthalmic Refraction Units	2	2	**4**	20,000	400
38	Pachymeter	1	1	**2**	20,000	400
39	Specular Microscope	1	1	**2**	20,000	400
40	Tonopen	1	1	**2**	20,000	400
41	Cryotherapy Unit	1	1	**2**	20,000	400
42	Viterectomy Machine	1	1	**2**	20,000	400
43	Rapid Sterilisers	2	1	**3**	20,000	400
44	Autoclave	1	1	**2**	20,000	400
45	Ultrasonic Cleaner	1	1	**2**	20,000	400

Section G : Forensic Medicine

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	Description of Goods	Qty. (In Nos.)				
46	Autopsy Saw With Vacuum Dust Collector	1	3	**4**	10,000	200
47	Mortuary Cabinet 9 Bodies	4 Cabinets for 3 body each	4 Cabinets for 3 body each	**8**	10,000	200
48	Embalming Machine	1	2	**3**	10,000	200
49	Suspended Autopsy Lights	1	2	**3**	10,000	200
50	Portable Autopsy Organ Scale(Dial Type) And Scale Stand	1	2	**3**	10,000	200
51	Odour Control System	1	3	**4**	10,000	200
52	Dead Body Autopsy Floor Scale(Digital Type)	2	2	**4**	10,000	200
53	Wall Mount Autopsy Station , Right Sink	2	2	**4**	10,000	200
54	Wall Mount Autopsy Station , Left Sink	2	2	**4**	10,000	200
55	Wall Mount Autopsy Station , Central Sink	2	2	**4**	10,000	200
56	Autopsy Cart /Autopsy Carrier(Use In Conjunction With The Wall Mount Autopsy Station	2	2	**4**	10,000	200
57	Autopsy Instruments	4 Sets	4 Sets	**8**	10,000	200
58	Autopsy Table	4	4	**8**	10,000	200
59	Stainless Steel Gloves And Plastic Sani Block Head Rest	2	2	**4**	10,000	200

Section H : Ortho.

Consignee :=>		Nalhar Medical College, Mewat	Khanpur Kalan Medical College, Sonepat	Total	Bid Security in INR	Bid Security in USD
Sch. No.	Description of Goods	Qty. (In Nos.)				
60	Screw Removal Set	2	2	**4**	20,000	400

2. List of Related Services and Delivery & Completion Schedule

List of Related Services:

i) Incidental Services

The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

(a) Performance or supervision of the assembly, installation and/or start-up of the supplied equipment

(b) Furnishing of tools required for assembly and/or maintenance of the supplied Goods along with each equipment

(c) Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied equipment at the time of delivery

(d) After sales service centre should be available at/near to the location of Consignee on 24 (hrs) X 7 (days) X 365 (days) basis. Complaints should be attended properly maximum within 48 hrs including the travel time.

(e) The Comprehensive maintenance Contract (Including Spare Parts)

(i) The Purchaser/ Consignees/, Government of Haryana, may, at his own and sole discretion enter into a Comprehensive Maintenance Contract (CMC) with the Supplier, three months prior to the completion of Warranty Period, at the contracted price, for a period of four (4) years after the expiry of the warranty period as per the details given in clause 12.2 of GCC, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract. The CMC will commence from the date of expiry of Warranty period. The CMC includes preventive maintenance including testing & calibration as per technical/service/operational manual, labour and spares.

(ii) The supplier shall visit each consignee site as recommended in the manufacturer's technical/ service operational manual, but at least once in three months during the CMC period for preventive maintenance.

(f) Training of the Purchaser's personnel, on-site, in assembly, start up, operation, maintenance and/or repair of the supplied Good. This must be carried out at the time of installation of Equipment.

ii) **Availability of Spare parts**

The Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

(a) such spare parts as required for maintenance of the equipment during Warranty and CMC period, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and

(b) In the event of termination of production of the spare parts:

(i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and

(ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

(c) Suppliers shall ensure the availability of spare parts for ten years. Inventory of the Spare parts required for 8 years.

Delivery & Completion Schedule:

i. **Delivery to all Consignees within 60 days from the date of issue of the Purchase Order; see Note below.**

Note: At the time of award of contract, successful bidders will be given 10 additional days time to visit the site and assess the site preparedness requirement. This is exclusive of and in addition to, the delivery period specified above.

ii. **Installation, training & commissioning:**

Installation, Training (Paramedics and end users on proper usage of equipment and maintenance) and Commissioning as per the **Consignee Distribution List within 30 days** from the respective dates of delivery of the goods. See Note below.

Note: *While installation at the designated site/location and commissioning will be the responsibility of the supplier, basic readiness of the site enabling such installation will be the responsibility of the consignee*

Terms of Delivery

CPT final destination as per Consignee Distribution List provided in List of Goods (also see note below). Cargo insurance during transit will be provided by UNOPS.

Note:

a) The responsibility of arranging all required documents, including Custom clearance (if applicable), Road Permits etc. is of the Supplier.

b) Installation of Medical Equipment will be at the Medical Colleges as per the Consignee Distribution List.

c) Training on Medical Equipment at Medical Colleges as per the Consignee Distribution List; however with the prior approval of the consignee(s), training for more than one centre can be organized together at one location.

NOTE:

1.) **The Consignee Receipt Certificate (CRC) will be issued to the Supplier within 72 hours of the delivery at the Consignee address.**

2.) **Liquidated Damages (LD) will be calculated separately on: (1) delay in the delivery of the Goods to the consignees; and (2) delay in installation, training & commissioning, attributable to the supplier, and not for reasons not attributable to the Supplier.**

Note :-

1. Functional demonstration of all the offered goods shall be required to be arranged by the bidder, at his cost, before the Bid Evaluation Committee for technical evaluation, as when requested to do so by the Bid Evaluation Committee.

2. Please note that the functional demonstration of the equipment is purely at the discretion of the Bid Evaluation Committee and its input shall be treated as supplementary / corroborative in nature and will not be a substitute for technical evaluation of the document submitted along with the bid.

Consignee List

A. BPS Government Medical College for Women, Khanpur Kalan, Sonepat, Haryana.

B. Nalhar Medical College, Nalhar, Mewat, Haryana.

3. Technical Specifications

SECTION A : ANAESTHESIA

Schedule 1 : SYRINGE INFUSION PUMP

1. Programmable flow rate from 0.1 ml/hr to 1200ml/hr or more
2. Facility for bolus drug administration
3. Facility for' Keep Vein Patient' by slow administration of Fluid
4. Selectable occlusion pressure trigger levels
5. Standard alarms, e.g mains failure, occlusion, syringe empty, syringe not in proper position, disconnection, air bubble etc
6. Backlit bright display of information
7. Should run of 220 V AC mains without any external adapter/ transformer, etc.
8. Internal battery backup for at least 3 hours with display of battery charge level
9. Should be compatible with a variety of syringe available in the Indian market, in 10, 20 and 50/ 60 ml sizes
10. Automatic detection of syringe size
11. Facility of display of drug name with concentration with automatic calculation of drug amount given
12. Should be mountable on standard iv stands
13. Essential spares for performing 100 uses to be supplied alongwith each unit.
14. List of essential spares with price, which may be holding for five years
15. The unit should comply with all regulatory agencies such as CE or US FDA approved
16. Warranty: 24 months from date of installation
17. CMC for 5 years after the period of warranty

Schedule 2 : SUCTION MACHINES

1. Should be capable of operating on 220/230 VAC mains and equipped with minimum ½ H.P. high power noise less motor (sound level less than 50 dB) (ISI mark) with piston based fan belt driven vacuum pump filled with oil complete with 2 x 2000 ml polycarbonate suction jars.

2. The suction machine should be capable of producing maximum vacuum 700 mm Hg which should be adjustable between 0-700 mm Hg and should be monitored by vacuum gauge of suitable range (ISI Mark/US FDA/CE approved).

3. A fuse of appropriate capacity should be incorporated for protection of motor.

4. The machine should have rust proof stainless steel cabinet mounted on four castors with locking facility in any of the two diagonal castors and should have handle for transportation.

5. Overflow cut off device should be provided to prevent overflow (auto lock facility).

6. Should have main ON/OFF switch with light indicator.

7. The main power cord should be provided with minimum length of 5 mtrs with 15 Amps plug top.

8. The Suction Machine should be ISI Approved (ISI Mark).

9. It should be supplied with 2 years warranty and 5 years CMC after completion of warranty period which include replacement of each and every defective part of the suction machine.

Schedule 3 : BLOOD GAS ANALYSER MACHINE

1. Automatic Blood Gas Analyzer to perform tests for Blood Gases and Electrolytes with measuring parameters like Ph, HCO_3, PO_2, PCO_2, Na, K, CI, Base excess, Calcium, Hb, Lactate level, Blood Glucose etc. with liquid calibration system.
2. The instrument should accept heparinised whole blood, serum or plasma, arterial, mixed venous and capillary sample.
3. It should also provide the facility to measure the above parameters in cerebrospinal fluid, dialysate, pleural fluid and urine.
4. Preferable standby mode for reagent economy
5. Should not require any gas cylinders for functioning.
6. Should have automatic cleaning cycle and programmable on board maintenance software.
7. Should have latest technology maintenance free, ready sensors electrodes that should not require re-membraning calibration before use.
8. Life of electrodes should be atleast 2 years.
9. On screen display and thermal printer for results.
10. Storage facility of patients results.
11. Should have modular platform for future degradation/up-gradation of capabilities and test configuration.
12. On board reagents facility with inventory management through display of reagents levels on the screen.
13. Should have automatic recognition of sampling device (Syringe/Capillary).
14. Should accept all sample containers including capillary without adapters. Sampling Area should be enclosed to reduce risk of contamination.

15. No Manual calibration steps should be required for Calibration after changing of pack or sensor. Fully automatic Tonometered calibration of al parameter in fixed or user friendly intervals.
16. Calibration cycle time should not be more than 30 minutes (preferably).
17. Company should be ISO certified.
18. Should have facility for PC inter feasibility with supply of codes for data transmission.
19. Should have requisite Data Output port and hardware for networking facility with hospital Network.
20. Should have in built data management system to store patient results. QC results, calibration reports and self diagnosis.
21. Sample through put minimum 30 samples per hour.
22. Should have Built-in color TFT/LCD > 10 inch flat screen (touch screen) monitor.
23. It should follow the international Safety & Standards requirement.
24. All standard accessories should be provided.
25. Operating and detailed service manual should be supplied.
26. 2 years warranty and 5 year CMC after that. The bidder should quote and include for all the accessories and consumables to run this machine for analysis of 450 samples per month for initial two years (warranty period) and then subsequent for each subsequent years for the next 5 years (CMC period). The quoted cost for each of these years including the initial two years should include the onsite maintenance and continuous running of machine with maximum downtime of 4 hours with facility to replace the machine with standby in case of prolonged breakdown without any added cost to the institute. Any failure to repair the machine within 24 hrs without standby arrangement will invite daily penalty of 0.1% of machine cost excluding CMC.
27. Cost of consumables for doing extra no. of samples per month in addition to specified above should be quoted and freezed for 7 years.
28. Local availability of service engineer and distributor for after sale service.

Schedule 4 : PATIENT WARMING SYSTEM

1. Should operate on 220V, 50 Hz, AC mains current.
2. Control unit should be light-weight, mobile and easily attached to infusion stand or operation table.
3. Capable of attaining operating temperature of up to 40° C.
4. Disposable Blankets should be light weight, blood and fluid resistant.
5. Freezing of rates of Disposable Blankets for 10 years.

6. Supply of 100 Blankets (20 – Paediatric & 80 – Adult)/year/unit during warranty period and CMC period.

7. Should provide constant and efficient surface warming to every area of body.

8. Display of operating temperature, optical and acoustic warning signals for high temperature and power failure alarms.

9. Should have safety features like automatic check, temperature measurement between warming system and patient, permanent temperature monitoring and auto stop of overheating above 42° C.

10. Warranty of 2 years after successful installation and CMC for 5 years after expiry of warranty.

11. The product should be FDA approved.

Schedule 5 : PATIENT CONTROLLED ANALGESIA SYSTEM (INTRAVENOUS USE)

1. Should be compatible for use by intravenous route/ Epidural.

2. Should have a well lit back screen.

3. Should run on alternating current and be provided with rechargeable battery.

4. Should be easily programmable.

5. Should be able to operate on-demand, continuous infusion mode as well on bolus plus continuous background infusion.

6. The delivery system should be compatible with standard tubings, standard syringes and commonly used drugs in anaesthesia & intensive care.

7. Bolus should be in the range of 1-6 ml while CBI should be in the range of 1-20 ml/hr.

8. Should be provided with the facility of lockout interval. With safety keyed anti-siphon and back flow valve.

9. It should be provided with alarms for pump, microprocessor malfunction, occlusion or disconnection.

10. Patient activator button must be safe, sturdy and simple to use.

11. Should be provided with a memory of at least 8 hours.

12. Warranty : 24 months from the date of installation.

13. CMC for 5 years after the period of warranty.

Schedule 6 : PULSE OXIMETER

1. Should be able to monitor SPO2 in neonates, infant and Paediatrics patient.
2. It should work on mains (220-240v, 50-60 Hz) as well as inbuilt rechargeable battery with minimum 2 hour backup.
3. It should have an LCD display for displaying wave forms of SPO_2.
4. Display SPO_2 values, HR/PR, plethysmograph along with perfusion level indicator.
5. It should have adjustable alarms for Pulse oximetry.
6. It should work on re-usable as well as disposable sensors meant for neonates, infants and children.
7. Should supply two reusable sensors each for neonates, (Y-probe, ear lobe probe) infant and older child (finger probe) and adult standard accessory with the equipment and quote price inclusive of these.
8. Range of SPO_2 measurement - 0 to 100 %, Accuracy-±1-3%, Averaging time - 02 to 10 second.
9. Should supply disposables finger wraps for Y –probe (50 nos)
10. Warranty period: 2 years.
11. CMC for 5 years after warranty
12. The department will like to have a live demonstration of the equipment quoted
13. Original literature, and not photocopy, to be supplied with the quotation, otherwise quotations will not be considered
14. Company should certify that model quoted is the latest and not obsolete, and spares are available for minimum 10 Years after warranty.

SECTION B : SURGERY

Schedule 7 : MOBILE EXAMINATION LIGHT

1. Mobile OT light should offer light intensity of 35000 lux
2. Should have halogen bulbs with service life of at least 1000 hrs.
3. Should have colour temperature of @ 4300k.
4. Should have handle for aiming and focusing of light.
5. Should have articulated arm for wide range of adjustments and wide turning radius. Should have fixed focus 500-1500 mm and light field diameter of 170mm.
6. Should have battery backup of 3 hrs.
7. The lamp head should have unbreakable outer glass.
8. Should confirm to international standard for medical electrical equipment EN 60601-1 and EN 60601-2.
9. Should have diffuser for harmonize light
10. Should have filter to absorb radiant heat
11. Epoxy powder coated
12. Should have back up bulb automatically switching on in case main bulb burns out.

Schedule 8 : HORIZONTAL AND RECTANGULAR STEAM STERILISER FOR CSSD

1. It should be Horizontal and rectangular.
2. Should be front loaded and single door.
3. Weight of the door should not lead to sagging down.
4. It should operate on 3 phase 36 KW load.
5. Should be made of heavy duty stainless steel material SS-316 (chamber & pipe & fitting of SS 304)
6. The wall thickness should be mentioned in mm.
7. Should have dimension 90x90x180 cm with chamber vo1 of 45 cu feet.
8. It should have trolley carriage and vacuum pump.

9. Rubber gasket should be of silicon rubber.
10. It should specify max temperature 134° centigrade and pressure 30 PSI.
11. The Jacket should be insulated with non fiber shredding, resin bonded glass wool with stainless steel outer cover.
12. It should have steam generator safety valve, water level sensor and pressure control valve.
13. It should have 2 years warrantee and CMC for 5 years.
14. It should supply with all the accessories i.e door diaphragm and gasket 1 each, door gasket (Silicon) 1 each, dye for changing element 1 each, tool kit 1 each, electronic multimeter 1 each, glass gaze 5 each, contractor box 1 each & elements 6 with each sterilizer.

SECTION C : BIOCHEMISTRY

Schedule 9 : SEMI-AUTOMATIC CLINICAL CHEMISTRY ANALYSER

1. The equipment should be able to analyze Enzymes, Hormones, Electrolytes, Coagulation profile, other liquid chemistry using substrates like Plasma, whole blood, serum, peritoneal fluid, CSF, urine etc.
2. Optical module should be static with photometric range of 340-700 nm with minimum 8 interference filter of 340, 405, 450, 505,546,580, 600 and 670 nm.
3. Should have silicon photodiade detector with a range of 0-2.5 OD.
4. Should have Test Library of more than 100 'OPEN' test programmes, more than 40 tests selectable through specific test keys and more than 60 tests selectable through test codes.
5. The system should also must have at least 10 'OPEN' unnamed test programmes which can be named by the user as per needs.
6. The system should use endpoints using Bichromatic function, Old factor or new factor or average of both with reagent blank in memory
7. The Fixed time Kinetics should use Standard and reagent blank
8. The system should use multistandard Assays Using up to 7 calibrators with reagent blank and Up to 7 calibrators with reagent & sample blanks.
9. The system should have triple Cuvette handling system using 10-20 µl Flowcell or Manual Cuvettes. The equipment should also have provision for using 6 mm round glass tube .
10. Aspiration volume should be programmable and in the range of 500 uL to 6000 uL
11. The should system should have Peltier based temperature control: 25°C, 30°C, 37°C
12. The system should have Special Functions for Sample and reagent blank in memory Select function, Help function, Statistical test counter, Self diagnostic capability.
13. The system should have Display of operating steps, User-friendly prompts while reprogramming and Special 'Absorbance' key and mode.
14. The system should have Flagging capability for abnormal results
15. The system should have memory of minimum 200 user defined test programmes, 1000 test results and Input of QC Control samples, Auto storage of marked results, Graphic representation of Levey-Jennings Chart and Auto calculation & printout of control chart.
16. The system should have Data Processor with following specification

    Main Processor capacity : 16 bit / 256 kB or more

    Co-processor capacity : 8 bit / 64 kB or more
17. The system should have Inbuilt thermal printer with 40 columns of 9 x 7 dot matrix with Printing speed or More than 30 characters per second on a Paper with More than 100 mm width. The printer should also be able to detailed as well as brief parameter printing , Graphic printout, Kinetic assays, Multi standard Curves & Levey- Jennings Chart.
18. The system should be supplied with Power requirements 220, 50 Hz, maximum power consumption 100 Watts and should be able to function at 15°C to 32°C.
19. The system should be supplied with online UPS with minimum 2 hours backup.
20. The firm will provide spares & consumable during the duration of warranty. The firm should give rate list of different spares and consumable to be used for the machine as part of financial bid.

Schedule 10 : DE-IONISED WATER PURIFICATION PLANTS

1. Should have three stage purification process –
    a. Primary purification by a prefilter with antiscaling and activated carbon for bacteriostasis .
    b. Secondary purification through high density R O membrane.
    c. Tertiary purification should involve an Electro deionization module or deionization module.
2. Prefiltration Stage : System should have provision for attaching the prefiltration unit having two stage purification steps involving 5 micron and 1 micron cartridges.
3. Pressure gauges should be present to monitor the health of prefilter cartridge.
4. Pump should have the capacity to boost water up to 2 bar. System should be wall mountable.
5. System should possess pump temperature feedback mechanism to ensure a constant flow rate at al temperatures.
6. System should measure and display online resistivity measurement.
7. System should have a provision to store data.
8. An alphanumeric , backlit and LCD display auto diagnostic features and alarms.
9. Water quality with R O
    Resistivity : Up to 15 Megohm-cm
    Conductivity : > 0.1 micro-siemens
    Bacteria(CFU/mL) : < 1.0
    Heavy metal free
    TOC : 30 ppb
    Flow rate : 20 Liters / hour
10. Reservoir 250 litres with vent filter and auto level cut off switch
11. Water quality with ultra filtration Unit :
    Resistivity : 18.2 Megohm-cm
    Conductivity : 0.05 micro-siemens
    Bacteria(CFU/mL) : < 1.0
    TOC : 10 ppb
    Flow rate : 1.5 to 2.0 Liters / hour
12. System should incorporate ultra filtration 5 kilo Dalton, UV radiation, deionization and 0.22 micron filter and carbon filtered water to produce ultra pure water
13. Tank Specifications : A blow molded , cylindrical PE reservoir with sensor switch for determining the level of stored water. The tank should have recirculation of water between the tank and the system. Should have vent filter CO2 absorber.
14. Water quality produced (Type-I & Type-II) should be NCCLS or ASTM grade water.
15. Five years CMC rate following guarantee period. Firm should quote charges from AMC for 6^{th} year to 10^{th} year. The firm should give rate list of different spares and consumable to be used for the machine as part of financial bid.

Schedule 11 : ION SELECTIVE ELECTROLYTE ANALYSER

1. Measured Parameters: Ion selective electrodes for the measurement of Sodium, Potassium, Calcium & Lithium
2. Set up: Interchangeable electrolyte configuration
3. Internal Standard: Should have provision for Lithium as reference standard. Both level & stability of Internal standard is continuously & automatically monitored to ensure within run precision
4. Display: Readings displayed are frozen when end point result is achieved
5. Microprocessor: Microprocessor guided correct operation/measuring sequence
6. Diluter: Built-in internal diluter for automatic dilution of whole blood, serum, plasma or urine
7. Sample size 80-100 µl
8. Sample application Syringe, sample cup, collection tube or capillary
9. Nebuliser: Precise nebuliser design and fully automatic flame control system
10. Ranges of parameter:

		SERUM
Na	:	40 - 200 mmol/L
K	:	1.5 – 15 mmol/L
Li	:	0.1 – 9.9 mmol/L
Ca	:	0.2 – 5 mmol/L
Cl	:	50 – 200 mmol/L
		URINE
Na	:	0 – 300 mmol/L
K	:	4.5 – 120 mmol/L
Cl	:	1 – 300 mmol/L

11. Linearity: ± 1% of the range
12. Response time: Minimum
13. Trouble shooting: Automatic monitoring of system performance
14. Diagnostic programme: User controlled

Quoted prices should include Guarantee (free replacement) for two years and thereafter-comprehensive Warranty for next three years.
The firm will provide spares & consumable during the duration of comprehensive warranty. Firm should quote charges from AMC for 6^{th} year to 10^{th} year.
The firm should give rate list of different spares and consumable to be used for the machine as part of financial bid.

Schedule 12 : SPECTROPHOTOMETER

1. It should be dual beam UV-Vis spectrophotometer.
2. Light source should be Xenon flash lamp with three year warranty.
3. Spectral Bandwidth should be 1 nm.
4. Should have wave length range: 190 to 1100 nm with absorbance range of 0-1.999.
5. Wavelength Accuracy should be in 0.8 nm (full range) ± 0.5 nm (546.11 nm mercury line)
6. Wavelength Reproducibility should be less than 0.1 nm (546.11 nm mercury line, SD of 10 measurements)
7. Should have different Scan Ordinate Modes: Absorbance, % Transmittance, % Reflectance, Kubelka-Munk, log (1/R), log (Abs), Abs Factor, Intensity with dual silicon photodiodes detector.
8. It should have resolution greater than 1.5 (peak-to-valley ratio).
9. Scanning speed should be less than 1 to 6000 nm/min; continuously variable
10. Photometric Range should be greater than 3.5 Abs with Photometric Accuracy: 0.5 A: ± 0.004A; 1A: ± 0.006A; 2A: ± 0.010A; (440 nm; traceable neutral density filters).
11. Noise: 0A: less than 0.00015 A; 1A: less than 0.00050 A; 2A: less than 0.00080 A; (260 nm, RMS).
12. Technology should be open system.
13. Software tool: System diagnostic tool.
14. It should have pre-installed software like- Nucleic acid ratio and concentration (260/280 and 260/230), Direct protein concentration at 280nm and 205nm, Coomassie/Bradford (Standard and Micro), Lowry, BCA, Pierce Micro-BCA, Pierce 660nm Protein Assay, Cell growth (with scaling factor), Kinetics.
15. Should have stylus for touch screen interaction with sealed membrane keypad.
16. Should have touch screen LCD panel and minimum 3x7 segment LED display..
17. The system should be interfaced with Computer which must be provide with following specification with machine. Core2quad processor, 4GB DDR3 RAM, 500GB Hard Disk.
18. Instruments are approved to CE and UL/CSA standards.
19. Guarantee – 2yrs guarantee, 3 warranty with 5 yrs free CMC.

Schedule 13 (A) : HIGH SPEED CENTRIFUGE MACHINE

1. High speed refrigerated centrifuge for centrifugal forces not less than 60,000xg, with quite operation in lab.
2. Must be Microprocessor control and with LCD-display.
3. Efficient cooling system, pre-selection from -20°C to +40°C.
4. Must have Maintenance-free brushless drive motor. Should not produce carbon dust.
5. Speed range from 20 to 30,000 rpm., selectable in steps of 1 rpm.
6. Must have Magnetic rotor identification software.
7. Safety features: Automatic door interlock, imbalance detector, steel barrier ring around chamber, over speed detection, over-temperature detection, and mouse protection.
8. All control panels must be in front.
9. Time pre-setting infinite or up to 9h 59min.
10. Rotors capacity: 30 x 0.2-2ml, 16 x 4-7ml (13mm), 12 x 7-10ml(16mm), 10 x 15ml, 8 x 50ml, 4 x Universal 25ml.
11. Operating voltage: 220-230V, 50Hz.
12. Stabilizer
13. Guarantee & Warrantee : 5 years CMC rate following guarantee period.

Schedule 13 (B) : TABLE TOP CENTRIFUGE MACHINE

The equipment must fulfill following specifications:

1. Speed range from 20 to 15,000 rpm.., selectable in steps of 1 rpm
2. Must have Magnetic rotor identification to prevents overspeeding rotors
3. Must have Maintenance-free brushless drive motor. Should not produce carbon dust.
4. Safety features: Automatic door interlock, imbalance detection, re-entrant bowl
5. Simple operation e.g.: for routine research use, start/stop button on the front of the centrifuge
6. Time pre-setting infinite or up to 9h 59min.
7. Tubes capacity: 30 x Eppendorf 0.2-2ml, 24-36 x Blood tube 4-7ml (13 mm), 12x Blood tube 7-10 ml (16mm), 10 x Falcon 15 ml, 8 x Falcon 50 ml, 4x Universal 25 ml.
8. Operating voltage: 220-230 V, 50 Hz
9. Guarantee / Warranty – 5 years comprehensive from the date of installation.

SECTION D : OBSTETRICS AND GYNAECOLOGY

Schedule 14 : BIRTHING BED

1. It should be made up of good quality steel Japanese preheated and powder coated in KDC.
2. It should be able to convert quickly form a practical labour bed to delivery platform and back to a comfortable recovery bed.
3. It should have electric control with battery backup for height and backrest adjustment with help of handset.
4. It should have retracting let-section and two section mattress, allowing maximum access to mother and baby.
5. It should have gas spring assisted trendelenberg tilt to 12-20 degree.
6. The bed should be supplied with two accessory trolleys (with two braked castors)
7. It should have size 2070-2250 mm (length) 850-1000mm (width), 520-820mm height, safe working load.
8. Mattress 80-90 mm thick.
9. The bed should have the accessories as standard: large size fluid collection bowl and an IV Road, comfortable leg rests with straps for lithotomy position (two pairs), Hand grips for bearing down (pair), high foot supports for comfort (pair), seat section of two- part mattress with 8 -10 cm, extended apron, low foot supports for chair position, removable step for patient access and chair position, removable headboard for access by anaesthetist, adjustable stainless steel side rails to reassure and to grip (pair), Dual side CPR fast drop release lever, accessible brake-levers, with steering facility, four 12.5 castors (3 braking, 1 steering) and four rotary buffers for protection of walls and doors. The bed should have wheels for transfer.
10. It should be CE and ISO certified.
11. The equipment guaranteed minimum for 2 years or more against any manufacturing defect subject to replacement.
12. Satisfactory after sales service whenever required.
13. CMC – 5 years.
14. Accessories: 10 mattress covers,

    2 accessories trolley; 2 Chairs of appropriate height for conducting delivery.

Schedule 15 : VACUUM EXTRACTOR ELECTRIC

1. Aspirator vacuum 40 U 40 LT/min, vacuum – 0-9 bar, extractor pump for obstetrics.

2. 0-9 Bar vacuum regulator, with 2 holders for bottles, with sockets for foot switch on/off Foot regulator and mains cable with suction tube of length 2-4 meters and connection tubing set included 10 Nos. with disposable bacterial filters.

3. Two Suction Jar 1.5 to 2 ltrs of polysulfone made auto clavable.

4. Moveable stand

5. Suction extractor cups (silicon) with traction handle with trumpet valves (optional) dia 40 mm, 50mm, 60 mm (2 each).

6. Metal cups with chairs with diameter of 40 mm, 50mm, 60mm (one each) with one traction handle.

7. Foot regulator.

8. Accessories: Rubber washers, connectors, two spare suction tubes.

9. Warranty: 2 years; CMC: 5 year

Schedule 16 : VESSELS SEALING SYSTEM

The unit should be supplied with the following mentioned specifications and accessories:

1. Generator should be microprocessor controlled bipolar electrosurgical radiofrequency generator.
2. Generator should be equipped with technology to measure the tissue impedance and control the power delivery.
3. Should have temperature controlled energy delivery which maintain tissue temperature approximately at 100 degrees Celsius.
4. Should not have lateral thermal spread more than 1 mm.
5. It should have optically supported quickstep control panel.
6. There should be display board.
7. It should have power of 400 watts for monopolar.
8. It should have bipolar cutting with forfex current.
9. It should have vessels sealing facility for endoscopy and open surgery for blood vessels up to 7mm dia.
10. It should have progressive output control especially for low power setting.
11. It should have fractionated currents for use in endoscopy.
12. It should have coagulation currents for targeted coagulation, monopolar and bipolar coagulation should be auto functioning.
13. It should have patient control system with status indicator.
14. It should have power of approximately 320 W for vessels sealing
15. It should have two mono polar and two bipolar output sockets.
16. It should have automatic cooling system to allow detachment.
17. Should have alarm to indicate completion of sealing.
18. Should have alarm for non completion of sealing.
19. Should be supplied with all necessary accessories for making the equipment functional.
20. It should have well equipped service center.

21. It should be CE/FDA certified.

22. 2 years of warranty

23. CMC – 5 years

24. **Accessories to be supplied:**

    a) Hand probes (curved and straight) for vessel sealing in open surgery 14 mm (reusable 6 each)

    b) Bipolar scissors curved and straight size 23cm (reusable) 2 no. each.

    c) Bipolar vessel sealing clamp / forceps for laparoscopy size 5 mm width, and length 25cm (2 nos), 35cm (6 in number), 45cm (2 in number) (reusable) – 1 number each.

    d) Bipolar cable – 2 numbers

    e) Trolley to be available for system.

SECTION E : PAEDIATRICS

Schedule 17 : NASAL CPAP MACHINE

1. Imported CPAP machine with compressor
2. CPAP generator with pressure range from 3 to 10cm of water
3. Capable of giving nasal/nasopharyngeal CPAP
4. Air and oxygen blender separately calibrated with flow from 0-15 lit/ min
5. FiO_2 concentration should be adjustable (21-100%) and accurate
6. Safety mechanism for relief of excessive pressure through pressure relief valve/regulator
7. Soft anatomically shaped nasal prongs
8. Alarms for-
    a. Low/High CPAP
    b. Tube Open
    c. Apnea alarm
    d. Flow increase/decrease alarm
    e. O_2 pressure low alarm
    f. Air pressure low alarm
9. Flow meters :02 with each peace
10. Power 220-230 volts 50 Hz
11. Power pack (UPS with battery back of 2 hours)
12. System should be quoted with pole assembly to incorporate the whole CPAP machine
13. Standard accessories with each equipment
    a. Heated wire servo –controlled humidifier 01
        i. Should automatically regulate the required temperature
        ii. Should be a closed system for filling up water
        iii. Should have ports for heater wire as well as temperature probe
        iv. Should display the chamber temperature and/or temperature at the patient end
    b. Disposal patient circuits including nasal prongs 30 (10 each of different neonatal sizes)
        i. Should have the option of using both disposable and reusable circuits
        ii. Disposable circuits should be readily available and reasonably priced
        iii. Should have / be able to accommodate a heater wire; heat loss should be minimal along its length
    c. Disposable nasal prongs 15 (5 each of different neonatal sizes)
14. Warranty: For 2 Years for all parts including accessories & consumables

15. CMC: For 5 Years after warranty inclusive of spare parts/ accessories used during maintenance

16. Please quote the price and catalogue No of all the spares and flow sensor etc. likely to be changed during CMC, the price quoted should be frozen for 5 years. The company should give the certificate that the model quoted is the latest and not obsolete, 7 spares will be easily available for next 5-7 years.

Schedule 18 : ECG MACHINE

1. Portable, easy to carry, weighing about 3 Kg
2. Power supply 220-240 Volts AC, 50 Hz
3. Complaint with electrical safety standards
4. Mains and battery protection fuse
5. Battery should be built in, rechargeable, NiMH, having capacity for 2 Hrs and/ or 150 complete EKGs, rechargeable to 100 % in approximately 15 Hrs.
6. Should have manual and auto modes with acquisition of standard 12 leads ECG.
7. Recording sensitivity 2.5-5-10-20mm/MV +5 %
8. Mains interference, muscle and anti drift filters
9. Good quality stable ECG recordings
10. Indicators: Battery charging and low battery
11. Printer: Thermal with one print channel
12. Paper speed: 25 and 50 mm /sec
13. Paper roll : 500 mm x 20 m approx
14. Accessories as per standard supply with each machine
15. Print cable 1, Limb electrodes 4, chest electrode 6, standard and additional set of limb electrodes 4 and chest electrodes 6 of neonatal/ infant size and earth lead.
16. Paper roll 5, gel bottle 1, user manual with each machine.
17. Warranty: for 2 years for all parts including accessories.
18. CMC: for 5 Years after expiry of warranty period including spare parts/ accessories.
19. Rate of paper roll may be quoted and frozen for 5 years.
20. The company should give the certificate that the model quoted is the latest and not obsolete and spares will be easily available for next 5-7 years.

Schedule 19 : ELECTRONIC WEIGHING BALANCE FOR NEW BORNS

1. Digital weighing scale
2. Sturdy machine with stable bassinet
3. Bassinet : curved surface to prevent fall of baby
4. Range 0-10 kg
5. Accuracy ± 1 Grams
6. Display : Bright up to 3 decimal points visible from 4-6 feet
7. Units: in gram/ kg
8. Baby pan/platform:50 cm x 30 cm +/- 10 %
9. Easily cleaned and disinfected pan
10. Tare facility
11. Should be able to stabilize the readings in spite of baby movements
12. Mounting: On a lightweight compact mobile trolley
13. Runs on mains : 220-240 V and inbuilt battery minimum backup 30-60 minutes
14. User/ Technical/ Maintenance manuals to be supplied in English
15. Certificate of calibration and inspection

13. **Environmental Factors**

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

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

14. **Power Supply**

a) Power supply: 220/ 240 V 50/60 Hz with DC adaptor, capable of running on battery

15. **Standard, Safety and Training**

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

b) Manufacturer/ Supplier Should have ISO certification for quality standards

c) Shall comply with electrical safety requirements as per IEC or BIS regulations.

16. **Comprehensive warranty for 2 Years and 5 years CMC after warranty.**

Schedule 20 : IRRADIANCE METER FOR PHOTOTHERAPY (FLUX MONITOR)

1. Should have survey probe to measure radiance in the range of 0.1 to 100 mm/mm with LCD display
2. Wavelength range 425-475nm
3. Should have on and off and auto off switch
4. Should operate on batteries with a life of approximate 300 hrs and have signal of battery discharge.
5. Handheld irradiance meter (spectro radiometer) for measurement the output of conventional phototherapy devices
6. Bandpass filter, max transsion: 425 to 475 nm
7. Light detector, range: 0 to 2000 uW/cm2 (full bandwidth), 0 to 40 uW/cm2/nm
8. Results expressed in uW/cm2/nm ONLY
9. Minimal graduation: 1 uW/cm2/nm
10. Accuracy: (± 10%)
11. Total block for IR and UV
12. Large LED/LCD display
13. On switch and auto-off
14. Automatic zero setting between measurements
15. Power requirements: 220 V / 50 Hz (with adapter) or internal re-chargeable batteries (autonomy approx 6 hrs, automatic recharge)
16. Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted)
17. Device is safety certified according CE 93/42, FDA 510k or equivalent (Certificate to be submitted)
18. Supplied with high quality storing case
19. Should work on humidity range of 0-90% and Temperature of 0-50˚C
20. Warranty at least two years.
21. CMC for 5 years after expiry of warranty period.

Schedule 21 : LAMINAR FLOW SYSTEM

1. Size 4 feet x 2 feet x 2 feet
2. Vertical Laminar air flow station
3. HEPA filtered air rated 99.9% efficient removing 0.3 micron particles with high and low adjustment switch.
4. Should have facility for display of positive pressure inside the system
5. Noise level: 50 db ± 10db
6. Filter/ Fan unit (FFU) provides a flow of micro filtered air to meet cleanliness standards down to class I (per FED –STD -209)
7. Uniform airflow across the filter face
8. All stainless steel construction
9. Side panels and front sliding shield (made of PVC) to control the laminar airflow stream (from strong to weak) to achieve the air speed required for application.
10. Fluorescent illuminators to ensure easy viewing
11. Compatible with electricity output in Indian conditions
12. **Warranty**: For 2 Years for all including accessories and consumables
13. **CMC :** CMC for 5 years , which should include one year warranty for each spare parts/accessories used during maintenance .
14. List of essential spares, expendables and consumables expected to be used in one year should be provided and quoted separately. Prices so quoted to be frozen for 5 Years.
15. The company should give the certificate that the model quoted is the latest and not obsolete, & spares will be easily available for next 5-7 years.

Schedule 22 : RADIANT WARMER WITHOUT BED

1. Stand alone movable and not wall mounted.

2. **Micro Computer Temperature controller**

   a) Provides thermal regulation with highest degree of accuracy

   b) User friendly feather touch control

   c) Safety alarms along with high temperature cut off.

3. **Metallic Heater Box**

   a) Consists of radiant heat source enclosed in parabolic reflector with life-long warranty.

4. **Halogen Examination Lamp**

   a) Provides accurate assessment of infant colour and sufficient illumination during procedure.

5. **Type of Temperature Controllers**

   a) Skin/ Manual

      (i) 1" bright skin temp display

      (ii) Set temperature display

      (iii) % of heater output display

      (iv) Skin/mode/manual code

   b) Manual Code

      (i) Time programmable heater output settable

      (ii) Over temperature cut off

6. Timer/APGAR TIMER

7. Auto audio-alarm mute

8. Mute time programmable

9. Safety alarms (with status LED)

   a) Probe failure
   b) > 0.5 ˚C of set temp
   c) <0.5 ˚C of set temp
   d) >38˚C of skin temp (actual temp. starts blinking)

e) <34˚C skin temp (actual temp. starts blinking)
f) Power failure

10. **Safety High temp. cut off at 38˚C**

11. If skin probe is to be used for air control, < 34˚C limit can be programmed at desired air low temp alarm

12. Consumables i.e. Thermistor based interchangeable probe 2 nos per unit to be quoted and provided separately.

13. List of essential accessories and expendables should be provided and quoted separately.

14. Prices so quoted to be frozen for 5 years.

15. Warranty Period: 2 Years

16. CMC for 5 years after warranty.

17. Original literature, and not the photocopy, to be supplied with the quotation.

18. Company should certify that model quoted is the latest and not obsolete, and spares are available for minimum 5 years after warranty.

Schedule 23 : TRANSCUTANEOUS BILIRUBINOMETER

1. Transcutaneous bilimeter for non invasive bilirubin estimation. The machine should weigh less than 1000 gm; should be able to measure transcutaneous bilirubin in Asian/ Indian neonates; in preterm and term neonates; before, during and after phototherapy

2. Range of bilirubin measurement: 0-20 mg %

3. Based on multi wavelength spectral reflectance meter

4. Provides measurement of total serum bilirubin reported in micromol/L or mg/dL with easy to read display

5. Accuracy: better than +/- 2 mg/ dl

6. Precision: better than +/-1 mg/ dl

7. Correlation with serum bilirubin r >0.85

8. Should run on rechargeable nickel-cadmium or equivalent battery

9. If any disposable part is needed, the company should provide supplies for a total of 600 measurement of transcutaneous bilirubin

10. Supply with high quality cushioned carrying case
11. **Warranty**: For 2 Years of all parts including accessories and consumables.
12. **CMC**: 5 years after expiry of warranty period
13. Please quote the price and catalogue no and disposables likely to be changed after warranty
14. The company should give the certificate and the model quoted is the latest and not obsolete; and spares will be easily available for next 5- 7 years.

Schedule 24 : NEONATAL PULSE OXYMETER

1. Should be able to monitor neonates, infant and Pediatrics patient. Nelcor or Masimo technology or equivalent technology.
2. It should work on mains (220-240 V, 50-60 Hz) as well as rechargeable battery with minimum two hour backup.
3. It should have an LCD display for displaying wave forms of SPO2.
4. Continuous display SPO2 waves, HR/PR, plethysmograph along with perfusion level indicator.
5. Large display readable from distance of >6 feet
6. It should have adjustable alarms for Pulse oximetery.
7. It should work on reusable as well as disposable sensors meant for neonates, infants and children.
8. Should supply two reusable sensors each for neonates flex probe Infant and older child (finger probe) as standard accessory with the equipment and quote price inclusive of these.
9. Range of SPO2 measurement -0 to 100 %, Accuracy-±1-3%, average time -02 to 10 second.
10. Should supply disposables finger wraps for Y –probe (50 nos)

    Supplied with:
    5 x reusable SpO2 sensors neonate, clip-on type
    5 X reusable SpO2 sensors (finger type) for children and adolescents
    10x spare set of fuses

11. Automatic switch from mains to batteries in case of power failure
12. Warranty period: 2 years.
13. CMC for 5 years after warranty

14. Original literature and not photocopy to be supplied with the quotation otherwise quotation will not be considered

15. Company should certify that model quoted is the latest and not obsolete, and spares are available for minimum 5 Years after warranty.

16. Device is produced by ISO 9001 certified manufacturer (Certificate to be submitted)
17. Device is safety certified according CE 93/42, FDA 510k or equivalent (Certificate to be submitted,)

Schedule 25 : LED PHOTOTHERAPY UNIT FOR NEONATAL JAUNDICE

1. Illumination source: Blue light emitting diodes (LEDs) with lifetime of at least 30,000 hours

2. Peak spectral irradiance: at least 30 µw/cm^2/nm at 30 cm distance and 50 µW /cm^2/nm at 20 cm distance (as measured with Minolta - Airshields or Olympic flux meter)

3. It should be possible to increase or decrease the irradiance without changing the distance to the baby

4. Large effective foot print area : mean spectral irradiance of at least 20 µW/cm^2 /nm over an area of 25cm by 50cm at 30cm distance

5. Emissions spectrum: blue light with a peak wavelength between 440 and 470 nm

6. The source of lamps (manufacturer) should be identified and a certificate of the emission spectrum from a government /research laboratory should be provided.

7. Quality control: device is produced by manufacturer with ISO 9001 certification (certificates to be submitted)

8. Electrical: device is compatible with 220 – 240 V 50/60 Hz power input

9. Durability: LEDs are protected by suitable cover made of fire resistant transparent material

10. Digital Lamp time counter.

11. Additional requirements:

    a. Sturdy mobile stand

    b. At least 2 inch sturdy Castors, at least 2 should have breaks

    c. Height of stand's base must be less than 8 cm to fit under radiant warmers/incubators and baby Cots

    d. Height adjustable from 1.20 m to 1.50 m (measured from bottom surface of enclosure to ground)

e. Light enclosure must be tiltable from horizontal to at least 30 degree

12. Warranty: 5 years :Full warranty, including provision for rapid repair or replacement of broken device within five days of notification of problem

13. Spare set of fuses

14. Uses manual with trouble shooting guidance ; Technical manual with maintenance and first line technical intervention instruction

15. Training and installation as user site

16. During warranty: full service, covering (i) 2 preventive maintenances per year, (ii) on-call technical interventions, all spare parts –metallic, electrical, plastic, rubber, glass etc., lamps (till 10,000 hours) and travel

17. Price list of priced accessories and spare parts after warranty period : and lamps after 10,00 hours

Schedule 26 : OPEN INTENSIVE CARE SYSTEM FOR NEONATES

1. Micro-processor based Electronic servo-control system with inbuilt provision of oxygen and suction, made of sturdy, corrosion resistant material. It should have a self test function performed at power on. The suction unit must create a negative pressure of 100 mm of Hg equivalent to 130 cm of water pressure and have a pressure gauge. It should have a jar of capacity of minimum 1 litre made of polycarbonate.

2. The chassis of the open care system must be made from Fire Resistant grade material to dampen the fire and retards continuous burning.

3. The coating must be of epoxy/powder for scratch resistance and rust protection.

4. The unit comprises of oxygen pipeline with suitable dispensing system for the release of oxygen with minimum 2.5 meter long hose. The unit must have oxygen flow adjustment up to 10 lpm & pressure measurement up to 3-4 kg/cm2.

5. The accessories mentioned below are per machine.

a) Essential parts : Cart & bassinet

Warming system with controls & alarms with life time warranty
Examination light

6. Cart : Should swivel on 4 wheels of at least 4” diameter- with foot

Operated brakes on 2 front wheels

7. Dimensions

Height	:	180-200 cms
Width	:	60-70 cms
Depth	:	100-120 cms
Working level	:	95-105 cm, adjustable

8. Bassinet : Movable transparent side walls, sturdy easily dismantable and cleanable.

9. Mattress

Width	:	55-60 cms
Length	:	65-75 cms
Thickness	:	at least 4 cm
Material	:	Soft, easy to clean, radiolucent

10. Bassinet tilt : At least 8 degrees, Trendelenburg as well as reverse Trendelenburg

11. Warmer module swivel : 45-70 degrees on either side

12. Warming system Modes: Manual & Skin

13. Manual Mode : Adjustable in steps from 0 to 100%

14. Skin mode

Set point range	:	34-38 degrees C
Skin temp. variability at temperature equilibrium:		±0.1 degrees C

Skin temperature display

Accuracy	:	±0.1 degrees C
Resolution	:	0.1 degree C

15. Audiovisual Alarms : Probe failure
Heater failure
High and low infant temperature
Power failure
System failure
Silence/reset switch

16. Examination Light : Illuminance 100 foot candles at mattress centre

17. Storage space : 2 drawers, preferably covered and sliding

18. Power requirement : 220/240 V AC, 50/60 Hz,

19. Essential Accessories

a) Suction bottle stand
b) Cylinder holder one each

c) I.V. Stand : should be able to accommodate 2 fluid bottles

d) Monitor shelves : 2 in number can take load upto 10 Kg

e) X-Ray cassette holder : sliding holder located just below undersurface of Bassinet, with markings to help placement of cassette

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

g) Spare Mattress : 01 nos

h) Oxygen Cylinder 10 L : 02 nos

i) Medical grade tubing of atleast 2 metre length alongwith Oxygen cylinder. : 02 nos.

j) Suction Jar 1 litre (additional) : 01 nos.

20. Operator Manuals

21. Warranty: 2 years; CMC: 5 years after warranty period

22. Price of all consumables – temperature probes, extension cable, heater element and halogen bulb should also be quoted separately and should be valid for 7 years.

Schedule 27 : SYRINGE INFUSION PUMP FOR NEONATES

1) Application Neonatal use
2) Syringe loading: Manual
3) Syringe size: 10, 20 and 50ml sizes
4) Syringe recognition: Automatic Detection
5) Compatibility with syringe brands: All locally available brands in India
6) Alarms: Occlusion pressure alarm
Syringe near-empty alarm
Low battery
Internal malfunction
Syringe wrongly fitted
Power supply failure
7) Priming rate & bolus rate: 5ml-150ml/hr
10ml-300ml/hr
8) Bolus administration: Manual or automatic
9) Flow rate range: 0.1 to 199ml/hr

10) Flow rate increments: 0.1ml/hr

11) Volumetric accuracy: ± 2% over 1hr

12) Controls: On/Off

Start/Stop infusion

Flow rate

Volume

Prime/bolus

Alarm silence

13) Display: Flow rate ml/ hr in large LCD display

Alarms

AC mains indicator

Battery on

Occlusion pressure

14) Audible alarm: Sound intensity user-adjustable

Rechargeable, maintenance free battery

Life when fully charges; up to 4 hrs

15) Mains power supply: 220V, 50/60 Hz

Cable length: more than 2 m

16) Clamp: Pole clamp (adjustable to fit stands of all widths)

17) Warranty: 24 months from date of completion installation

18) Manuals: Operator manuals

19) Comprehensive maintenance contract: 5 years from end of warranty period

CMC must cover all part of the pump including all metallic, plastic, electrical parts. Part that are covered and not covered must be explicitly stated upfront.

At least 4 preventive maintenance visits/yr.

20) Quotation must include a compliance statement and in addition, each of the above points is marked in the technical brochure. Points not covered in the brochure must be specifically addressed in a separate certificate.

21) FDA or CE (European) certificate to be enclosed.

Schedule 28 : TRANSILLUMINATOR (COLD LIGHT) FOR NEW BORNS

1. Should be able to trans illuminate arteries, veins and air collections (pneumothorax)
2. Portable light weight compact base unit between 200-600 grams
3. User-adjustable light intensity
4. Flexible Fibre-optic cable with non-metallic sheath
5. Length of cable 3-5 feet
6. Tip of Fibre-optic cable: 0.5 cms or less
7. Long-life internal battery re-chargeable from mains, with continuous running time at least 1 hour
8. Power supply: 220/240 V, 50/60 Hz, with DC adaptor
9. Manual: Operator manuals
10. Warranty period – 2 years from date of installation
11. Warranty should cover all parts including bulb and fiber-optic cable
12. Price of spares after the warranty period-bulb, fiber-optic cable and any other consumable part to be quoted separately
13. The prices of spares should be valid for 5 years after warranty

SECTION F : EYE

Schedule 29 : CHART PROJECTORS

1. Self illuminated projector chart
2. Remote control for changing test types
3. Facility for individual line projection
4. Facility for single letter projection
5. Worth four dot test facility
6. Duchrome testing facility
7. Facility for English, Hindi, E (or C) chart, Picture chart
8. Maddox rod testing facility
9. Low contrast vision testing facility
10. Astigmatism testing facility
11. Total 32 or more test types
12. Warranty for 2 years and CMC for 5 years

Schedule 30 : INDIRECT OPTHALMOSCOPE

1. Weight of Head band with Light weight with soft cushioning and non slip contoured ophthalmoscope leather head band. Adjustable circumference and height
2. Bulb 6V with easy fit, push in (halogen bulb)
3. Illumination 2000lux, rheostat-on transformer & illumination should be adjustable from 100% to 2% of max required
4. Diffuser should have both wireless and must run for 100 min with battery rechargeable on lithium batteries with 2 extra batteries with charger
5. Transformer for continuous illumination control
6. Filters 4: a. Diffuse, b. Yellow, c. Blue,
7. Mirror height adjustable
8. Apertures Adjustable for large, intermediate and small pupil
9. Independent image alignment control
10. Original case
11. Teaching Mirror
12. Scleral Indentor Large & small
13. With + 20D aspheric lens
14. 2 years warranty and CMC 5 years

Schedule 31 : STREAK RETINOSCOPE

1. Hand Held Streak Retinoscope with XL 3.5 V Halogen lamp.
2. Rechargeable handle which can be directly plugged in AC supply for recharging
3. Simple operation with knurled thumb screw. The line and spot image can be focused with the operating element and turned 360 degree.
4. Holder for hanging and fixing the fixation card into position for dynamic retinoscopy.
5. Bayonet fitting for fast and secure attachment to the handle.
6. Accessories: Original Manufacturer Hard Plastic case (1), Original Rechargeable battery (1) and fixation cards for dynamic retinoscopy (2), Original Spare bulbs (10)
7. Warranty: 2 yrs, 5 year CMC

Schedule 32 : LENSOMETER

1. Type : External Reading Type
2. Target: Corona and cross, Rotable 360 degree
3. Vertex power range ± 25 D
   i. (0,25 Diopter step): 0 to 10 Diopters
   ii. (0,50 Diopter step): 10 to 25 Diopters
4. Cylindrical axis: 0 degree to 180 degree (1 degree steps)
5. Prismatic power: 0 to 10 ▲ (0.25 ▲ step)
6. Acceptable Lense
   i. Diameter: 30 to 80 mm dia.
   ii. Tiltable angle: Continuously variable from 30 degree to 90 degree
7. Eyepiece focusing range: + 3D 0 to -5 D
8. Light source: 220 V, with battery backup
9. Accessories: contact lens holder, dust cover, spare bulbs-2, center marker
10. 2 year warranty, 5 years CAMC

Schedule 33 : MANUAL KERATOMETER

1. External reading
2. Measurements to 0.2 mm accuracy
3. Ocular: 15X wide-angle piece
4. Adjustable chin rest
5. One position instrument: Measures both meridians without changing optical system
6. Simple vertical adjustment to fit patient
7. Two-way adjustable head and chin rests
8. Dual eye-level sighting system. Facilitates horizontal alignment
9. Positive fixation. Permits rapid measurement of central corneal area
10. Precision objectives, assures durability, achromatic lenses
11. Measurement range: radius of curvature, 9.4-6.4 mm (in 0.05 mm steps),

Dioptre 28-60 D (in 0.25 steps)

12. Motorised table for keeping Keratometer
13. Extra Bulb: 5, dust cover, chin rest paper 10 rolls
14. Warranty: 2 yrs; CMC : 5 years

Schedule 34 : A SCAN BIOMETER

1. Probe:- Frequency-10 MHz, Hard probe

   Fixation – Internal LED
2. Measurement Mode: Automatic, Manual, for Aphakic, Pseudophakic & Cataract Mode.
3. IOL Power Calculation Formulae :-SRK-T, SRK-II, HOLLADAY, BINKHORST, HAIGIS, HOFFER-Q
4. Facility of axial length measurement with contact and immersion mode.
5. Facility to input IOL constants (minimum 8) and surgeon parameters
6. Accuracy of measurement ± .05 mm
7. Axial length detection: 16-40 mm
8. Printer: In built/external
9. Accessories:- Standard accessories; Foot pedal 1, Power cord, 1, Test Chamber1, Immersion cups 2.
10. Must measure AC depth, Axial length, lens thickness
11. Power Supply 220 V
12. Warranty- 2 yrs; CMC-5 yrs

Schedule 35 : A AND B SCAN ULTRASOUND

1. Should be compact, touch panel display, color CRT/LCD display.
2. Should have minimum 8.4 inch color CRT/LCD display
3. Should be supplied with built-in or external printer for easy loading and auto cutter.
4. Should have facility of RS-232 port for LAN communication and for USB Memory.
5. A/B Scan

a.	Probe	10 MHz transducer, 25 frames/sec
b.	Scan angle	Variable scan angle 0-60 D
c.	Scan depth	0-60 mm
d.	Sector line density	384 lines X 512 sample/line
e.	Zoom	2.5 to 5.0 X
f.	Image record	Approx. 20 sec and 4 image display
g.	Scale	Color, Gray scale 256 levels
h.	Gain/TGC	0-90 dB variable/0 to -20 dB variable
i.	Gain curves	Log, Liner, S-Curves or equivalent

j. Dual Caliper facility for measurement of various structures

6. Biometry and A Scan

a.	Probe	10 Mhz solid probe
b.	Internal fixation	LED (Red)
c.	Measurement facility for	Axial length, Anterior Chamber depth, Lens thickness
d.	Accuracy	± 0.05 mm
e.	Axial length measurement range	12-40 mm
f.	Minimum IOL calculation step	0.25 D
g.	IOL calculation formulas	SRK-T, SRK 11, Holladay, Binkhorst, Haigis, Hofer Q

7. Standard accessories

a. A/B scan probe
b. Foot switch,
c. Test eye,
d. Printer external/integrated with printer paper rolls (10),
e. Power cord,
f. Ultrasonic gel (3)
g. Dust cover, spare fuse (3)
h. Should have power supply 220 Volts/50 Hz

8. Warranty 2 years and CMC 5 years

Schedule 36 : SYNAPTOPHORE

1. Specifications : Tube movement : for horizontal +50 to -40D
   Vertical 30-30 D
   Cyclotorsion 20-20D with illuminating side tubes
2. Auto-flashing device for slide illumination.
3. After image test and Haidinger brushes
4. Slides including simultaneous macular perception, Simultaneous parafoveal perception
5. Set of slides for fusion
6. Set of slides for steropsis
7. Set of slides after image test
8. Set of slides for angle kappa
9. Rheostat controlled 6 V lamp, 12 V for after image test
10. Motorized table for placing synaptophore
11. 2 years warranty and 5 years CMC

Schedule 37 : OPTHALMIC REFRACTION UNITS

1. Motorized Up-Down Movement of the Chair
2. Motorized back & forward Movement of the chair.
3. Retinoscope / Ophthalmoscope holder.
4. Near vision testing facility.
5. Over head reading lamp.
6. Indirect holding arm.
7. Sliding Table Top for Twin instrument.
8. The choice of either of the various colors.
9. Easy operation by foot control switch.
10. 360 degrees rotatable trial lens tray.
11. The smooth touch control panel to control the up/down movement as well as 180 degree maximum to flat horizontal Inclination*Automatically.
12. The 360 degrees rotable features is for trial sets/Instruments.
13. The following instrument can be mounted on the table top

    i. Overhead lamp
    ii. Slit lamp
    iii. Auto-refractometer
    iv. Ophthalmoscope/Retinoscope.
    v. Trial lens tray.
    vi. Near Vision Arm
    vii. Chart Projector/Vision Drum
    viii. Indirect Ophthalmoscope

14. It should satisfy following

    i. Seat minimum height-550 mm
    ii. Seat Rotation-0 to 180 degrees
    iii. Back & Forward movement-95 to 175 degrees
    iv. Power Supply-220 V AC, 24 DC
    v. Power consumption-600mA.
    vi. Load Lifting-200Kg
    vii. Motor Available-230 AC-24DC
    viii. Stabilizer-0.5 KVA min.
    ix. Minimum area required-8 feet 10 feet

15. 2 years warranty and 5 years CMC

Schedule 38 : PACHYMETER

1. Measurement range : 0.2 – 2.3 mm
2. Resolution : 1 micron, color touch screen
3. Accuracy : +/-3 microns
4. Transducer frequency : 20 MHz focused
5. Battery powered
6. Small size, portable
7. Autodata capture, contact and immersion capability
8. Wireless data export for printing
9. IOP adjustment configuration
10. Straight and angled probe options
11. 2 years warranty and 5 years CMC

Schedule 39 : SPECULAR MICROSCOPE

1. Advance endothelial cell cound and pachymetry
2. Three modes for image capture; auto , semi auto , manual
3. 3-D auto alignment
4. fixation targets
5. Integrated color monitor and data analysis
6. Motorized table with foot control
7. Non contact system
8. Manual alternative cell count
9. Power 220 V
10. Printer / Thermal Paper
11. 2 years warranty and 5 years CMC

Schedule 40 : TONOPEN

1. Dimensions: small hand held, pocket type
2. Weight: 71 g or less
3. Transducer: Micro strain Gauge
4. Range of Measurement: 5-80 mmHg
5. Power source battery pack
6. Accessories : Ocufilm tips (100 nos.)
7. 2 years warranty and 5 years CMC

Schedule 41 : CRYOTHERAPY UNIT

1. Small light weight portable Console
2. Front panel gauze indicates incoming cylinder gas pressure
3. Temp. selection – 25 deg,-55 deg, -85 deg, tolerance +/-5 deg.
4. Front panel On/off switch turns console on/off
5. Foot switch controls freezing operation (Depress to freeze & release to defrost)
6. Power source run on CO2 & N2O gas (No electricity required)
7. Freezing & thawing should be fast (instant)
8. Probe handles should be durable & made of stainless steel
9. Tip & tach should have protective cover.
10. Dual switch over valve should remain at comfortable temperature on 2 cylinders allowing continuous operation of cryo while on empty cylinder is remove for refill
11. Cryo tube enhanced flexibility, 9 ft long, reduced coil memory
12. Probes

    a) curved retinal probe 2.8 mm dia X 17.3 mm length

    b) curved glaucoma probe 3.4 mm dia*X19 mm length

    c) Vitreous probe 1.5 mm dia X27 mm length
13. 2 years warranty and 5 years CMC

Schedule 42 : VITERECTOMY MACHINE

1. It should possess vented gas forced infusion system to provide instantaneous tamporade for bleeders.
2. Should be pneumatically or electrically driven Cut rate of 2500 cuts per minute or higher should be there.
3. Linear and proportional 3 dimensional control of vacuum and cutting with footswitch should be possible.
4. Phaco fragmentation should have sub modes like fixed proportional and momentary modes.
5. Dual illumination source preferably Xenon should be present. Should be adaptable to bullet lighting.
6. Endodiathermy and bipolar photocoagulation should be through foot switch.
7. Facility for airfluid exchange should be there.
8. Automated injection and removal of silicon oil through the machine.
9. All hidden costs of disposables required for 1 year i.e. VGFI tubing, cassettes etc. should be quoted with individual pricing. Details of standard and optional accessories should be mentioned with individual pricing.
10. Should be portable, along with the compressor. Whole machine should be electrically driven.
11. Following accessories should be quoted:
    a. One fragtome hand piece
    b. 12 spare bulbs
    c. 12 endoilluminator probes
    d. 12 high speed and 12 normal speed cutters
    e. 23 G pack with standard instruments like intravitreal forceps, sensors (Horizontal, Vertical), H.M. peeling forceps, flute needle with silicone tip cannula – 3 each should be provided.
    f. 23 G endoilluminator and cutters – 6 each should be quoted
    g. 23 G endolaser probes – 2 should be provided.

Schedule 43 : RAPID STERILISERS

1. It shall guarantee express sterilization of instruments for Operation Theatre at 121° C and 134° C.
2. Chamber capacity shall be 36-40 Litres.
3. Chamber temperature multiple cycle options
4. Chamber shall be fabricated from stainless steel 304 with high quality argon welding
5. It will have stainless steel 316 L racks for easy loading & unloading
6. It will have high vacuum ejector to ensure effective air removal for excellent steam penetration & efficient post sterilization drying.
7. It shall have inbuilt steam generator fabricated from high quality stainless steel with water feeding & pressure control
8. Process Interlock as a safety feature to avoid opening of the door when the process is on
9. Provision of alarm if the door is open during the process.
10. There should be alarm when the water in the chamber is low & there should be process cut off facility when this happens.
11. Equipment shall be microprocessor based automatic system from add water to sterilization & dry cycle.
12. Material of construction shall be stainless steel S.S 304
13. System shall have attached thermal printer.
14. Power 220 V
15. It will have safety features like temperature control, Overheat protection, Safety valve, Electronic Circuit safety system, Low water indicator, Sterilization complete indictor, Emergency Exhaust Switch, Automatic preheating programme.
15. Exclusive drying cycle and liquid sterilization cycle
16. 2 years warranty and 5 years CMC

Schedule 44 : AUTOCLAVE

1. Rectangular, horizontal, double door, high pressure, high vacuum fully automatic and microprocessor based autoclave for sterilizing hospital materials.

2. Double, Jacket Autoclave with latest Product Specific Quality Certification- ISI/International

3. Electrically operated in built compatible electric steam generator with the unit

4. Temperature adjustable from 121° to 134° C

5. Working pressure range from 15 to 32 psi

6. Sterilization cycles: The autoclave residence time should not be less than 60 minutes if the autoclave operates at the working temperature (inner chamber) of 121° C at a pressure of 15 pounds per square inch (psi) and should be adjustable as per standards at different temperature and pressure.

7. Capacity: Sterilization capacity should be 30-36 cu ft/cycle.

8. Autoclave should be properly equipped with door safety locks, steam traps, pressure gauges and safety valves for chamber and jacket.

9. Autoclave should have insulation jacket with glass wool, covered with aluminium foil

10. The unit should have integral alarms that ring, flash, or otherwise display information when temperature set-points are exceeded or fall below.

11. Pressure safety valve, over-temperature limiter, anti-scorch limiter, door (lid) interlock, overpressure limiter, current fuse.

12. The unit includes a data logger or chart recorder for monitoring operational history

13. Integral controls, keypad, and/or display on the panel of the unit. The control panel must document all cycle information including key transition points in the cycle, alarms and deviations that may jeopardize the sterilization process, resulting in inadequate sterilization.

14. The Sterilizer should be supported on steel stand, appropriately, coated for corrosion protection

15. Boiler 36 KW (certified by competent authority in case required), fitted with appropriate safety features and having protective cover should be provided.

16.Electric vacuum pump of appropriate power should be provided.

17. Carriage trolley with at least three SS trays and roller shelves.

18. The firm should provide all piping connections made up of SS required in the installation and should install the machine at the identified site in the Hospital.

19. 2 years warranty and 5 years CAMC.

Schedule 45 : ULTRASONIC CLEANER

1. Construction: External AISI 304 stainless steel and Internal AISI 304 or AISI 316Ti (20/10)
2. Tank capacity: usable volume of approximately 40 litres. Should allows fitting of instruments up to 600 mm of length.
3. It should have a large stainless steel basket with 6 rubber outlets, to connect tubing of any diameter and plastic stands to hold the instruments
4. Should have minimum eight ultrasonic transducers with operating frequently from 28-34 KHz placed underneath the tank for an optimum spread of ultrasonic across the whole tank volume, for a effective cleaning of all the instruments in short times
5. Should have minimum eight washing programs, each selectable by a pushbutton, that can be used to wash canulated instruments and non canulated instruments at the same time
6. Should have Pause facility for washing programs
7. Should provide for Water load, water drain and water leveling operations
8. RS232 printer output with printer to keep record of performed washing cycles.
9. Should have alarm and safety features for water level control, cover closure control, water temperature control, sensor failure control.
10. Cleaning programs parameters should be adjustable as per following:
    i. Time: from 1 to 99 minutes
    ii. Heating: from 20 deg C to 50 deg C
    iii. Water flow: off, linear, pulsed, mixed
    iv. Time parameters according to the selected type of flow
11. Automatic water drain after selected number of cycles (from 1 to 99) or function excluded.
12. The control panel should have the following:
    i. LCD alphanumerical display
    ii. keyboard
    iii. Water level (min, max, over) and cover closure light indicators
13. Should be able to work on 230/50 Hz Electric Power Supply
14. Should be provided with transparent Lid/Cover
15. 2 years warranty and 5 years CAMC

SECTION G : FORENSIC MEDICINE

Schedule 46 : AUTOPSY SAW WITH VACUUM DUST COLLECTOR

1. Strong Motor with at least 18,000 RPM
2. 15000-16000 Oscillations/out of blade
3. Motor and hand piece should be separate and connected by a long cord not less than 8 feet long so that motor is not required to be lifted every time
4. Motor is to be provided with long service cord with plug
5. Hand piece with safety flange permitting from grip and should stay cool during operation
6. Easily detachable hand piece-autoclavable.
7. Both hand and foot switch for on and off operation
8. Suitable wrench to remove blades
9. Accessories
    a. Large section blade 6.3 cm width a stem of 1.1 cm : 1 Nos.
    b. Round blade of 6.3 cm cuts to a depth of 44 mm : 1 Nos.
    c. Small section blade 4 cm width
    d. Should come with vacuum bone dust collector
    e. Should be supplied with easily available disposable bone dust bags
    f. Should work on electric supply of 220-230 V 50 Hz AC
    g. Suction system should be of reputed / standard company of international standard.

Schedule 47 : MORTUARY CABINET 9 BODIES

1. Equipment:

Cell type freezers to preserve corpses at internal temperature ranging from (+8 deg. C) to (-30 deg. C) at the following ambient conditions.

Summer DBT deg.c

2. Each refrigerator has the following specification:

- Capacity : 9 cells
- Construction : 3 layers, each has 3 cell
- Outer dimension (maximum);
- Width 320 cm
- Height 290 cm
- Depth 380 cm
- Power Supply :220-260v 3ph 50 Hz
- Cabinet interior shall be made of heavy corrosion proof **stucco embossed coated stainless steel not less than 20 gauge.**
- Having water proof light inside and cleaning water drain, the opening of the drain is at the front side or beside.
- Cabinet exterior shall be made of stucco embossed coated stainless steel not less than 26 gauge, coated with white weather proof coating to make it suitable for out-door installation.
- Insulation: Not less than 14 cm of polyurethane which maintain the specified internal temperature in the specified ambient conditions.
- Corpses stretcher: is stainless steel sliding on proper telescopic stainless steel rail with rubber wheels for easy and noiseless movement.
- Doors : are positioned at the front side supplied with lock. Handle and anti condensation heathers. **Double gasket seal between the door and the cabinet increases system efficiency. Gasket should be magnetic.**
- Door size : 75cm x 60 cm.
- The front side of the freezer is supplied with control panel contains indicators of the internal temperature, audio-visual alarm for high temp, thermo state setting and internal light switch. **Digital LED/LCD temperature display.**

- External dial thermo meter must be provided.
- The outer assembly must include the two cooling independent refrigeration. The specified ambient condition capacity and model of compressor used shall be mentioned in the offer and compressor must be semi hermetic type. The entire system shall utilize heavy refrigeration copper tubing, no aluminium or steel tubing to be used.
- The type of compressor must be Bitzer_Germany or Copland_USA / Inbuilt V- stabilizer or a reputed company. The ferion gas used must be R 404a.
- The cooling capacity of each system suitable for complete load capacity of the freezer.
- The evaporator copper tube shall be anti-corrosion type provided with automatic electric defrosting system and its own drain pipes.
- The control system must be able to put any of the two cooling units at work or select the automatic mode to operate the two units alternately to assure even wear.
- The control system must include high-low pressure cut out, oil pressure cut out units & operation timers, defrost timers and other major elements.
- Temperature Recorder / Date logger; Voltage Safety System; Alarm System for various parameters with rechargeable battery backup.
- All refrigeration parts (except the evaporator and the expansion valve) must be located outside.
- Having opening balance device to control inside and outside air pressure of freezer to make the door opened easily.
- A suitable service door must be fitted at the rear of the freezer or at any side. This door is the entrance to the back service area which used for maintenance and cleaning.
- The cooling units of each freezer could be installed and fixed behind the refrigerator or at its die according to our decision and the condition of location. Backup of Refrigeration system.
- A movable barrier made of plastic or light metal must be fitted to be separation between the (corpses area) and the (service area which contains the evaporators) to facilitate the maintenance works.
- Supply special cleaning tools and equipment needed to use for cleaning this type of refrigerator.

Schedule 48 : EMBALMING MACHINE

1. Injection Pressure : 40 – 80 psi
2. Tank capacity : 10 L
3. Compressor capacity : ½ H.P. of a reputed company
4. Unit to be fully covered and mounted on a trolley fitted with wheels for easy movement.
5. Tank fitted with safety valve pressure gauze and fluid level indicator, rubber tubing (min 4 meters) with provision to inject the solution.
6. Cannula of varying sizes.
7. Power cord – Heavy duty with min 4 meter wire.

Schedule 49 : SUSPENDED AUTOPSY LIGHTS

1. Brightness should be 60000 Lux to 100000 Lux
2. Should have corrective temperature filters
3. Bulb specification – 75 W, 24 V
4. Light sources should be easily maneuverable
5. Range-1.6 meters – 2 meters
6. Should work on electric supply of 220-230 V 50 Hz AC

Schedule 50 : PORTABLE AUTOPSY ORGAN SCALE(DIAL TYPE) AND SCALE STAND

1. Should have the capacity of weighing 0-5 kg organ
2. Should have zero adjustment screw
3. Should have deep stainless steel pan which can be attached to the autopsy scale.
4. Should have portable autopsy stainless steel scale stand which can hold the autopsy scale.
5. Dimensions of portable scale stand Length 20-25 inch, Width 20-25 inch, Height: 75-80 inches

Schedule 51 : ODOUR CONTROL SYSTEM

1. Should be noiseless while running.
2. Spraying solution should be environmental friendly, non toxic, ozone safe and biodegradable
3. Spraying solution should be able to breakdown and neutralize odor causing bacteria and molecules.
4. System should have at least four spraying units.
5. Spraying solution should be readily available on a recurring basis.
6. Should work on electric supply of 220-230 V 50 Hz AC

Schedule 52 : DEAD BODY AUTOPSY FLOOR SCALE(DIGITAL TYPE)

1. Length of the floor scale should be 4 feet to 6 feet.
2. Platform for keeping the body – should eb sturdy, made of stainless steel, 14 gauge – size 6 feet X 2 ½ feet X 4 inch.
3. Should have a digital meter to display the weight rapidly and measurements can be calibrated to adjust the weight of platform
4. The digital meter (dial) should be enclosed dust proof and water tight stainless steel enclosure mounted on a wall. AC or DC operated.
5. Should be able to perform under the most rigorous conditions of a mortuary conducting 15 postmortem examinations per day measuring dead body weight ranging from m0 kg to 200 kg.

Schedule 53 : WALL MOUNT AUTOPSY STATION, RIGHT SINK

1. Working space should have perforated grid plates on left side.
2. Should be all steel construction with heliarc welded scams and joints, ground and polished to a smooth finish.
3. Should have aspirator with reverse flow for additional waste removal
4. Aspirator should be able to relieve suction clogging by providing reverse pressure of water.
5. Should have hot and cold water fixture with convenient goose – neck faucet and wrist blade handles.
6. Should have spray hose assembly with cold water control valve, nozzle and at least 10 feet of flexible hose pipe.
7. Should have dissecting area rinse assembly with cold water valve
8. The dissection area should be elevated above a sloped surface that drains directly into the sink.
9. Should have large instrument drawer.
10. Can be easily cleaned and sanitation maintained.
11. Should have large single compartment sink on the right side with rapid and positive drainage.
12. Should have cart-to-sink (or Autopsy cart latch) locking mechanism with slide latch which can be accessed from either side of the carrier (autopsy cart).
13. The Autopsy cart should be able to overhang so that all the fluid and drainage is allowed into the sink.
14. Should have fluorescent light over the dissecting area.
15. Wall mount autopsy station-Dimensions – Length: 80 to 90 inches

    Height: 45 to 65 inches from the floor level
16. Should work on electric supply on 220-230 V and 50 Hz AC

Schedule 54 : WALL MOUNT AUTOPSY STATION, LEFT SINK

1. Working space should have perforated grid plates on right side
2. Should be all steel construction with heliarc welded seams joints, ground and polished to a smooth finish.
3. Should have aspirator with reverse flow for additional waste removal
4. Aspirator should be able to relieve suction clogging by providing a reverse pressure of water.
5. Should have spray hose assembly with cold water control valve, nozzle and at least 10 feet of flexible hose pipe.
6. Should have dissecting area rinse assembly with cold water valve
7. The dissection area should be elevated above a sloped surface that drains directly into the sink.
8. Should have large instrument drawer.
9. Can be easily cleaned and sanitation maintained.
10. Should have large single compartment sink on the right side with rapid and positive drainage.
11. Should have cart-to-sink (or Autopsy cart latch) locking mechanism with slide latch which can be accessed from either side of the carrier (autopsy cart).
12. The Autopsy cart should be able to overhang so that all the fluid and drainage is allowed into the sink.
13. Should have fluorescent light over the dissecting area.
14. Wall mount autopsy station-Dimensions – Length: 80 to 90 inches

    Height: 45 to 65 inches from the floor level
15. Should work on electric supply on 220-230 V and 50 Hz AC

Schedule 55 : WALL MOUNT AUTOPSY STATION, CENTRAL SINK

1. Working space should have perforated grid plates on either side
2. Should be all steel construction with heliarc welded seams and joints, ground and polished to a smooth finish.
3. Should have aspirator with reverse flow for additional waste removal.
4. Aspirator should be able to relieve suction clogging by providing a reverse pressure of water.
5. Should have spray hose assembly with cold water control valve, nozzle and at least 10 feet of flexible hose pipe.
6. Should have dissecting area rinse assembly with cold water valve
7. The dissection area should be elevated above a sloped surface that drains directly into the sink.
8. Should have large instrument drawer.
9. Can be easily cleaned and sanitation maintained.
10. Should have large single compartment sink with rapid and positive drainage.
11. Should have cart-to-sink (or Autopsy cart latch) locking mechanism with slide latch which can be accessed from either side of the carrier (autopsy cart).
12. The Autopsy cart should be able to overhang so that all the fluid and drainage is allowed into the sink.
13. Should have fluorescent light over the dissecting area.
14. Wall mount autopsy station-Dimensions – Length: 110 to 120 inches
    Height: 50 to 65 inches
15. Should work on electric supply on 220-230 V and 50 Hz AC

Schedule 56 : AUTOPSY CART /AUTOPSY CARRIER
(USE IN CONJUNCTION WITH THE WALL MOUNT AUTOPSY STATION

1. Should work in conjunction with wall mount autopsy station already available (installed)
2. The frame design should have hand lifting mechanism to elevate one and of the autopsy carts allowing extra sloped surface.
3. The elevating mechanism should consist of plated gear box with a heavy lift and plastic crank handle.
4. The cart should have total lock caster system with non corrosive with 8 inches heavy duty wheels.
5. Caster wheels should be made of polyamide plastic with polyurethane treads.
6. During autopsy, swivel and brakes of all the caster can be locked simultaneously from one position.
7. During transport one caster swivel can be locked.
8. The removable cart should be fabricated of 14-16 gauze stainless steel with satin finish.
9. Top should be recessed and dimpled toward the drain hole.
10. A drain should be provided.
11. Cart frame should be made of 1- ½ inch heavy gauze with stainless steel tubing.
12. Dimension – removal cart top Length – 75 -85 inches

    Width – 30 -35 inches

    Cart Height – 30-45 inches (adjustable)

Schedule 57 : AUTOPSY INSTRUMENTS

Sl. No.	INSTRUMENTS NAMES	DIMENSIONS	REMARKS
1	Dissection scissors – Sharp – sharp straight	5 – 1/2 " (139.7 mm)	Sharp- sharp means sharp sharp tip (points)
2	Dissection scissors – Sharp – sharp curved	5 – 1/2 " (139.7 mm)	-do-
3	Dissection scissors – Sharp – Blunt straight	5 – 1/2 " (139.7 mm)	-do-
4	Dissection scissors – Sharp – Blunt Curved	5 – 1/2 " (139.7 mm)	-do-
5	Dissection scissors – Blunt Blunt straight	5 – 1/2 " (139.7 mm)	-do-
6	Dissection scissors – Blunt Blunt curved	5 – 1/2 " (139.7 mm)	-do-
7	Dissection forceps (Standard serrated handles)	4-1/2" (114.3 mm)	Without teeth
8	Dissection forceps (Standard serrated handles)	6" (152.4 mm)	Without teeth
9	Dissection forceps (Standard serrated handles)	10" (254 mm)	Without teeth
10	Dissection forceps (Standard serrated handles) With teeth	4-1/2" (114.3 mm)	With teeth
11	Dissection forceps (Standard serrated handles) With teeth	6" (152.4 mm)	With teeth
12	Dissection forceps (Standard serrated handles) With teeth	10" (254 mm)	With teeth
13	Dissecting knives – Heavy pattern	8" L with 40 mm rule	Handle & blade should be made in a single piece from stainless steel
14	Dissecting knives – German autopsy knives	11-3/4" Lx ¾ " W (299 mm x 20 mm)	Handle & blade should be made in a single piece from stainless steel
15	Dissecting knives –autopsy dissecting	9-7/8" l x ¾"W (250 mm x 20 mm)	Handle & blade should be made in a single piece from stainless steel
16	Dissecting knives – Long specimen dissecting	14" L x 1-1/2"W (356 mm x 38.1 mm)	Handle & blade should be made in a single piece from stainless steel
17	Bone saw	8-1/2" (215.9 mm)	All made of stainless steel
18	Forceps	8-1/2" (215.9 mm)	All made of stainless steel
19	Rib cutting knife	40 mm cutting edge, (200 mm)	All made of stainless steel
20	Councilman's rib shears	15" (50.8 MM)	All made of stainless steel
21	Virehow skull breaker	½" cutting blade (12.7mm), handle, 3.625" long (92.1 mm)	All made of stainless steel

Sl. No.	INSTRUMENTS NAMES	DIMENSIONS	REMARKS
22	Postmortem Handle	12-oz.solid stainless steel, straight handle 8" (203.2 mm)	All made of stainless steel
23	Bone Chisels small	6 mm, 6 ½" (165.1 mm)	All made of stainless steel
24	Bone Chisels medium	12 mm, 6 ½" (165.1 mm)	All made of stainless steel
25	Bone Chisels large	18 mm, 6 ½" (165.1 mm)	All made of stainless steel
26	Blade Handle	No. 3	All made of stainless steel
27	Blade Handle	No. 4	All made of stainless steel
28	Blades	No. 23	All made of stainless steel
29	Blades	No. 24	All made of stainless steel
30	Bullet probes	18" L (457.2 mm), 22 Caliber	All made of stainless steel
31	Bullet probes	18" L (457.2 mm), 38 Caliber	All made of stainless steel
32	Bullet probes	18" L (457.2 mm), 45 Caliber	All made of stainless steel
33	Post mortem needles – half curved	Size 3, 4-1/2" (114.3 mm)	All made of stainless steel
34	Post mortem needles – double curved	Size 3, 4-1/2" (114.3 mm)	All made of stainless steel
35	Post mortem needles – circle curved	Size 3, 3" (76.2 mm)	All made of stainless steel
36	Skin punch-multi-size holes, 6.5" long	5 hole Sizes: 2mm, 1.7mm, 1.4 mm, 1.2 mm, 1 mm	All made of stainless steel
37	Precision caliper stainless steel (Vernier caliper)	Total length: 3-3/4" (92.3 mm) &width capacity: 3" (8 mm)	Sliding caliper with finger tip nut to lock down ruler with graduated etched markings in inches and millimeters.
38	Dissecting stainless steel metric rulers – flexible	150mmx1/2" wide x .015" thick	All made of stainless steel
39	Dissecting stainless steel metric rulers	300mmx1/2" wide x .015" thick	All made of stainless steel
40	Dissecting stainless steel metric rulers	450mmx3/4" wide x .020" thick	All made of stainless steel

Schedule 58 : AUTOPSY TABLE

1.	An "L" shaped Autopsy Table with a common sink at the corner of the L, should be facilitated with the followings:
i.	Hot/Cold faucet with a swivel spout, built-in vacuum breaker and wrist-blade handles.
ii.	Should have downdraft ventilation assembly to exhaust fumes through pedestal of the table
iii.	Reverse flow Hydro-aspirator for additional waste removal should be completed with control valve, vacuum breaker and ON/OFF flow control valve.
iv.	Removable Perimeter table flushing system to wash over the entire table surface at one time.
v.	Should have marking in inches at one side and in centimeters at another side on the parapets of autopsy wing as well as side wing of the Autopsy Table.
vi.	The Autopsy Table should also comprise with heavy-duty disposer and Hospital grade Ground fault current interrupter (GFCI) receptacles of 220/240 VAC for user protection against electrical shocks and other accessories.
2.	**Detailed Specifications:** The Autopsy Table should consist of:
A)	Dimensions (Lx W x H): Autopsy wing - 100-104" x 30-35" x 28-30" Side wing - 60-64" x 24-28" x 28-30" Sink (LxWxD) - 14-16" x 12-14" x 10-12"
B)	**Features:**
i.	The table top should be made up of minimum 14 – gauge type 304 or higher quality stainless steel in a proper frame. 1" radius on all inside corners and all edges should be flanged around the full length then hydro aspirators attached to autopsy wing of the table.
ii.	Welded seams and joints should be ground and polished
iii.	Special acoustic coating and then sealed with silver enamel paint should be applied to the underside to deaden metallic sound and prevent condensation.
iv.	Four (4) removable perforated 20" wide Grid plates should be made up of 16-gauge type 304 or higher quality stainless steel and each Grid plate should have two 11-gauge stainless steel standoffs.
v.	Three support pedestals made up of 14-gauge type 304 or higher quality stainless steel out of which main pedestal should act as air plenum for the downdraft and other act as concealed storage area and sturdy instrument drawer and a shelf.
C)	**Disposer:** Factory installed heavy duty commercial disposer of compatible HP capacity or better should be completed with water solenoid valve, vacuum breaker, water proof ON/OFF switch and thermal overload protector.
D)	**Plumbing:**
i.	Vacuum Breakers are installed for all supply lines
ii.	Hydro-aspirator included
iii.	Irrigation include

E) Storage tank/fluid reservoir:

A storage tank of 500 liters capacity with a lid and on/off drain valve, made up of 14-gauge type 304 or higher quality stainless steel for the purpose of collecting and decontaminating body fluid should have connectivity with autopsy table and main hospital drainage system

F) Plumbing supply requirements:

i. Inlet plumbing:

- Provide one (1) – cold water supply (hard copper)
- Provide one (1) – hot water supply (hard copper)

ii. Waste Plumbing:

- Provide one (1) – standard copper waste line

G) Electrical supply requirement:

i. One circuit for receptacle

ii. One circuit for disposer

iii. Liquid-tight junction box and conduit connectors

H) Accessories: *(should be made up of 14-gauge type 304or higher quality stainless steel)*

i.	Slats 5" for body support	- Five (5)
ii.	Slat 7" for body support	- One (1)
iii.	Socket/Bracket for digital scale	- One (1)
iv.	Digital scale with LCD Display Showing upto 15kgms, or more with heavy gauge Stainless steel pan of minimum 9 ltr. Capacity	- One (1)
v.	Marking in centimeter	- One (1)

I) Warranty:

The entire autopsy table including all accessories should be supported with minimum two years warranty from the date of satisfactory installation

Schedule 59 : STAINLESS STEEL GLOVES AND PLASTIC SANI BLOCK HEAD REST

1. **Stainless Steel Gloves:**

Size	Quantity
Small	4 Pairs
Medium	4 Pairs
Large	4 Pairs

2. **Glove should be:**

i. Ergonomically designed.
ii. Fully enclosed five fingers.
iii. Ambidextrous.
iv. With mesh cuff and tapered fingers.
v. Provide cut and puncture protection.
vi. Should be lightweight, flexible and repairable.
vii. Made of tight woven mash of corrosion resistance stainless steel rings of ≥21 gauge.
viii. The ring should be individual and machine welded.
ix. Double linking between tapered glove fingers.
x. The mesh cuff should be ≥3.5" wide.
xi. Replaceable antimicrobial polypropylene adjustable straps.
xii. The straps should be with buckles closer and adaptable to left and right hand.

3. **Plastic Sani-block Headrest: (4No.)**

i. Should be made of Teflon-like material.
ii. Should be stain resistance and clean easily.
iii. Should provide six different positions for elevating head of limbs.

SECTION H : ORTHO

Schedule 60 : SCREW REMOVAL SET

1.	Aluminium cases, white, small, perforated, without content	1
2.	Hollow reamer for 3.5/4.0 mm screw	1
3.	Spare reamer Tube for 3.5/4.0 mm	1
4.	Extraction Bolt for 3.5/4.0 mm	1
5.	Extraction screws, conical for 2.7mm,3.5mm, and 4.5mm screws	1
6.	Hollow Reamer for 4.5mm screws	1
7.	Spare reamer Tube for 4.5	1
8.	Extraction bolt for 4.5mm screws	1
9.	Extraction screw conical for 4.5/6.5 mm screws	1
10.	Hollow reamer for 5.0/6.0/6.5/7.0 mm screws	1
11.	Spare reamer tube for 5.0/6.0/7.0 mm	1
12.	Extraction bolt for 5.0/6.0/6.5/7.0 mm screws	1
13.	Sharp hook	1
14.	Forceps for screw removal	1
15.	Gauge 10mm vide length approx. 200mm	1
16.	T-handle with quick coupling for attachment of extraction instruments	1

STANDARD REQUIREMENTS

The following requirements with regard to inspection, quality, packing, warranty, maintenance and related services shall commonly apply to all the goods in all the Schedules:

i. INSPECTION OF THE GOODS

All goods shall be subject to inspection and testing by UNOPS or its designated representatives, to the extent practicable, at all times and places, including the period of manufacture and, in any event, prior to final acceptance by UNOPS.

If any inspection or test is made on the premises of Vendor or its supplier, the Vendor, without additional charge, shall provide all reasonable facilities and assistance for the safety and convenience of the inspectors in the performance of their duties. All inspection and tests on the premises of the Vendor or its supplier shall be performed in such a manner as not to unduly delay or disrupt the ordinary business activities of the Vendor or supplier.

Neither the carrying out of any inspections of the Goods nor any failure to undertake any such inspections shall relieve the Vendor of any of its warranties or the performance of any obligations under the Contract.

ii. QUALITY CERTIFICATION

Where ever appearing in the bid document, the “CE certificate” shall be read as:
“CE mark for *conformité européenne*, (French for "European conformity").

iii. PACKING & LABELLING

Packing & Labeling shall follow the standard norms for such equipment. However, details thereof shall be specified at the time of issue of contract to the successful bidder(s).

iv. WARRANTY

Unless specified otherwise, warranty shall always be for a period of **two (2) years** from the date of acceptance of the goods. During warranty, cost and responsibility of the transport/shifting of the equipment, in case so required for repair, etc, shall be entirely borne by the Supplier, without any liability on the consignee. In case of such shifting of equipment, alternative working equipment shall be first made available to the consignee to avoid any disruption in the clinical work

v. MAINTENANCE

a. CMC shall be for **five (5)** years following expiry of warranty, unless specified otherwise.

b.During CMC, cost and responsibility of the transport/shifting of the equipment, in case so required for repair, etc, shall be entirely borne by the Supplier, without any liability on the consignee. In case of such shifting of equipment, alternative working equipment shall be first made available to the consignee to avoid any disruption in the clinical work.

c. Subject to (b) above, CMC services shall be provided at the site of the equipment, within the prescribed response time.

Note :- Functional demonstration of all the offered goods shall be required to be arranged by the bidder, at his cost, before the Bid Evaluation Committee for technical evaluation, as when requested to do so by the Bid Evaluation Committee.

Comparative Data Table

Bidders must complete the right column of the below table and the compliance confirmation statement.

Schedule Nos. 1…….60

UNOPS's minimum Technical Requirements	*Please fill-in*

THE OFFERED PRODUCTS ARE IN ACCORDANCE WITH THE REQUIRED SPECIFICATIONS AND TECHNICAL REQUIREMENTS:

YES NO

ANY DEVIATIONS MUST BE LISTED BELOW:
