

ADDITIONAL ANNUAL PROCUREMENT PLAN FOR THE YEAR 2025-26
(WORKS, GOODS & SERVICES)
DIRECTOR HEALTH SERVICES KARACHI DIVISION

Sr .#	Description of Procurement	Quantity (where applicable)	Estimated Unit Cost (where applicable)	Estimated total cost (in millions)	Funds allocated for 2025-26	Source of Funds (ADP/ Non ADP)	Proposed Procurement Methods	Timing of Procurement				Remarks
								1 st Qtr. From July - Sept. 2025	2 nd Qtr. From Oct-Dec 2025	3 rd Qtr. From Jan-Mar.2026	4 th Qtr. From Apr.- June 2026	
1	Purchase of Medical Equipment, Machinery, Furniture, Fixture & etc for the ADP Scheme Establishment of Medical Complex at National Highway, near Razzakabad, Bin Qasim town, Karachi	Details are attached			1377.056 (M)	ADP	Single Stage Two envelope procedure	-	-	-	Would be started	
2	Purchase of Medical Equipment, Machinery, Furniture, Fixture & etc for the ADP Scheme Establishment of Sindh Government Bilqees Edhi, Mother Child Healthcare centre (MCHC), UC Akhter colony, district east, Karachi.				26.271 (M)							


**DIRECTOR HEALTH SERVICES
 KARACHI DIVISION**

Thursday

April 23, 2026

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OFFICE OF THE DIRECTOR HEALTH SERVICES KARACHI DIVISION

NOTICE INVITING TENDER

The Director, Health Services Karachi Division invites E-bids through E-Pak Acquisition and Disposable System (EPADS) from Suppliers / Firms / Manufacturers / Importers / Authorized Distributors on Active Taxpayers List of the FBR / SRB (whichever is applicable) for the supply of Medical Equipment, Machinery, Medical Devices, Instruments, Furniture / Fixture and Other Items under ongoing following ADP Schemes of Director, Health Services Karachi Division under Rule-46(2) Single Stage-Two Envelopes Procedure. Bidding documents containing detailed Terms & Conditions, can be viewed / downloaded from <https://portalsindh.eprocure.gov.pk/#/>:

S.#	ADP #	NAME OF SCHEME
01.	924	ESTABLISHMENT OF MEDICAL COMPLEX AT NATIONAL HIGHWAY NEAR RAZAQABAD, BIN QASIM TOWN, KARACHI. (2025-26 & 2026-27)
02.	932	ESTABLISHMENT OF SINDH GOVERNMENT BILQUEES EDHI MOTHER CHILD HEALTH CARE CENTER AKHTAR COLONY KARACHI. (2025-26 & 2026-27)

Electronic Bids should be submitted through EPADS ONLY, Manual bid shall not be received. Interested Bidders are required to register themselves on EPAD System at the link: <https://sindh.eprocure.gov.pk/#/supplier/registration> for submission of electronic-bids. The Bids, prepared in accordance with the instructions in the bidding documents, must be submitted on EPADS by 11.05.2026 at 11:00 A.M. The original instrument of tender fee Rs. 3,000/- and fixed bid security mentioned against quoted items must reach the procuring agency before the deadline for submission of e-bids, which will be opened on the same day at 12:00 Noon at the address Fatima Engineer Auditorium, Jinnah Sindh Medical University, Karachi.

N.B:-

- Any query for e-bidding may contact at Director, Health Services Karachi Division at contact No. 0315-2284642.
 - In case Govt. announces any Public Holiday or any unfavorable circumstances, the tender / bids will be opened on next working day, with same Venue and Time.
 - The Purchaser reserves the right to reject any / all bids under the relevant provisions of SPP Rules 2010.
- In case of any difficulty prospective bidders may contact EPADS Helpline 051-111-137-237 during working days/hours.

INF-KRY
1533/2026

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JOB PORTAL BY INFORMATION DEPARTMENT



Sd/-
DIRECTOR HEALTH SERVICES
KARACHI DIVISION



GOVERNMENT OF SINDH HEALTH DEPARTMENT

NOTIFICATION

No.SO(PM&I)2-1/2022-23(Main)/PC: In supersession of this Department's Notification of even number dated: 20.07.2022, 18.10.2023, 03.11.2023 & 04.01.2024 and with the approval of Hon'ble Chief Minister Sindh vide CMIT Summary, the Health Department's Procurement Committee (PC) for procurement of Drug/Medicines, Surgical/Disposable items, X-Ray Films / Chemicals, Machinery Equipments, Furniture / Fixture (etc.) is hereby re-notified as under:

1.	Professor Dr. Amjad Siraj Memon, Vice Chancellor, Jinnah Sindh Medical University (JSMU), Karachi.	Chairman
2.	Vice Chancellor, Liaquat University Medical & Health Sciences (LUMHS), Jamshoro.	Member
3.	Vice Chancellor, Peoples University of Medical & Health Sciences for Women, Nawabshah-Shaheed Benazirabad.	Member
4.	Vice Chancellor, Shaheed Mohtarma Benazir Bhutto Medical University Larkana.	Member
5.	Prof. Dr. Sajida Qureshi, Professor of Surgery, DUHS / Dr. Ruth K.M. Pfau CHK.	Member
6.	Chairman, Health Care Commission Sindh.	Member
7.	Special Secretary, Chief Minister's Inspection, Enquiries & Implementation Team Department, Govt. of Sindh.	Member
8.	Additional Secretary (GA), SGA&CD, Govt. of Sindh.	Member
9.	Additional Secretary (PM&I), Health Department, Govt. of Sindh.	Member / Secretary

TOR's:

- Preparing and /or reviewing bidding documents;
- Carrying out technical as well as financial evaluation of the bids;
- Preparing evaluation report as provided in Rule 45;
- Making recommendations for the award of contract to the Competent Authority.
- Monitoring of the procured medicines with regard to their quality and genuiness.
- The Committee shall be authorised to have vigilance on distribution of the supply to different Hospitals including all health facilities.
- The Committee would be empowered to Co-opt. Expert(s) incase the committee desires any assistance in any specific/relevant fields.
- The committee shall have all the powers to procure the medical/surgical equipments, machines and furniture or any other item to be installed and / or fixed within the Hospital in Sindh province at any level whether Tertiary, District & Taluka Hospitals.
- The powers of the Procurement Committee would extend to all the projects under the Health Department for procurement of medicines, furniture, instruments & machines etc.
- Perform any other function ancillary and incidental to the above;

SECRETARY HEALTH


Karachi, dated: 29th January 2024

No. SO(PM&I)2-1/2022-23(Main)/PC:

C.C. to:

- The Chairman and all Members of the Committee.
- The Accountant General Sindh, Karachi.
- The Managing Director, Sindh Public Procurement Regulatory Authority, Karachi.
- The PS to Chairman, CMIE&ITD Karachi.
- The PS to Chairman, Health Care Commission Sindh.
- The PS to Special Secretary, CMIE&ITD, Karachi.
- The Deputy Secretary (Staff) to Chief Minister Sindh / Chief Secretary Sindh.
- The PS to Minister Health, Social Welfare and Public Health Engineering Dept. Sindh, Karachi.
- The PS to Secretary Health, Govt. of Sindh, Karachi.
- The PS to Addl. Secretary (PM&I), Health.




(ZULFIQAR ALI DARS)
SECTION OFFICER (PM&I)



NOTIFICATION

No. SO(PM&I)2-1/2022-23/PC(TEC-III): In supersession to this department's notification of even number dated: 13.10.2023, on recommendation of Health Procurement Committee (HPC) and with the approval of worthy Secretary Health, the Experts Committee for Machinery / Equipment / Lab. Equipment / Furniture & Fixture etc. is hereby re-constituted with the following composition and ToRs:

i.	Dr. Shahid Pervez, Histopathologist, Aga Khan University Hospital Kyc.	Chairman
ii.	Dr. Benish Sultan, Associate Professor & Head of Pathology Lab, JSMU, Karachi.	Member
iii.	Prof. Dr. Tariq Mehmood, Representative of PAF, JPMC, Karachi.	Member
iv.	Dr. Syed Farjad Sultan, Associate Professor, Anaesthesia Department, DUHS / Civil Hospital Karachi.	Member
v.	Prof. Dr. Sajida Qureshi, Professor of Surgery, DUHS / Dr. Ruth K.M. Pfau Civil Hospital Karachi.	Member
vi.	Prof. Dr. Syed Mahmood Hassan, Professor of Pathology, JSMU, Karachi.	Member
vii.	Dr. Shoaib Malik, Associate Professor, Anesthesia Department, JPMC Karachi.	Member

TORs:

- To revisit and approve proposed specifications of Machinery / Equipment etc. prepared by the Technical Committee.
- To approve bidding documents prepared by Technical Committee along-with verification / certification of technical evaluation reports finalized by Technical Committee.
- The committee will also check the samples as per given specification in the tender document (wherever applicable).
- To submit final recommendation to the Procurement Committee within seven (07) days for approval.

SECRETARY HEALTH

No. SO(PM&I)2-1/2022-23/PC(TEC-III):

Karachi, dated the 18th February 2025

A copy is forwarded for information & necessary action to:-

- The Chairman, Health Procurement Committee / VC, JSMU, Karachi.
- The Chairman and all members of the Experts Committee.
- PS to Minister Health, Social Welfare and Public Health Engineering Dept. Sindh, Karachi.
- PS to Secretary Health.



(ZULFIQAR ALI DARS)
SECTION OFFICER (PM&I)



NOTIFICATION

No. SO(PM&I)2-1/2022-23/PC(TEC-II): In supersession to this Department's Notification of even number dated: 15.08.2022, on the recommendation of the Chairman, Health Department's Procurement Committee, Technical Experts Committee for Machinery / Equipment is hereby re-constituted comprising on following, to assist the Health Procurement Committee for preparation of bidding documents and evaluation of tender of companies / bidders for purchase of Machinery / Equipment / Furniture etc. for the year 2022-23:

a.	Mr.S.Zamir Hussain Shah,Bio Medical Engineer,Dr.Ruth K.M.Pfau Civil Hosp. Kar.
b.	Mr. Abdul Majid, Electrical Engineer, NICH, Karachi.
c.	Mr. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop.
d.	Mr. Sunny Mohiuddin, Dy. Director (Procurement),Directorate of Pharmacy,Sindh, Kar.
e.	Mr. Rajeev, Pharmacist, Dr. Ruth K.M. Pfau Civil Hospital Karachi.

ToRs:

- To prepare bidding documents, Specifications and Evaluation Criteria.
- To review existing formulary list and segregate into seven (07) Therapeutic Groups and submit to technical experts / leading professors of respective therapeutic groups for approval.
- To carry out scrutiny of submitted bidding documents.
- To prepare Bid Qualification Report (BQR), Bid Evaluation Report (BER) and submit to respective therapeutic groups experts for review and approval.
- To prepare financial comparative statement and final Bid Evaluation Report (BER) and get endorsement from respective experts of therapeutic groups before final approval by Health Department Procurement Committee.
- To submit scrutinized working to Experts Committee constituted for Machinery / Equipment / Furniture / Fixture & Lab Equipment etc.

SECRETARY HEALTH

No. SO(PM&I)2-1/2022-23/PC(TEC-II):

Karachi, dated the 01st February 2023

A copy is forwarded for information & necessary action to:-

1. The Chairman, Health Procurement Committee / VC, JSMU, Karachi.
2. The Executive Director, NICH, Karachi.
3. The Medical Superintendent, Dr. Ruth K.M.Pfau Civil Hospital Karachi.
4. All members of the Technical Experts Committee (Machinery / Equipment).
5. The P.S. to Secretary Health.




(ZULFIQAR ALI DARS)
SECTION OFFICER (PM&I)



**GOVERNMENT OF SINDH
HEALTH DEPARTMENT**

NOTIFICATION

No.SO(PM&I)2-1/2013/CRC): In supersession of this department's notification of even number dated: 09.01.2023 and in pursuance of Rule-31 of Sindh Public Procurement Rules 2010, Health Department, Govt. of Sindh is pleased to re-constitute Complaint Redressal Committee (CRC) comprising of following officers for scrutinizing the complaints of aggrieved bidders against tender invited by the Health Procurement Committee, Health Department under Frame Work Contract System and Health Institutions/Hospitals of Sindh Province :-

1)	Secretary Health, Govt. of Sindh	Chairman
2)	Representative of Accountant General Sindh, Karachi.	Member
3)	Independent professional from the relevant field.	Member

ToR's:

- To scrutinize the complaints received from the aggrieved bidders and decide the same strictly in accordance with SPP Rules 2010.

SECRETARY HEALTH

No.SO(PM&I)2-1/2013/CRC):

Karachi, dated, the 10th July, 2024

Copy forwarded for information and necessary action to :

- The Chairman and all members of Health Procurement Committee.
- The Accountant General Sindh, Karachi.
- The Managing Director, Sindh Public Procurement Regulatory Authority Karachi.
- The Medical Superintendents (All).
- The District Health Officers (All).
- The Directors Health Institutions / Projects (All).
- The Chairman and all members of Complaint Redressal Committee.
- PS to Minister Health & Population Welfare Deptt., Govt. of Sindh, Karachi.
- PS to Secretary Health Govt. of Sindh, Karachi.
- PS to Additional Secretary (PM&I), Health Department, Govt. of Sindh, Karachi.




(ZULFIQAR ALI DARS)
SECTION OFFICER (PM&I)

OFFICE OF THE DIRECTOR HEALTH SERVICES
KARACHI DIVISION
HEALTH DEPARTMENT, GOVERNMENT OF SINDH



STANDARD BIDDING DOCUMENT

PROCUREMENT OF MEDICAL EQUIPMENT, MACHINERY, MEDICAL DEVICES,
INSTRUMENTS, FURNITURE/FIXTURE AND OTHER ITEMS FOR FOLLOWING ADP
SCHEME

S#	ADP No#	NAME OF SCHEME
1	924	ESTABLISHMENT OF MEDICAL COMPLEX AT NATIONAL HIGHWAY NEAR RAZAQABAD, BIN QASIM TOWN KARACHI

FOR FINANCIAL YEAR 2025-26 & 2026-27
DUE ON _____ at 11:00 AM

(Single Stage - Two Envelope Procedure)

SECTIONS OF THE TENDER

TENDER TITLE

SECTION A

SUPPLY, INSTALLATION OF MEDICAL MACHINERY/EQUIPMENTS






SECTION B

SUPPLY, OF HOSPITAL & GENERAL FURNITURE, FIXTURE ITEMS

SECTION C

MEDICAL INSTRUMENTS & DEVICES, IT EQUIPMENTS AND
MISCELLANEOUS ITEMS

Prepared/Reviewed by following members of Technical Committee (Machinery, Equipment / Furniture etc):

- a. S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M. Pfau Civil Hosp, Kar. 
- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

DR. SAQIB ALI SHAIKH
Director Health Services
Karachi Division








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7	Major Spare Parts (Form C)	
8	Compliance Sheet/Technical Evaluation Sheet (From D)	
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DR SAQIB ALI SHAIKH

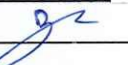
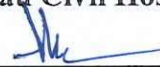

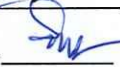

Prepared/Reviewed by following members of Technical Committee (Machinery, Equipment, Service, Spare Parts, etc):

- a. S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M.Pfau Civil Hosp. Kar. 
- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

SALIENT FEATURES OF THE TENDER

1.	Name of Work & Address	PURCHASE OF MEDICAL EQUIPMEN/MACHINERY FOR Office of the Director Health Services Karachi Division
2.	Time & Date of issue of Tenders	From the date of publishing to one day before opening of Technical Proposal, during office hours. It should be (As mentioned in Notice inviting tender).
3.	Place of Issuance of Tender	Office of the Director Health Services Karachi Division
4.	Date of pre-bid meeting	In case requested by bidders or informed by Procuring Agency. Mentioned pre-bid meeting date if any application received considered for discuss same mentioned date
5.	Method of opening of Tender	Single Stage – Two Envelopes; as per SPPRA-Rules 2010 (Amended up-to-date) on online EPAD system.
6.	Date & Time of Submission of Tenders	As published in newspapers It should be (As mentioned in Notice inviting tender).
7.	Date & Time of Opening of Tenders / Technical Proposals	As published in newspapers/ on EPAD system It should be (As mentioned in Notice inviting tender).
8.	Date of Opening of Financial Proposals	As informed by the Chairman of Procurement Committee to all participants
9.	Venue of submission & opening of Tenders	Vice Chancellor, Jinnah Sindh Medical University (JSMU), Karachi.
10.	Validity of Tenders	90 days as per Sindh Public Procurement Rules, 2010 (Amended till date).
11.	Amount of Earnest Money/Bid Security	Fixed bid security on each quoted item amount in shape of Pay Order / Call Deposit from schedule Bank in favor of Director Health Services Karachi Division to be submitted along with Financial Proposal and also attached photo copy without showing amount of that pay order else the offer will be rejected.
12.	Supply of Equipment	Within up to 16 weeks after the Purchase order in case of DDP. However, this period is extendable as per mutual agreement/demand of the situation.
13.	Installation Period	It will start after receiving of equipment at site. It will start after satisfactory installation of equipment at site.
14.	Maintenance Period	It will start after the satisfactory installation of the equipment and issuance of Installation Certificate from the concerned official. This period will remain functional till three years with replacement of parts.
15.	Warranty Period with replacement of Parts and services	As mentioned in technical specification of the equipment, otherwise the warranty period of parts with Free of cost replacement will be for three years.
	DR SAQIB ALI SHAIKH Director Health Services	Along with three years free service & maintenance from the date of Installation.






Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):

- S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M.Pfau Civil Hosp. Kar. 
- Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

16.	(a) Contract Agreement Stamp Paper requirement for Agreement	The Contractor shall enter & execute a formal Agreement as per the "Form" annexed with such modification as may be necessary. - Rs. 0.35% of the Contract Value or as prescribed by Government Laws.
	Opening of L.C (Letter of Credit)	Letter of Credit (L.C.) will be opened by Procuring Agency as consignee and as per the prevailing rule of same. Performa invoice of the quoted amount on C&F basis of the country of origin along with insurance cover note if applicable will also be submitted by the contractor(s). Bank charges in establishment of Letter of Credit (L.C.) fluctuation in currency if any and other miscellaneous charges on logistics, transportation clearing from sea port/ airport will also be paid/bear by the contractor(s).
17.	Release of Earnest Money/Bid Security	To un-successful bidders, after financial bid is opened or technical bid is rejected. Earnest Money will be released to successful Bidder after purchase order is released but after 5% Security Deposit submission.
18.	Security Deposit	5% Security Deposit in the shape Pay Order/Bank Guaranty will be submitted by Contractor with Procuring Agency which will be released as per item 20. Bank Guarantee of equal amount will also be acceptable. Security Deposit is deposited as per item – 19.
19.	Release of Security Deposit	After completion of installation and maintenance of Defect Liability period.
20.	Variation in Contract Price	No variation in price shall be allowed on any ground including currency fluctuation/variation or whatsoever.
21.	Discrepancy	If there is any discrepancy between Salient Features of Tender /Bidding Documents and respective contents mentioned elsewhere, Salient Features / Terms & Conditions and Additional Terms & Conditions of Tender will govern.
22.	Taxes	All taxes will be deducted as per prevalent laws of Country.
23.	Approved makes	As mentioned in items specifications.
24.	Special Note Regarding Equipment	Technical offers / Commercial offers failing to demonstrate below details would be rejected: a. Quoted system must be of advanced & latest version.

DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division

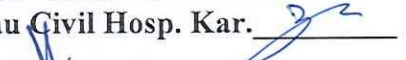

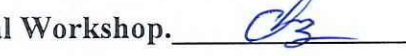
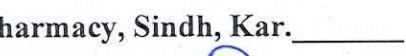

Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):

- S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M. Pfau Civil Hosp. Kar. 
- Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

		<p>b. Tender must cover complete equipment.</p> <p>c. Tender must cover complete range of disposables/ kits</p> <p>d. Tender must provide all technical details up to the satisfaction of the end user.</p> <p>Items should be quality approved from the concerned international body of the respective industry.</p>
25.	(a) Inspection of Imported equipment manufacturing site by the client.	After the award of Purchase Order, Supplier shall take two persons to the manufacturing site and bear all expenses of visit in case the cost any equipment of Supply Order is 50 million or above.
	(b) Training	Supplier will provide on-site successful training to all the personnel working on/operating the said Equipment / Machine as long as the need prevail.
26.	Maintenance.	Maintenance cost for all items for Two years from the date of successful Installation shall be undertaken by the Contractor (Maintenance includes all Parts & Labor, etc. with sufficient staff, during maintenance period).
27.	Default in Preventive Maintenance, Breakdown and Emergency Calls.	<ul style="list-style-type: none"> In case of default by the Contractor with respect to maintenance, break down and emergency calls, the same will be carried out within 24 hours by the Procuring Agency and the cost so incurred will be paid from the Retention Money. Moreover an additional 10% of the amount spent would be charged from the concerned contractor being defaulter.
28.	Cost to be quoted in BOQ.	<ul style="list-style-type: none"> The Contractors shall quote price in DDP only, of the Equipment's including custom clearance etc. and delivering of Equipment at site with Installation & Commissioning cost. It should also include cost during maintenance period including the parts and maintenance staff.
29.	Tax Exemption.	In case of purchase on C&F basis, the required certificate will be issued by this office that the import has been made for this hospital, so as to avail the facility of exemption of duties/taxes, as per Government Rules/Policy according to the Sindh Public Procurement Rules, 2010 (Amended till date). Clearance from the custom and other charges will be the responsibility of bidder.

DR SAQIB ALI SHAIKH
 Director Health Services
 Karachi Division

Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):






- a. S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M. Pfau Civil Hosp. Kar. 
- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

30.	Criteria for bid evaluation.	Merit Point Evaluation (Most Advantageous Bid) The items ranked highest in merit points (obtained through and based on technical and financial evaluation) shall be considered as most advantageous bid.
31.	Award of Contract	The Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the Most Advantageous Bid , provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.



DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division

Prepared/Reviewed By following members of Technical Committee (Machinery Equipment / Furniture etc):

- a. S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M. Pfau Civil Hosp. Kar. 
- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

TERMS & CONDITIONS OF TENDER

1. The Contractors responsible for **Supply, Installation, Testing and Commissioning of Medical Equipment, Machinery items, Instruments & Furniture & Fixture** while Installing Equipment at no extra-cost. So, the Contactors should take into account all such expenditures while quoting the bid.
2. **In Technical Bid**, the bidder must provide original data sheet, technical brochure, and all other relevant documents, along with copy of Pay Order / Bank Draft / Bank Guarantee without showing the amount figure otherwise, the bid will be ignored/rejected. The technical evaluation will be done on the basis of criteria given in tender document.
3. The vendor has to fill up **compliance sheet** with YES/NO or put value as desired in the column against provided specification. These specifications must be highlighted in the brochure attached; else the offer will be rejected.
4. **In Financial Bid**, the vendor should mention financial offer along with scanned copy of Pay Order / Bank Draft / Bank Guarantee Fixed bid security on each quoted item amount in favor of, **Director Health Services Karachi Division, Bid Security (in Original) must be submitted in sealed envelope to the procuring Agency before opening of tender.**
5. The Supply order shall be placed on DDP basis the bidder should supply the items within time as specified in Tender Document i.e. 16 weeks. This period is extendable as per mutual agreement/demand of situation.
6. The disclosure of firm's price at the time of opening of Technical bid will result in the rejection of the bid.
7. No tender will be entertained without earnest money. The earnest money will be forfeited to Government Treasury, in case of non-submission of security money within **seven (7) days** of receipt of the offer letter.
8. Only Manufacturer, its Sole Agent or Authorized Distributors can quote Device, Equipment / Machinery. No sub-distributor is allowed to quote.
9. **For Single Stage Two Envelope Sections of the tender**, first scrutiny of Technical Bids will be performed by the Procurement Committee. Financial Bids of only those firms will be opened who are qualified technically.
10. Certificate from the Sole Agent/Manufacturer has fully equipped Workshop Trained Personnel/ Engineers and Equipment should be provided in the technical bid, and it can be physically verified by the administration of **Director Health Services Karachi Division** The warranty period will commence from the date of installation of the Equipment at **Office of the Director Health Services Karachi Division**
11. Firm must provide complete details of their financial standing, listing of similar items supplied in Pakistan, available local stock of items and details of office with number of personals.
12. The vendor has to quote only one rate for each item as per tender specifications. Hand written tenders or any over writing, cutting, should be signed.
13. Vendors should quote the items they intend to supply.
14. The bidder shall submit with the bid, an **Undertaking** on Non-Judicial stamp paper of Rs.50/- duly attested by Oath Commissioner, stating that the medical equipment will be supplied brand new, free from defects as per the approved specification, also provide **two years warranty** for service and maintenance

Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):

- a. S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M.Pfau Civil Hosp. Kar. _____
- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. _____
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. _____
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. _____
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. _____

and will bind himself for availability of spares for a period of **10 years** from the date of supply. In case of winding up of his business, the supplier will be bound to make an alternate arrangement of spares and maintenance of medical equipment. In case of default, depreciated cost of medical equipment will be recoverable from vendor.

15. If it has been found that the information submitted by the bidder regarding his qualification and professional, technical, financial, legal or managerial competence as supplier / contractor is / was false and materially inaccurate or incomplete at any stage, then the bidder will be disqualified.
16. Suppliers / Contractors will be responsible for supply at consignee end, free of cost and also responsible for free installation work, if required.
17. Equipment will be handed over to the Store Keeper will be handed over to Store Keeper **Office of the Director Health Services Karachi Division** (Price escalation will not be allowed.)
18. If vendor doesn't supply medical equipment in accordance with the supply order or fails to supply according to terms and conditions or in case of any other default, the Performance Security and Security Deposit would be forfeited and further action as per SPPRA rule would be taken against such vendor.
19. If the supplier fails to give supply and install within the stipulated period, Liquidated charges will be imposed.
20. The decision once taken will be final and will not be challenged in any Court of Law.
21. A copy of Income Tax and GST Registration Certificate should be attached along with Technical Bid.
22. The bidding firm must be registered with PNRA department for minimum past three years (for Radiology items).
23. The bidder shall furnish copy of ATL (Active Tax Payer List certificate).
24. Copy of valid Professional Tax (Excise & Taxation) Certificate, Income Tax Certificate and GST Registration Certificate should be attached with the technical bid.
25. The bidder shall furnish three years Income Tax Return Certificate.
26. Conditional Tender(s) against the Government rules and non-compliance of instructions mentioned in Tender Form & Hand written tender(s) will not be entertained.
27. The vendor should submit a **Data Sheet** according to the Tender Specifications Form as mentioned in the tender and highlight the tender specifications in their Technical Data Sheet. Additional Features can be mentioned separately.
28. In case the information provided by bidder in Data Sheet as per **Clause No. 30** is incomplete or incorrect, the quoted item will be liable for rejection.
29. Supplier must have to provide Manual book with circuit diagram where applicable.
30. Supplier must have to arrange training on site for concerned technical staff for the supply of Equipment
31. Procurement Committee,, **Office of the Director Health Services Karachi Division**
32. the right to reject or accept any / all tender(s) as per SPPR-2010 (Amended 2019).
33. The system will have the minimum uptime 95% in case of down time beyond this period the following penalty will be applied:

DR. SAQIB ALI SHAIKH
Director Health Services
Karachi Division

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- d. **Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar.** _____
- e. **Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi.** _____

- a) 95% to 100% No penalty.
 - b) 90%to95%the warranty period will be extended by the number of days system in down.
 - c) 85% to 90% warranty period will be extended 1.5 time the down time period
 - d) 80% to 85% warranty period will be extended two time for the down time period and supplier is supposed to give justification of delay.
 - e) Uptime less than 80% hospital will complain to the Principal to take action against the supplier and warrant\ will be the three time for the down time period.
 - f) However, PPM (Periodic Preventive Maintenance) will not be considered in the downtime and PPM of the system will be done as per manufacturer recommendation.
34. Payment of DDP basis, the vendor shall submit Bill/Invoice for the purchase order value after delivery, installation and issuance of satisfactory report by the end user.
 35. Bids shall remain valid for **90 days** after the date of bid opening and same may be extended in terms of Rule 38 (2) (3) (4) of SPPRA Rules.
 36. Bid should be inclusive of all Government taxes (if applicable) and the same will be paid by the Contractor except withholding tax and 0.35% Stamp Duty which will be deducted at source in office of the Accountant General Sindh Karachi.
 37. The bid security will be forfeited to the Government, if the bidder withdraws his bid after opening and before the expiry of the bid validity period or fails to sign the contract in stipulated time if the bid is accepted.
 38. The Procuring Agency may reject all or any bid at any time prior to the acceptance of a bid or proposals, subject to the relevant provision of SPP Rules, 2010 (Amended 2019 up-to-date). Payment will be made within four weeks after receipt of bill / invoice duly fills in all respects.
 39. Prices quoted shall remain valid up to 90 Days.
 40. Registration from Sindh Revenue Board is not required in procurement of Goods.

I / We agree to above mentioned terms & conditions:

Name of Contractor _____ Signature _____

(CNIC NO _____ (Copy must be attached).)

Full Address _____

Rubber Stamp _____

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 Karachi Division

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SECTION A

Supply, Installation, Testing and Commissioning of Medical Equipment and Machinery Items





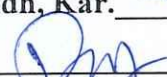
DOCUMENT CHECKLIST

Please review the following list of all documents to be enclosed with the Technical Proposal. These are the “**MANDATORY DOCUMENTS**” non-submission of any one of the mandatory documents will lead to disqualification and no further assessment of tender will not be done hence “**TECHNICALLY REJECTED**”

S.NO	DOCUMENT DESCRIPTION	YES / NO	PAGE #
1	Tender Purchase Receipt (Original) (Mandatory)		
2	Bid Security (Copy with value hidden in Technical Proposal; Original in Financial)		
3	Bidding Documents (Duly filled, Signed & Stamped by Bidder)		
4	Technical Proposal on Bidder's Letterhead		
5	Compliance sheet on letter head (Mandatory)		
6	Undertaking (as per sample form)		
7	Certificate (as per sample form)		
8	Income Tax & GST Registration Certificate		
9	Professional Tax Certificate (Sindh)		
10	SECP Incorporation Certificate (where applicable)		
11	PNRA Registration Certificate (where applicable)		
12	PEC Registration of Firm & Qualified Engineer's Certificate (where applicable) (Mandatory for Service works)		
13	DRAP Establishment license showing Importer/Manufacturer of medical devices.		
14	DRAP Product Establishment /Registration		
15	Company Profile		
16	Bank Account Maintenance Certificate		
17	Income Tax Returns (last 3 years)		
18	Audited Financial Statement (last 3 year)		
19	Workshop for After Sales Services (Mandatory)		
20	Technical Team Details (Workshop details & Technical Staff Bio data with Training Certificates)		
21	Manufacturer's Authorization for the sole distribution in Pakistan (Attested by the Embassy)		
22	Catalogue / Brochures (original)		
23	Product Technical Data Sheet		
24	ISO 9001 of bidder (where applicable) (website link must be provided for verification)		
25	ISO 13485 of Manufacturer (where applicable)(website link must be provided for verification)		
	CE/ FDA510(K) / JIS / MHLW (where applicable)(website link must be provided for verification)		

DR SAGIB ALI SHAIKH
Director Health Services

Prepared/Reviewed by following members of Technical Committee (Machinery, Equipment, Furniture etc):

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- Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
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- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

Note:





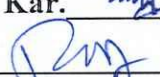
- Mandatory documents are mentioned.
- All pages of the bid, except for un-amended printed literature, shall be initialed by the Bidder.

BIDDER'S DETAILS FOR NOTICE PURPOSES

Bidder Name:	
Address:	
Tel No.	
Fax No.	
Contact Person Name:	
Mobile No.	
Email Address:	


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Karachi Division

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SECTION A

Supply, Installation, Testing and Commissioning of Medical Equipment and Machinery Items

Note:

EVALUATION CRITERIA

Financial proposal must be submitted on company letter head duly signed and stamped. Bidder is required to type their offer in figure and as well as in words of the total amount; else the offer would be rejected.

EVALUATION/QUALIFICATION

1. The procuring agency reserves the right to evaluate and compare the bids on itemized basis OR on basis of a group of similar nature goods OR goods compatible with each other.
2. The following merit point system for weighing evaluation factors/criteria will be applied for technical proposals.
3. Bidders achieving minimum 70% marks will be considered as qualified beside compliant of all mandatory clauses. Documentary evidence must be attached in support of each parameter.
4. Any Bid not meeting the mandatory requirements of evaluation criteria will be disqualified /rejected straight away and will not be considered for further evaluation.
5. Provide website link of product certification for online verification.

A. PRODUCT EVALUATION

S#	PARAMETERS/SUB-PARAMETERS	Total Marks
1	Conformity to the Purchaser's Specifications (Mandatory)	30
1.1	Fully compliant with the required specifications	30
1.2	Compliant with minor deviation (up to 5% subject to main function is not affected)	25
1.3	Compliant with minor deviation (up to 10% subject to main function is not affected)	20
1.4	Non-compliant to required specifications	Disqualify
2	Trained Product Specialist	10
2.1	Two marks for each Foreign Technical Graduate Engineer with PEC Registration in Sindh for the quoted product (Factory/OEM level service training).	06
2.2	Two marks for each Foreign Trained Science Graduate in Sindh for the quoted product (Factory/OEM level application training).	04
3	Product Certification	10
	<ul style="list-style-type: none">● USA Food & Drug Administration (USA-FDA)● European Community (CE) MDD● Japan Industrial Standard (JIS) / Japan Quality Assurance Organization (JQAO) Certificate issued by Ministry of Health, Labor and Welfare Govt. of Japan	
3.1	All Three of the above	10
3.2	Any two	7
3.3	Only One	3
	TOTAL MARKS PRODUCT EVALUATION (A)	50

DR SAQIB ALI SHAIKH
District Health Services
Karachi Division

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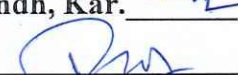
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- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. _____

B. BIDDER EVALUATION

S#	PARAMETERS/SUB-PARAMETERS	Total Marks
4.	Manufacturer's Authorization(Mandatory)	10
4.1	Bidder is OEM direct representative or the Sole Distributor for last 10 years or more. (Authorization certificate attested by embassy must be provided)	10
4.2	Bidder is OEM direct representative or the Sole Distributor for more than 05 years but less than 10 years. (Authorization certificate attested by embassy must be provided)	8
4.3	Bidder is OEM direct representative or the Sole Distributor for 05 years or less (Authorization certificate attested by embassy must be provided)	5
4.4	Non submission of valid manufacturer's authorization	Disqualify
5.	Human Resource	06
5.1	Diploma of Associate Engineer (DAE) in electrical / electronic / biomedical / mechatronics / mechanical / industrial. DAE certificate must be submitted. (0.5 mark for each certificate)	2
5.2	Graduate Engineer with PEC Registration in biomedical, electronics, and mechatronics, mechanical, industrial. PEC registration card of the engineer must be submitted. (1mark for each Engineer)	4
6.	Networking	04
6.1	Networking setup across Pakistan (1 mark for each setup) (verifiable) (proof of registered office and workshop must be provided)	04
7.	Past Experience/ Performance	10
7.1	Bidder's prior experience for supplying the same nature of product . Performance certificate of at least 05 public hospitals having minimum 5 years' Experience along with Installation Report and Supply order/ Purchase Order of the firm in last 5 years, on letter head, signed and stamped by the Head of institution of public sector. <i>One mark for each after sale satisfactory performance certificate.</i>	05
7.2	Bidder's prior experience for supplying the same nature of product . Performance certificate of at least 05 reputable private hospitals having minimum 5 years' Experience along with Installation Report and Supply order/ Purchase Order of the firm in last 5 years, on letter head, signed and stamped by the Head of institution of private sector. <i>One mark for each after sale satisfactory performance certificate.</i>	05
8.	Turnover total during last three (03) financial years(Audited Statements of Accounts and Income Tax Return Forms must be attached as supporting documents)	10
8.5	Turnover last 3 years equal or above PKR 1200 million	10
8.4	Turnover last 3 years equal or above PKR 1000 million	08
8.3	Turnover last 3 years equal or above PKR 800million	06
8.2	Turnover last 3 years equal or above PKR 600 million	04
8.1	Turnover last 3 years below PKR 600 million	00
9.	Bonus points	10
9.1	Free of Cost Extended Warranty (in accordance with the standard warranty period) atleast for two year including parts & services & labor. (Bidder offering greater extended warranty period will get the full marks)	10
9.2	Free of Cost Extended Warranty (in accordance with the standard warranty period) at least for one year including parts & services & labor.	05
	TOTAL MARKS BIDDER EVALUATION (B)	50
	GRANDTOTAL (A+ B)	100


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- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

BIDDER EVALUATION CRITERIA

Bid found to be responsive with maximum accumulative points (Technical + Financial) shall be accepted as the **most advantageous bid** as per SPPR, 2010 (Amended 2021).

Bids will be evaluated on the basis of following evaluation criteria.

A. TECHNICAL EVALUATION

- i) Technical evaluation has 70% weightage
- ii) Bids will be evaluated on a Bidder's capacity and capability to undertake supplies and on quoted item quality, performance and conformity to the required specifications.
- iii) Technical capacity of a bidder includes availability of workshop, tools, technical staff, number of installation and experience in the province of Sindh for prompt services to Karachi Division. Past performance of the bidder at **Director Health Services Karachi Division** will also be reviewed.
- iv) A bidder must achieve a minimum of 70 points out of total 100 points in technical evaluation, to be considered for financial evaluation.

B. FINANCIAL EVALUATION

- i) Financial evaluation has 30% weightage.
- ii) Only financial proposal of bidders with responsive technical proposal will be opened. Financial proposal of bidders who do not meet required mandatory documents and minimum 70 points out of total 100 points in technical evaluation will be returned unopened.
- iii) Bidder who has offered the lowest value for the item will get 30 points.
- iv) All remaining bidders after the lowest shall get points on their financial proposal, calculated as per the following formula.

Value of lowest bidder x 30

Value of higher bidder
[2nd, 3rd, 4th, etc.]

C. FINAL BID EVALUATION

- i) Points obtained by bidders in technical and financial evaluation shall be prorated and finalized as follows.

Evaluation	Weightage
Technical	70%
Financial	30%
Total	100%

- ii) Bid of a bidder who is found technically responsive with highest accumulated points will be considered as the most advantageous bid.

DR SAQIB ALI SHAIKH
Director Health Services

Prepared/Reviewed by following members of Technical Committee (Machinery/Equipment / Furniture etc):

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SECTION A

Supply, Installation, Testing and Commissioning of Medical Equipment and Machinery Items

S. No	Name of items	Qty	Fixed Bid Security
1.	<p>Anesthesia Machine with Ventilator</p> <p>TECHNICAL SPECIFICATION</p> <ul style="list-style-type: none"> • Electronic flow meters for O₂, N₂O and Air • Auxiliary O₂ and Air outlet • F-V, P-V, P-F loops display • 3 Gas Machine with (Oxygen + N₂O + Air) • Machine with vapor Plug in with interlocking function for two vaporizers and I parking vaporizer positions. • 03 Gas Rotameter (O₂+N₂O+Air) • Mechanical hypoxic guard system provides a nominal minimum 21% concentration of oxygen in O₂ /N₂O mixture • Non inter changeable pipeline inlets • Pipeline & Cylinder gauges for O₂ + N₂O+ Air along with hoses. • 3 Pin Index cylinder yokes. (Oxygen, N₂O and Air) • ACGO with Oxygen Flush Available • Trolley with antistatic casters and central brake available • Monitors Shelf. <p>Specification of fresh gas flow range:</p> <p>1) O₂ Range: 0 - 15.0 L/min, 2) N₂O Range: 0 - 15.0 L/min, 3) Air Range: 0 - 15.0 L/min,</p> <ul style="list-style-type: none"> • Stainless steel work surface. • Absorber support arm. • Trolley with antistatic casters and central brake available • Integrated heating system for breathing system. • Two flow sensor located at inspiratory and expiratory port. • 4 auxiliary power outlet • 100–240 V, 50/60 Hz., 7 Hrs maximum • Writing Shelf / Platform. • 2 stage adjustable LED Light • Cupboard with 3 drawers • Sodalime absorber with CO₂ bypass function (Minimum capacity 1.5 litre) • Whole breathing system is autoclavable(134 °C) • Auto-seal O₂ sensor design, which means circuit could automatically have sealed when changing O₂ sensor. • Quantity = 2 Vaporizers provided with machine. <p>1) One each for Isoflurane and Sevoflurane, 2) Vaporizer have more than 350 ml capacity, 3) Vaporizer of same brand as the Anesthesia machine & Its flow, pressure and temperature</p>	6	990000


DR. SAQIB ALI SHAIKH
 Director Health Services
 Karachi District

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compensated.

Electronic Anesthesia Ventilator

- Full Color 15 inches or above TFT touch screen with brightness-adjustable
- Integrated pneumatic & electronically driven, electronically controlled anesthetic ventilator

Ventilation Modes required:

1. Spontaneous ventilation & Manual Ventilation.
 2. Volume Controlled Ventilation VCV ,
 3. Pressure Controlled Ventilation PCV,
 4. Pressure Support Ventilation- Volume Guarantee (PCV-VG),
 5. Synchronized Intermittent Mandatory Ventilation SIMV Pressure & Volume
 6. Pressure Support PS
- Integrated heating system for breathing system
 - Oxygen Monitoring as standardized
 - I:E Ratio 4 : 1 to 1 : 8
 - Electronic PEEP, Off, 3~ 30 (cmH₂O)
 - Autoclavable Latex free bellows
 - Oxygen or Air as driving Gas
 - Breathing Circuit Should be provided with machine
 - Tidal Volume from 20 - 1500ml
 - Anesthesia Machine should be Modular Design and able to support future Upgrade for below items:
 - 1) NMT
 - 2) BIS
 - 3) ETCO₂ Side stream
 - 4) Anesthesia Gas Module with Built in Oxygen Monitoring

Prices of optional items quoted separately.

OR EQUIVALENT

Country of Origin: UK, USA, Europe, Japan or equivalent, (CE and FDA (510K) Mandatory)

Should be: ISO-13485 (Mandatory)

Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment

Audiometer/Tympanometer

Specification

. Audiometer (Diagnostic Type)

Type:

- Clinical / Diagnostic Audiometer
- Microprocessor controlled

Frequency Range:

- Air Conduction: 125 Hz – 8,000 Hz
- Bone Conduction: 250 Hz – 4,000 Hz

Intensity Range:

- Air Conduction: -10 dB to 120 dB HL
- Bone Conduction: -10 dB to 70 dB HL

Test Functions:

- Pure Tone Audiometry
- Speech Audiometry

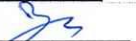
DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division

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d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 

e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

- Masking Function (Narrow band / White noise)
- Automatic Threshold Test

Signal Types:

- Pure Tone
- Warble Tone
- Pulsed Tone

Display:

- LCD / Color display screen
- Graphical audiogram display

Output Transducers:

- Air conduction headphones
- Bone conduction vibrator
- Insert earphones (optional)

Controls:

- Rotary knob / soft touch controls
- Patient response switch

Memory:

- Internal memory for storing patient data

Connectivity:

- USB / PC interface for data transfer
- Optional printer support

Power Supply:

- AC 220–240 V, 50/60 Hz

Accessories:

- Headphones
- Bone conductor
- Patient response button
- Power cable
- User manual

2. Tympanometer

Type:

- Automatic Tympanometer with Acoustic Reflex

Probe Tone Frequency:

- 226 Hz $\pm 3\%$

Pressure Range:

- +200 daPa to -400 daPa

Compliance Range:

- 0.1 ml – 6 ml

Ear Canal Volume Range:

- 0.2 ml – 5 ml

Test Functions:

- Tympanometry
- Acoustic Reflex Test
- Reflex Decay Test (optional)

Reflex Test Frequency:

- 500 Hz, 1000 Hz, 2000 Hz, 4000 Hz

Stimulus Intensity:

- 70 – 110 dB HL

Display:

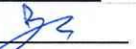

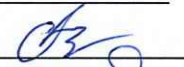


- LCD / Color display with tympanogram graph

Data Storage:

- Patient data storage and recall

DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division

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- Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

<p>Printer:</p> <ul style="list-style-type: none"> Built-in thermal printer or external printer support <p>Probe:</p> <ul style="list-style-type: none"> Lightweight probe with ear tips (various sizes) <p>Power Supply:</p> <ul style="list-style-type: none"> AC 220–240 V, 50/60 Hz <p>OR EQUIVALENT</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
<p>3. Auto Chemistry Analyzer with through put of 500-600 test/hr.</p> <p><i>Specification</i></p> <ul style="list-style-type: none"> Fully automated, discrete and random access chemistry analyzer Suitable for clinical chemistry, turbidimetry, and electrolyte testing STAT sample priority function <p><i>Throughput</i></p> <ul style="list-style-type: none"> Minimum 500 photometric tests per hour Optional ISE module (Na⁺, K⁺, Cl⁻) with additional electrolyte tests Continuous loading with emergency sample capability <p><i>Analytical Methods</i></p> <ul style="list-style-type: none"> End-point method Fixed-time method Kinetic method Turbidimetry Ion Selective Electrode (ISE) optional <p><i>Optical System</i></p> <ul style="list-style-type: none"> Light source: Halogen-tungsten lamp Grating photometer technology Multi-wavelength system <p>Typical Wavelengths:</p> <ul style="list-style-type: none"> 340 nm, 380 nm, 405 nm, 450 nm, 505 nm, 546 nm, 570 nm, 600 nm, 660 nm, 700 nm <p><i>Reaction System</i></p> <ul style="list-style-type: none"> Reaction temperature: 37°C ±0.1°C or above Reaction volume: 120 – 360 µL Automatic cuvette washing system Reusable cuvettes <p>Precise temperature control around 37 °C with ±0.1 °C fluctuation ensures stable biochemical reactions.</p> <p><i>Sample System</i></p> <ul style="list-style-type: none"> Minimum 60–100 sample positions or above Sample volume: 2 – 50 µL or above Continuous sample loading Automatic sample dilution <p><i>Reagent System</i></p> <ul style="list-style-type: none"> Minimum 60–90 reagent positions Refrigerated reagent compartment 2 – 10 °C Automatic reagent level detection Barcode reader for reagent identification <p>Reagent trays are refrigerated continuously to maintain stability during operation.</p>	2	900000


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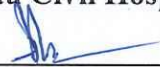



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- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

<p><i>Probe System</i></p> <ul style="list-style-type: none"> • Independent sample and reagent probes • Automatic probe washing (internal & external) • Liquid level detection • Clot detection • Vertical and horizontal collision protection <p><i>Calibration & Quality Control</i></p> <ul style="list-style-type: none"> • Automatic calibration • Multi-point calibration support • Internal quality control programs • Levy-Jennings charts and Westgard rules <p><i>Data Management</i></p> <ul style="list-style-type: none"> • Large internal memory for patient results • Bi-directional LIS/HIS connectivity • USB and network interface • Patient report printing <p><i>User Interface</i></p> <ul style="list-style-type: none"> • Windows-based operating system • Large color LCD monitor • Graphical user interface <p><i>Power Supply</i></p> <ul style="list-style-type: none"> • 220–240 V • 50/60 Hz <p><i>Environmental Conditions</i></p> <ul style="list-style-type: none"> • Temperature: 15 – 30 °C • Humidity: ≤ 85% <p><i>Accessories</i></p> <ul style="list-style-type: none"> • Computer with software • Printer • UPS • Starter reagent kit • Calibration and QC materials <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) OR EQUIVALENT Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
<p>4. Autoclave Sterilizer /CSD Complete Item</p> <p>Specification</p> <p><i>1. General Description</i></p> <ul style="list-style-type: none"> • Fully automatic horizontal autoclave sterilizer for hospital and laboratory sterilization. • Suitable for sterilization of surgical instruments, dressing materials, linen, glassware, rubber items and culture media. • Microprocessor controlled with digital display. <p><i>2. Chamber</i></p> <ul style="list-style-type: none"> • Capacity: Approximately 250 Liters or above • Material: High-quality Stainless Steel (SS 316 / SS 304) • Shape: Cylindrical horizontal chamber • Chamber finish: Mirror polished corrosion-resistant surface 	1	675000

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- **Jacket:** Stainless steel steam jacket for uniform heating
- **Insulation:** Glass wool / mineral wool insulation to reduce heat loss

3. Door System

- Single door or double door (optional pass-through)
- **Radial locking door system** or automatic locking system
- Silicon rubber door gasket
- Safety interlocking mechanism to prevent door opening during pressure

4. Sterilization Parameters

- **Temperature Range:** 105°C – 134°C or above
- **Working Sterilization Temperature:**
 - 121°C
 - 134°C
- **Pressure Range:** 1.2 – 2.2 bar
- Adjustable sterilization time

5. Control System

- **Microprocessor based control system**
- Digital LCD / LED display
- Automatic sterilization cycle control
- Programmable sterilization cycles
- Cycle phases display:
 - Heating
 - Sterilization
 - Exhaust
 - Drying

6. Safety Features

- Safety pressure valve
- Door safety interlock
- Low water level protection
- Over-temperature protection
- Over-pressure protection
- Automatic alarm system

7. Steam Generation

- Built-in **electric steam generator**
- Stainless steel heating elements
- Automatic water filling system

8. Vacuum System

- Vacuum pump for effective air removal
- Pre-vacuum and post-vacuum drying system
- Efficient drying of instruments and dressing materials

9. Control Panel

- Digital display for:
 - Temperature
 - Pressure
 - Time
- Start/Stop controls
- Emergency stop switch

10. Loading System

- Stainless steel trays / baskets
- Stainless steel trolley (optional)
- Easy loading and unloading system

11. Monitoring & Recording

- Temperature and pressure monitoring




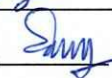

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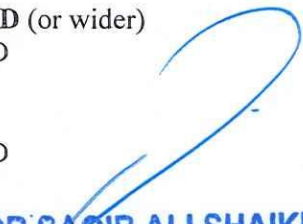
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- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. _____

	<ul style="list-style-type: none"> • Cycle completion indicator • Optional thermal printer / data recorder <p>12. <i>Power Supply</i></p> <ul style="list-style-type: none"> • 380 – 415 V • 3 Phase • 50 / 60 Hz <p>13. <i>Environmental Conditions</i></p> <ul style="list-style-type: none"> • Operating Temperature: 10°C – 40°C • Relative Humidity: ≤ 85% <p>14. <i>Standards Compliance</i></p> <ul style="list-style-type: none"> • ISO sterilization standards • CE certified • Medical device quality standards <p>15. <i>Accessories</i></p> <ul style="list-style-type: none"> • Stainless steel trays/baskets • Water tank • Drain system • User manual • Installation and training <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan, Turkey, (Any One Certificates of CE, FDA, MHLW) Other than UK, USA, Europe, Japan, Turkey should be any two of CE, FDA, MHLW Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
5.	<p>Automatic Urine Analyzer</p> <p>Specification</p> <ul style="list-style-type: none"> • Fully automatic urine chemistry analyzer for rapid urinalysis. • Suitable for clinical laboratories, hospitals, research institutions, and diagnostic centers. • Uses photoelectric colorimetry / dry chemistry test strip method for urine analysis. <p>Analytical Performance</p> <p>Principle:</p> <ul style="list-style-type: none"> • Photoelectric colorimetry / reflectance photometry. <p>Throughput:</p> <ul style="list-style-type: none"> • 60 tests per hour test strip or more <p>Test Strip Compatibility:</p> <ul style="list-style-type: none"> • 9 parameter strips • 10 parameter strips • 11 parameter strips • 14 parameter strips <p>Measured Parameters</p> <p>Typical parameters include:</p> <ul style="list-style-type: none"> • Glucose (GLU) • Bilirubin (BIL) • Ketone (KET) • Specific Gravity (SG) • pH • Blood (BLO) • Protein (PRO) <p style="text-align: center;">DR SAQIB ALI SHAIKH Director Health Services Karachi Division</p>	1	24000






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<ul style="list-style-type: none"> • Urobilinogen (URO) • Nitrite (NIT) • Leukocytes (LEU) • Vitamin C (VC) • Creatinine (CRE) • Calcium (Ca) • Microalbumin (MCA) <p>Display & User Interface</p> <ul style="list-style-type: none"> • 4-inch color touch screen or more • Menu-based user interface • Easy operation and navigation • Real-time test display. <p>Memory & Data Management</p> <ul style="list-style-type: none"> • Storage capacity: More than 2000 test reports • Data review and result recall • Patient report management • Result printing capability. <p>Printer</p> <ul style="list-style-type: none"> • Built-in thermal printer • Direct printing of test reports. <p>Interface & Connectivity</p> <ul style="list-style-type: none"> • USB port • RS-232 interface • LIS / HIS connectivity option • Data export capability. <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
<p>Auto refractometer</p> <p>Specification</p> <ul style="list-style-type: none"> • Fully automatic Auto Refractometer / Auto Ref-Keratometer for objective measurement of refractive errors of the eye. • Used for measurement of sphere, cylinder, axis and pupil distance. • Suitable for eye hospitals, ophthalmology clinics and optical centers. <p>Measurement Method</p> <ul style="list-style-type: none"> • Infrared light / Hartmann-Shack wavefront technology or equivalent • Automatic focusing and alignment system • Auto fogging system to minimize accommodation during measurement. <p>Refractometry Measurement Range</p> <p>Sphere (SPH):</p> <ul style="list-style-type: none"> • -20.00 D to +20.00 D (or wider) • Step: 0.12 D / 0.25 D <p>Cylinder (CYL):</p> <ul style="list-style-type: none"> • 0.00 D to ±8.00 D • Step: 0.12 D / 0.25 D <p>Axis (AX):</p> <ul style="list-style-type: none"> • 0° – 180° • Increment: 1° 	1	30000

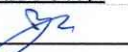





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	<p>Vertex Distance (VD):</p> <ul style="list-style-type: none"> • 0 mm, 12 mm, 13.75 mm selectable <p>Keratometry Measurement (if combined model)</p> <p>Radius of Curvature:</p> <ul style="list-style-type: none"> • 5.0 – 10.0 mm <p>Corneal Power:</p> <ul style="list-style-type: none"> • 33.75 – 67.50 D <p>Corneal Astigmatism:</p> <ul style="list-style-type: none"> • 0 – 8 D <p>Axis:</p> <ul style="list-style-type: none"> • 1° – 180° <p>Pupil Measurement</p> <ul style="list-style-type: none"> • Pupil Distance (PD): 45 – 88 mm • Minimum pupil size: approx. 2.0 mm <p>Display & Interface</p> <ul style="list-style-type: none"> • 5 inch color LCD / TFT display or more • Graphical measurement display • User-friendly operating interface. <p>Measurement Speed</p> <ul style="list-style-type: none"> • Measurement time typically less than 0.5 seconds per eye depending on the device. <p>Data Storage</p> <ul style="list-style-type: none"> • Storage for multiple patient results • Memory for 10 or more measurements for each eye. • Built-in thermal printer • Automatic printout of measurement results. <p>Connectivity</p> <ul style="list-style-type: none"> • USB port • RS-232 interface • Optional LAN / HIS connectivity <p>Operating System</p> <ul style="list-style-type: none"> • Microprocessor controlled • Automatic measurement and alignment. <p>OR EQUIVALENT</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
7.	<p>Baby Incubator</p> <p>TECHNICAL SPECIFICATION</p> <p>To provide a thermally stable, humidified, and oxygen-controlled microenvironment for neonates.</p> <p>Key Features:</p> <ul style="list-style-type: none"> ○ Microprocessor-based intelligent control ○ 7-inch Color Touchscreen LCD or better ○ Double-Wall Canopy for heat retention ○ Servo Control for Temperature, Humidity, and Oxygen (O2 optional) ○ Target Temperature Surveillance System (TTSS) ○ Integrated X-Ray Cassette Tray ○ Trendelenburg Position ($\pm 12^\circ$) ○ Data Trending (up to 7 days) <p style="text-align: center;">DR SAQIB ALI SHAIKH Director Health Services Karachi Division</p>	10	360000

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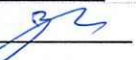




- **Electrical:**
 - Supply Voltage: 220 VAC, 50 – 60 Hz
 - Maximum Power Consumption: 500 W
 - Protection Class: Class I, Type BF
- **Environmental (Operating):**
 - Temperature: 20°C – 30°C
 - Humidity: 5 – 95 %RH, non-condensing
- **Temperature Control:**
 - **Skin Mode:**
 - Setting Range: 34.0°C – 38.0°C
 - Measurement Accuracy: ± 0.2 °C
 - Display Resolution: 0.1 °C
 - **Air Mode:**
 - Setting Range: 20.0°C – 39.0°C
 - Measurement Accuracy: ± 0.2 °C
 - Display Resolution: 0.1 °C
 - Warm-up Time: <35 minutes (from 22°C to 33°C at 22°C ambient)
- **Humidity Control (Servo):**
 - Setting Range: 30 – 95% RH
 - Measurement Range: 0 – 100% RH
 - Accuracy: ± 1.8%
 - Reservoir Capacity: 1.8 Liters
- **Oxygen Control (Optional):**
 - Control Range: 21 – 65%
 - Measurement Range: 0 – 100%
 - Accuracy: ± 3%
 - Double O2 Sensor
- **Noise Level:** <47 dBA
- **Weight Capacity:**
 - Mattress: 10 kg
 - Monitor Tray: 10 kg
 - IV Pole: 5 kg
- **Alarms:** Comprehensive visual and audible alarms for:
 - High/Low Skin & Air Temperature
 - Skin Probe Disconnection/Failure
 - Air Circulation Failure
 - Power Supply Failure
 - System Failure
 - High/Low Humidity & Sensor Failure
 - Low Water Level
 - High/Low Oxygen & Sensor Failure (if equipped)
 - Air Filter Change Reminder

Optional Features

- SmartWeigh Integrated Scale System (0-10 kg, 1g resolution)
- Servo Oxygen System
- Secondary Skin Probe
- Electronic Height Adjustment (+20 cm)
- Additional Monitor Tray
- Oxygen Cylinder Rack
- Disposable Skin Probe

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	<p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan, (Any One Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Other than UK, USA, Europe, Japan, will be accepted if have two certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
8.	<p>Blood Chemistry Analyzer</p> <p>Specification</p> <ul style="list-style-type: none"> Fully automated clinical blood chemistry analyzer for quantitative analysis of biochemical parameters. Suitable for testing serum, plasma, urine, cerebrospinal fluid, and other biological samples. Random access, discrete analyzer with continuous sample loading. <p>Analytical Performance</p> <p>Throughput:</p> <ul style="list-style-type: none"> Up to 200 tests per hour or more <p>Analysis Methods:</p> <ul style="list-style-type: none"> End-point method Fixed-time method Kinetic (rate) method Turbidimetry. <p>Sample & Reagent System</p> <p>Sample Positions:</p> <ul style="list-style-type: none"> Approx. 37 sample positions. <p>Reagent Positions:</p> <ul style="list-style-type: none"> 28 reagent positions with refrigeration. <p>Sample Volume:</p> <ul style="list-style-type: none"> 2 – 70 µL <p>Reagent Volume:</p> <ul style="list-style-type: none"> 20 – 350 µL. <p>Probe System:</p> <ul style="list-style-type: none"> Teflon-coated probe Liquid level detection Anti-collision protection Automatic probe washing. <p>Reaction System</p> <ul style="list-style-type: none"> Reaction temperature: 37°C ±0.2°C. 48 reusable reaction cuvettes. Automatic cuvette washing system Independent mixing probe. <p>Optical System</p> <p>Light Source:</p> <ul style="list-style-type: none"> Halogen-tungsten lamp. <p>Spectrophotometry:</p> <ul style="list-style-type: none"> Post-spectral spectrophotometry. <p>Wavelengths:</p> <ul style="list-style-type: none"> 340 nm, 405 nm, 450 nm, 510 nm, 546 nm, 578 nm, 630 nm, 700 nm. <p>Absorbance Range:</p> <ul style="list-style-type: none"> 0 – 3.0 Abs <p>Calibration & Quality Control</p> <ul style="list-style-type: none"> Multi-point calibration 	1	180000


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- Linear and non-linear calibration
- Real-time quality control
- Westgard rules
- Daily and monthly QC programs.

Data Management

- Windows-based software
- Patient result storage
- LIS/HIS connectivity with **HL7 protocol**
- LAN interface for networking
- External printer support.

System Features

- STAT emergency sample testing
- Automatic reagent cooling tray
- Continuous sample loading
- Automatic washing system.

Power Supply

- AC 220V ±10%
- 50/60 Hz
- Power consumption approx. 300 W.

OR EQUIVALENT

Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)

Should be: ISO-13485 (Mandatory)

Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment

Water Bath Ultrasonic

Specification:

Microprocessor PID-temperature controller Exterior body of steel sheet
 Double skinned tank, inner case made of stainless steel Perforated stainless steel bottom tray
 Temperature control for regulation of temperature Gabled lid
 Power Source 220V, 50HZ AC User Adjustable Settings:
 Capacity of 20-25 Liters
 Adjustable temperature ranges from +5C above ambient up to 100C Temperature accuracy of +1%

Displayed Parameters:

Built in thermometer
 Digital display of temperature and time Adjustable timer for time setting
 Fault indication system

Over temperature protection system Accessories:

Three Racks of different sizes
 Servo Controlled Voltage Stabilizer with surge protection facility with drain tap
 Operating Manual with a Soft Copy

Country of Origin: UK, USA, Europe, Japan or equivalent.

Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW

(Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificate.

Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end..

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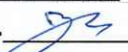
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10.	<p>Blood Gas Analyzer</p> <p>Specification</p> <p><i>1. General Description</i></p> <ul style="list-style-type: none"> Fully automated Blood Gas Analyzer for measurement of blood gases, electrolytes, and metabolites. Suitable for arterial, venous, and capillary whole blood samples. Microprocessor-controlled system with user-friendly interface. <p>Principle of Measurement</p> <ul style="list-style-type: none"> Ion Selective Electrode (ISE) for electrolytes Amperometric electrode for oxygen measurement Potentiometric electrode for pH and CO₂ measurement. <p>Measured Parameters</p> <p>Blood Gas Parameters</p> <ul style="list-style-type: none"> pH pCO₂ (Partial pressure of carbon dioxide) pO₂ (Partial pressure of oxygen) <p>Electrolytes</p> <ul style="list-style-type: none"> Sodium (Na⁺) Potassium (K⁺) Chloride (Cl⁻) Ionized Calcium (Ca²⁺) <p>Metabolites / Additional</p> <ul style="list-style-type: none"> Lactate Glucose Hematocrit (Hct). <p>Calculated Parameters</p> <ul style="list-style-type: none"> Bicarbonate (HCO₃⁻) Total CO₂ (TCO₂) Base Excess (BE) Oxygen Saturation (SO₂) Anion Gap (AG) Oxygen Content (O₂Ct) Standard bicarbonate (SBC). <p>Sample Requirements</p> <p>Sample Type</p> <ul style="list-style-type: none"> Whole blood (arterial, venous, capillary) Plasma / serum (optional) Approximately 50 – 150 µL depending on analyzer model. <p>Analysis Performance</p> <p>Analysis Time</p> <ul style="list-style-type: none"> Approximately 60 – 90 seconds per test. <p>Throughput</p> <ul style="list-style-type: none"> Up to 40 – 60 samples per hour or more. <p>OR EQUIVALENT</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	1	45000
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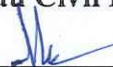
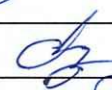


DR SAQIB ALI SHAIKH
 Director Health Services
 Karachi Division

Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):

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- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

11.	<p>Blood Warmer</p> <p>Specification</p> <ul style="list-style-type: none"> • Medical device designed to warm blood and intravenous (IV) fluids before transfusion to patients. • Prevents hypothermia and transfusion complications during surgery, trauma care, and intensive care. • Suitable for blood transfusion, plasma, saline, and other IV fluids. <p>Heating System</p> <ul style="list-style-type: none"> • Dry heating system with aluminum heating plate or heating cassette. • Rapid and uniform warming without damaging blood components. • Microprocessor controlled temperature regulation. <p>Temperature Control</p> <ul style="list-style-type: none"> • Temperature Range: 35°C – 42°C or better • Preset Operating Temperature: 37°C or better • Temperature Accuracy: ±0.5°C • Automatic temperature stabilization. <p>Heating Performance</p> <ul style="list-style-type: none"> • Rapid warming of blood and IV fluids. • Flow rate capacity: up to 50 – 200 ml/min depending on the model. • Continuous warming during transfusion. <p>Display & User Interface</p> <ul style="list-style-type: none"> • Digital LCD / LED display showing: <ul style="list-style-type: none"> ○ Temperature ○ System status ○ Alarm indicators • User-friendly control panel. <p>Safety Features</p> <ul style="list-style-type: none"> • Over-temperature protection • Low temperature alarm • Air bubble detection (optional in advanced models) • Leakage protection • Audible and visual alarms. <p>Compatibility</p> <ul style="list-style-type: none"> • Compatible with standard blood transfusion sets and IV infusion sets. • Suitable for warming: <ul style="list-style-type: none"> ○ Whole blood ○ Packed RBC ○ Plasma ○ Saline and IV fluids. <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	4	42000
12.	<p>C-ARM Image Intensifier</p> <p>Specification</p> <ul style="list-style-type: none"> • Microprocessor Controlled High Frequency • X-Ray Generator 4 KW or better • Stationery Anode X- Ray Tube <p style="text-align: center;">DR SAQIB ALI SHAIKH Director Health Services Karachi Division</p>	1	240000

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- Dual Focal Spot (0.6mm x1.5mm)
- Anode Heat Storage Capacity (56KHU)
- KV Range for all Modalities: 40-110KV
- Radiography mA Max: 80mA
- Continuous Fluoroscopy mA Max: 30mA
- Image Intensifier Size: 9 inch
- Orbital Movement Range: +92° and - 48°.
- C-Arm Rotation of +/- 360° should be available.
- Wig wag: +/-24° or better.
- Motorized Iris Collimator
- Digital CMOS camera of Matrix 1K x1K with LIH (Last Image Hold) function.
- Digital Acquisition in Real Time Post Processing to adjust Brightness, Pulse fluoroscopy.
- Digital Zoom with Magnification Factor and Digital Rotation of the image.
- Digital Vertical & Horizontal flip, Built in CD and DVD Writer.
- Dynamic Density Compensation for Anatomical Regions.
- Memory Capacity Minimum Should be 500000 images on Hard Disk
- 2 x Monitors 19-inch Medical Grade with Trolley from original manufacturer.
- 1x X-Ray Cassette Holder 10"x12".and Laser Marker
- C-Arm Should Have DICOM 3.0 Compatible.

OR EQUIVALENT

Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)

Should be: ISO-13485 (Mandatory)

Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment

C.T.G Machine

Specification:

- Machine Should have Intrapartum /Antepartum Monitoring Facility
- 1 MHz ultrasound transducers for the detection of fetal heart rate.
- Accurate heart beat detection and advanced auto-correlation algorithms provide rate calculation.
- Allows monitoring for dual or twin fetuses 8 inch or more colorful touch screen display with graphical and numeric representations.
- TOCCO transducer for the measurement of uterine activity with multiple user adjustable baselines.
- Record Fetal movements with either maternally sensed event marker or automatically using Actogram.
- Analysis of the CTG trace and a robust interpretation based on a research.
- 4 hours battery backup with integral Charger.
- Audible and visual notification is provide for all fetal alarms. Alarm limits are all user adjustable.
- On screen GA calculator

Lifetime storage for patient records and allows

- reviewing at any time.
- Provide clinical annotation facility. A clinical note should be displayed on screen and on the CTG print.
- A high-resolution thermal printer with various user adjustable paper speeds of 1cm/mint, 2cm/mint and 3cm/mint.
- Option for two separate FHR scales when twins (or triplets) monitoring

OR EQUIVALENT

Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)

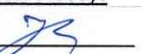




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45000

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	<p>Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
14.	<p>C-ARM Fluoroscopy Specification</p> <ul style="list-style-type: none"> • Microprocessor Controlled High Frequency • X-Ray Generator 4 KW or better • Stationery Anode X- Ray Tube • Dual Focal Spot (0.6mm x1.5mm) • Anode Heat Storage Capacity (56KHU) • KV Range for all Modalities: 40-110KV • Radiography mA Max: 80mA • Continuous Fluoroscopy mA Max: 30mA • Image Intensifier Size: 9 inch • Orbital Movement Range: +92° and - 48°. • C-Arm Rotation of +/- 360° should be available. • Wig wag: +/-24° or better. • Motorized Iris Collimator • Digital CMOS camera of Matrix 1K x1K with LIH (Last Image Hold) function. • Digital Acquisition in Real Time Post Processing to adjust Brightness, Pulse fluoroscopy. • Digital Zoom with Magnification Factor and Digital Rotation of the image. • Digital Vertical & Horizontal flip, Built in CD and DVD Writer. • Dynamic Density Compensation for Anatomical Regions. • Memory Capacity Minimum Should be 500000 images on Hard Disk • 2 x Monitors 19-inch Medical Grade with Trolley from original manufacturer. • 1x X-Ray Cassette Holder 10"x12".and Laser Marker • C-Arm Should Have DICOM 3.0 Compatible. <p>OR EQUIVALENT</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA 510K, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	1	198000
15.	<p>C-ARM Machine Specification</p> <ul style="list-style-type: none"> • Microprocessor Controlled High Frequency • X-Ray Generator 4 KW or better • Stationery Anode X- Ray Tube • Dual Focal Spot (0.6mm x1.5mm) • Anode Heat Storage Capacity (56KHU) • KV Range for all Modalities: 40-110KV • Radiography mA Max: 80mA • Continuous Fluoroscopy mA Max: 30mA • Image Intensifier Size: 9 inch • Orbital Movement Range: +92° and - 48°. • C-Arm Rotation of +/- 360° should be available. • Wig wag: +/-24° or better. <p style="text-align: center;">DR SAQIB ALI SHAIKH Director Health Services Karachi Division</p>	2	1080000

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- Motorized Iris Collimator
- Digital CMOS camera of Matrix 1K x1K with LIH (Last Image Hold) function.
- Digital Acquisition in Real Time Post Processing to adjust Brightness, Pulse fluoroscopy.
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OR EQUIVALENT

Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)

Should be: ISO-13485 (Mandatory)

Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment

Single Plane Digital Angiography System (Cath Lab)- For Cardiovascular and Interventional Procedures

A fully digital flat panel single plane angiography System for cardiac interventional procedures.

A POSITIONING ARM:

- 1 The system should be Floor Mounted for easy unhindered access to patient and head to toe coverage without patient repositioning.
- 2 Real time display of rotation angulations.
- 3 Geometry: C-arm / G-arm
- 4 RAO / LAO: RAO 120° to LAO 120° or more.
- 5 C-Arm Sliding: Minimum CRA 50° to CAU 90° or more.
- 6 Rotation Speed: 50°/sec or more in LAO / RAO.
- 7 Isocentric Height: Variable / Fixed.
- 8 Auto Positioning: Programmable auto positioning of selected.
- 9 Angulations, (50 or more programmable positions.)
- 10 The control panel can be mounted at any side of the patient table.
- 11 All the rotational / angles should be digital displayed.
- 12 Motorized / rotation of the positioning arm.
- 13 SID: $\leq 90\text{cm} \geq 115\text{cm}$.

B DIGITAL FLAT PANEL DETECTOR:

- FPD panel for cardiac interventional works, size should be 20cm x 20cm approximately. Bigger size is not acceptable.
- 1 Single plane C-Arm / G-Arm
 - 2 Image matrix of 1024 x 1024 x 16 bits or more.
 - 3 Standard FPD size with four formats.
 - 4 Built in temperature stabilizer.
 - 5 Integrated collision protection feature

**Director Health Services
Karachi Division**

16.

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4350000

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- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. Mk
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. QZ
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. SM
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. Raj

- 6 All other standard accessories according to this digital flat panel.
- 7 Dose management with fluoro filters range of 0.1/0.2mm to 0.9/1.0 mm Cu.

C PATIENT SUPPORT / CATHERIZATION TABLE:

- 1 Floor mounted, dedicated table allowing precise imaging during operation.
- 2 Up down / vertical, longitudinal and transverse
- 3 Tabletop length of 295cm or more.
- 4 Table top should be durability to accept patient's weight of not less than 200kg plus 100kg for resuscitation.
- 5 Table dimensions should be able to accommodate patients of all ages.
- 6 Compact tableside control unit with easily distinguished buttons and controls.
- 7 Radiation free patient positioning.

D X-RAY GENERATOR:

- 1 Microprocessor based high frequency using fiber optic for data communication between each imaging system.
- 2 Dedicated X-Ray generator of 100kW.
- 3 Radiographic rating minimum 1000mA.
- 4 Serial filming exposures with shortest exposure of 1ms, with automatic kV and mA control for optimum image quality.
- 5 The system should have capability of digital radiography and fluoroscopy.
- 6 Should have capability of doing digital pulsed +fluoroscopy at 1, 2, 3, 5, 7.5, 10, 15, 20, 30 frames/sec and 60fps for pediatrics.
- 8 Automatic kV, mA & pulse width regulations.
- 9 Shortest exposure time of 1 msec or less.

E DIGITAL IMAGING AND ACQUISITION / FLUOROSCOPY:

- 1 Acquisition, storage and display in 1024 x 1024 x 16 bits or more at 12.5 / 15 and 25/30 FPS and 512 x 512 acquisition at 60FPS for pediatric.
- 2 Parallel processing capability / multitasking facility.
- 3 Real time filtering and road map function.
- 4 Magnetic Disk Capacity for Storage of 200,000 images in 1024 x 1024 matrix x 16 bit on the magnetic disk of main console. Multiple Hard Disks (RAID) system for greater reliability.
- 5 Minimum scene length to be 10 seconds in 1024 matrix.
- 6 Digital pulsed fluoroscopy with 1, 2, 3, 5, 7.5, 10, 15, 20, 30 FPS or more flexible range in 1024 x 1024 x 16 bits or more.
- 7 Images to be stored on and retrieved from archival disks for possible manipulation and quantification using available software packages.

F X-RAY TUBE:

- 1 Triple focus with at least 3.75MHU or better anode heat storage. Liquid Metal

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Bearing technology.

- 2 Capacity to enable continuous heat dissipation during serial exposure.
- 3 Triple focus rotating anode.
- 4 Both tube and generator should have same power output of 100kW.
- 5 Focus Tube of 0.5/0.8 mm or similar.
- 6 Dose management with auto adjustment fluoro filters.
- 7 Copper filtration of 0.1/0.2mm to 0.9/1.0 mm Cu. for reducing patient radiation.

G MONITORING SYSTEM:

- 1 Flat Screen LCD/LED 55 inches of 1024 x 1024 matrix 8MP or more monitor.
- 2 Monitors should be ceiling mounted in the operation room with the original ceiling suspension system.
- 3 Two monitors for live images and road mapping in the Examination room 19 inch or larger LCD/LED as back up.
- 4 Two 19 inch or more monitors in the control room. One for live images and second for road mapping.
- 5 All the monitors will be of Medical Graded, complied with international standards for medical monitors.

H CONTROL:

All controls of digital imaging shall be in the examination as well as control room.

I RECORDING / ARCHIVING & COMMUNICATION SYSTEM:

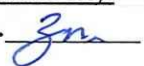




- 1 Recording / archiving system should be DICOM-3 compatible.
- 2 They digital images should be stored as backup on CD/DVD.
- 3 DICOM (send/storage, commitment, retrieve/query)
- 4 Ethernet connection to connect with other terminals.
- 5 Integrated Intercom system.

J SOFTWARE / HARDWARE PACKAGES:

- 1 Complete analysis package for the following applications.
- 2 Dynamic pre and post PTCA / valvotomy comparison with one image live and other reference.
- 3 Automatic loop replay after acquisition or fluoroscopy.
- 4 Dynamic real time pan / zoom.
- 5 Dynamic real time digital image processing like edge enhancement or gamma correction, noise reduction (spatial filtration.)
- 6 Fluoro individual mode to simultaneous display of fluoroscopy and Live reference images in dynamic loop both to be displayed simultaneously on same screen.
- 7 Online image density (gray scale) correction.
- 8 Facility to review previous studies in the examination room from the patients old CD.
- 9 Automatic positioning of the C-Arm corresponding to reference image.
- 10 Store fluoro facility to store fluoroscopy.
- 11 Digital Subtracted Angiography.
- 12 Rotational Angiography

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- 13 Rotational DSA
- 14 Live Stent enhancement facility. Older technology of enhancement on frozen image is not acceptable.
- 15 Auto pixel shift for DSA
- 16 Dedicated X-Rays radiation dose monitoring and dose reduction software features (Auto right/Clarity IQ /Dose Rite/ OPTIQ/Score Opera)
- 17 Parallel processing to allow live fluoroscopy acquisition of images while simultaneous burning data on CD and changing reference monitor layout, or and changing reference images dynamic and static.
- 18 Integrated table side touch screen (Original from OEM of Angiography Machine). Tableside tablet control to select the desired acquisition program and desired auto-positioning number and provide assistance in angiographic operation including play back, stop and frame advance cine images capable to switch between a cine image file and a map/static image file from tablet. Tableside tablet control all of Haemodynamic system parameters including sampling, ECG (leads), layouts, EDP, NIBP, Pullback, Gradient, Cardiac output and start/stop timers.

K QUALITY AND SAFETY STANDARDS FOR ANGIOGRAPHY MACHINE:

- 1 FDA 510 K approval, CE (MDD) compliance and MHLW certificate. All 3 are required.
- 2 Country of Origin and manufacturing should be USA, Europe or Japan.

L ACCESSORIES WITH THE SYSTEM:

PHYSIOLOGICAL HEMODYNAMIC MONITORING SYSTEM:

Should be from the same manufacturer as angiography system and should be fully integrated with angiography system with full table side control having bi-directional communication with the machine. Multichannel to record at least 2-channels IBP, Cardiac output with thermo-dilution method, surface ECG in any configuration and simultaneous 12 lead ECG, NIBP and SpO2 measurement. Digital display of all the parameters like IBP, Heart rate, cardiac output parameter. It should be possible to print the waveforms simultaneously while acquiring the data in the back ground. System should be upgrade to Electrophysiology with 32 bipolar channels, to be quoted optionally.

M ACCESSORIES:

1 SURGICAL SHADOW LESS LIGHT:

Ceiling suspended/Floor mounted, for Angiographic and related surgical procedures.

RADIATION PROTECTION:

- 2 Ceiling suspended / floor mounted tiltable lead glass for radiation protection of operators head & neck regions and lower body parts.
- 3 Collision tolerant.
- 4 Lower body radiation protection flaps.
- 5 03 x Lead Apron
- 6 03 x Lead Gloves
- 7 03 x Pb Goggle
- 8 03 x Thyroid shields.

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	<p>9 Lead glass window size 2x3 feet or more Pb. equivalent 2.0mm or better.</p> <p>10 Compatible true on-line sine wave UPS for angiography system with a minimum back up time of 10 minutes.</p> <p>11 Programmable contrast media injector (Medrad-Bayer or Guerbet or similar)</p> <p>N POWER REQUIREMENTS: Three Phase with line voltage of 220V, 50Hz.</p> <p>O WARRANTY Warranty for Three year from the manufacturer. The local vendor's warranty will not be acceptable. Latest system to be provided with undertaking from manufacturer what this system is latest and will remain in production for next 3 years. System should not be older more than 5 years to be verified from its FDA certificate.</p> <p>Country of Origin and Manufacture: USA, EU and Japan Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
17.	<p>Cell Separator Specification Blood Cell Separator</p> <ul style="list-style-type: none"> • Blood Flow Rate • < 10 mL/min (minimum) . Can be used safely on patients as small as 8 Kg • Centrifuge Speed < 3000 rpm • Extracorporeal Volume 120 mL • Collection Methods • Supports both single-needle and double-needle continuous flow collection . • Key Features • Independent anticoagulant pump • infrared drip monitor; • plasma line hemolysis detector; • plasma adsorption therapy program; • automatic parameter estimation to predict procedure time . <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, JIS, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	1	240000


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- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

**Central Oxygen & Vacuum Suction System including Liquid gas storage facility.
Specification**

APPLICABLE STANDARDS/ CONFIGURATION

The Medical gas Pipe line should strictly comply with the international standards and configuration for requirements of HTM 2022 or latest, however, ISO 7396-1 or latest can also be used. It would be the choice of the bidder for adherence to any standard which would be mentioned in the bid. The objectives are to ensure the following:

- a) Non-Interchangeability Between Different Pipeline Systems by Design;
- b) Continuous Supply of Gases and Vacuum at Specified Pressures by Providing Appropriate Sources;
- c) Required Flow Rates in Particular Areas/ Outlets;
- d) Use Of Suitable Materials;
- e) Cleanliness Of Components;
- f) Correct Installation;
- g) Provision Of Monitoring and Alarm Systems;
- h) Correct Marking of The Pipeline System;
- i) Following Of Testing and Commissioning Protocols;
- j) Maintaining The Purity of The Gases Delivered by The Pipeline System;
- k) Correct Operational Management.

The firms will follow the specifications mentioned below and if found contradiction between specifications and design standard then the design standard would prevail (only if the quantities mentioned are less; otherwise, adjustment will be made).

18.

01.	AUTOMATIC MANIFOLD FOR OXYGEN The Manifold shall be a fully automatic type & shall switch from "Bank in Use" to "Reserve" bank without fluctuation in delivery supply line pressure & without the need for external power after the switch over the "Reserve" bank shall then become the "Bank in Use" and the banking use shall become the reserve bank. The system should be able to maintain continuous supply in case of power failure. CAPACITY: (2 x 10) with capacity of 100-120, m3/h. FUNCTION: 1. Fully automatic self-contained shuttle-valve with no electrical power required for switching. 2. Microprocessor controlled display unit for monitoring of different parameters and loggings (if the design/standard (latest versions) allow for this requirement; otherwise the system standard design with standard design requirements will be followed). 3. Units of pressure measurement (psi/Pa/bar). 4. LCD /LED display for the left bank, the right bank& for the supply pressure. Complete with relief valve, Emergency shut off valve and battery / bank room alarm for left and right cylinder bank. 5. The complete automatic manifold unit with shifting from Main Bank and then to Reserve Bank automatically with display of pressures for each source.	01
+	EMPTY CYLINDERS WITH CAPACITY OF 47 LITERS	20
02.	AUTOMATIC MANIFOLD FOR NITROUS OXIDE The Manifold shall be a fully automatic type & shall switch from "Bank in Use" to "Reserve" bank without fluctuation in delivery supply line pressure	01

1

1200000

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- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

&without the need for external power after the switch-over the "Reserve" bank shall then become the "Bank in Use" and the bank in use shall become the reserve bank. The System -should be able to maintain continuous supply in case of Power failure.

CAPACITY:

(2x2) with capacity of 25-30, m3/h.

FUNCTION:

1. Fully automatic self-contained shuttle-valve with no electrical power required for switching.
2. Microprocessor controlled display unit for monitoring of different parameters and loggings (if the design/standard (latest version) allow for this requirement; otherwise, the system standard design with standard design requirements will be followed)
3. Units of pressure measurements (psi/Pa/bar)
4. LCD / LED display for the left bank, the right bank for the supply pressure.
5. Complete with relief valve, Emergency shut off valve and battery / bank room alarm for left and right cylinder bank.

+ EMPTY CYLINDERS WITH CAPACITY OF 47 LITERS 08

03. **DUPLEX Medical COMPRESSED AIR STATION** 01

Medical Air Plant with Breathable Air. Elimination of Toxic Gases such as carbon dioxide, Nitrogen dioxide, Nitrogen monoxide, Carbon monoxide; and other pollutants as per design standard; followed.

Compressor:

Duplex Compressor unit. 1080 Liters/mint each compressor @ 10 bar.

Screw Type.

Mounted on anti-vibration base.

Reservoir.

Air receiving tank 1,000 L. or as per actual requirement.

- o Vertical type.
- o Galvanized internally with auto drain.
- o Minimum 10 bars out put pressure of tank.

AIR DRYER

- o Desiccant type, Duplex.
- o Dew Point range between -40 to -80oC
- o Dew point monitoring on LCD Panel
- o Capacity suitable according to the compressor output.
- o Including oil water separator.

FILTRATION SYSTEM

o Clean Medical Grade Air supply in accordance with the requirements of HTM/ISO standards.

- o Consisting of Pre-filter / humidity, Oil free and sterile/bacteria filter.
- o Mounted with shut-off valves on an assembly panel.
- o Parallel Connections of the filters. This will make it possible to exchange filter without interrupting the air supply.

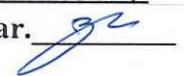


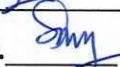

o Flow / filtering rate according to the compressed air output.

REDUCER PANEL COMPRESSED AIR

o Parallel switched reducer with gauge, safety valve, pressure switch for

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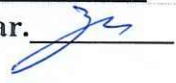
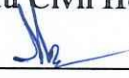



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	<p>high and low Pressure and shut off valve with assembly panel size 4+ 7 bar. o Complete with distribution block according to requirement, Incl. Shut off valve and pressure gauge for every distribution block, complete assemble panel with incoming and outgoing copper pipe for complete system.</p> <p>CONTROL o Complete with 1x main warning system for compressed air for visual and acoustic monitoring of alarms conditions for the compressor room. Color touch screen. o Test point in the system for air quality. o 1x switch cabinet for automatic Unit incl. All necessary fitting and installation. Touch screen panel. material for smooth running of the system without any interruption.</p> <p>POWER: Power Supply- 3 Phase, 380 – 400V/50 Hz.</p>			
04.	<p>DUPLEX MEDICAL VACUUM SYSTEM Flow rate for vacuum pump is minimum 3300 L/min each. Vertical Tank Capacity 1X1000 Liter. Or as per actual requirement. Vacuum level @ 700-725 mm Hg. Vibration Isolation, Pads, Hour meters, Circuit barkers, Vacuum pump run lights. Complete with filters.</p>	01		
05.	<p>GAS OUTLETS (BS-TYEP) Gas outlets, complete in Box/casing gas Specific, Self-sealing valve, indexed to eliminate interchangeability /erroneous tapping of gas, Filter and cover plate as per Standard Design requirements of the bidder with following color coding;</p>			
	1. Oxygen White			
	2. Nitrous Oxide Blue			
	3. Compressed Air 4 bar Black/ B&W Stripes			
	4. Surgical Air @ 07 bar B&W Stripes			
	5. Vacuum. Yellow			
	6. AGSS			
06.	<p>BED HEADS UNIT FOR ICU/CCU</p> <ol style="list-style-type: none"> Each unit consists of: 1,500 mm and above Horizontal type with railing Built in over bed Light with ON/OFF switch. Built in reading Light with ON/OFF switch. Provision for Nurse Call/ Alert Button Gas outlets (2x Vacuum, 2x Air, 2x Oxygen complete fitted). Electrical provisions; Electrical sockets: 6 Nos. & 2Nos. Multi Pin Plug and above schuko/ F-type All wiring conforms to standards, ground/earth Monitor shelf with railing clamp. IV pole with railing clamp Separate ducts for Electrical & Gas Pipes. 			
07.	BED HEAD UNIT FOR WARDS & PRIVATE ROOM			






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	<ol style="list-style-type: none"> 1. Each unit consists of: 1,000 mm and above 2. Horizontal type 3. Built in over bed Light with ON/OFF switch. 4. Built in reading Light, with ON/OFF switch. 5. Provision for Nurse Call/ Alert Button 6. Gas outlets (2x Vacuum ,2x Oxygen complete fitted). 7. <input checked="" type="checkbox"/> Electrical provisions; 8. <input checked="" type="checkbox"/> Electrical sockets: 4 Nos. & 2Nos. Multi Pin Plug and above schuko/ F-type All wiring 9. conforms to standards, ground/earth 10. <input checked="" type="checkbox"/> Separate ducts for Electrical & Gas Pipes. 			
08.	AVSU WITH AREA ALARM REMOTE SENSOR Alarm area with remote sensors. Individual display and sensor module. Self-diagnostic & error message display readable for ease of Maintenance psi, kPa or bar read out. Test & Mute Button, low alarm condition. Multiple zone valve box for six gases. Each wall type zone valve box shall consist of the following Components. A steel valve box which can house two to six shutoff ball valves. Pressure gauges to display the pressure of various gases.			
	5 Gases			
	3 Gases			
	2 Gases			
09.	MASTER ALARM Individual display and sensor module. Self-diagnostic & error message display readable for ease of maintenance psi, kPa or bar read out. Test & Mute Button, low alarm condition.			
10.	OXYGEN FLOW METER (Adult) Oxygen flow meter with humidifier and probes Oxygen Flow meter complete set from 1 to 15 lpm with autoclave able and unbreakable humidifier bottle.			
11.	VACUUM REGULATOR WITH GAUGE / DIGITAL The Vacuum Controller should be connected to Wall Source of Vacuum using direct probe or rail mounting System. Vacuum Levels 0 to 750 mm Hg complete with 1 Liter suction Bottles, Unbreakable/ Autoclavable. Complete with overflow safety system.			
12.	COPPER PIPING Supply and installation of seamless medical graded copper pipe, deoxidized and degreased along with required fitting etc., various sizes /diameter as per Drawing of the project and Design standard of the bidder with matching color indications of out lets.	RFT		
	Copper Pipe 12mm RFT			
	Copper Pipe 15mm RFT			
	Copper Pipe 22mm RFT			
	Copper Pipe 28mm RFT			
	Copper Pipe 42mm RFT			
13.	ANESTHESIA SCAVENGING SYSTEM Passive, Anesthetic Gas Scavenging System designed to remove exhaled anesthetic gas mixtures from operating theatres.			

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With Flow rate of Minimum 1250 LPM each, duplex

14	LINE VALVES		
	15 mm		
	22 mm		
	28 mm		
	35 mm		
	42 mm		
	54 mm		
	76 mm		

Item #	Description	Qty	Unit
1	2	3	4
	General Requirements for Medical Gas System		
a.	Shop Drawings with sectional details complete in all respect for complete Medical Gas Systems as per Specifications.	3	Set
b.	As Built Drawings with sectional details complete in all respect for complete Medical Gas Systems as per Specifications.	3	Set
c.	Contractor to list and price below with quantities any additional item(s) and/or quantities which are not included but required to complete the tender price for this section of works. Should the tenderer fail to insert any item(s) and/or quantities here, it will be deemed that this lumpsum price for the tender includes all items and no subsequent claims for any additional item will be entertained.		
2	Operation and maintenance of Medical Gas System		
	Operation and maintenance of Medical Gas		
	One month test run	1	Job
	Operation of maintenance of Medical Gas Systems for one year	1	Job
	Provision of Testing and commissioning ay BOC	1	Job
3	Supply, Installation AGS Duplex Machine FLC / Pump 7.2 CFM Complei in all respect.	4	Set
c.	Supply, Installation 2x2 CO2 Cylinder Bank with maniflod Couplet in all respect.	1	Nos
	Local		

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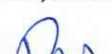
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d.	P.R.V (01-05 Bar)	1	Nos
e.	P.R.V (04-08 Bar)	1	Nos
4	Supply, Installation Triplex Air Compressor Build Pressure upto 10 Bar (145 P51) QV = 17 Itr/s (36 cfm)	1	Set
5	Supply, Installation Vacuum Pump Duplex (40 CFM) with panel & accessories etc, complete in all respects.	1	Set
6	Supply, Installation Oxygen (VIE) 6000 Itr with all essential accessories at Ground Floor.	1	Nos
7	Supply, Installation Oxygen 8 x2 Cylinder Bank faith maniflod Complet in all respect. Ground Floor	1	Set
8	Shhut - off Valve	109	Pcs
	Supply and Installation of shui off valve as per drawing & specs.		
i	1-7/8" dia	12	Nos
ii	1-5/8" dia	16	Nos
iii	1-3/8" dia	16	Nos
iv	1-1/8" dia	40	Nos
v	7/8" dia	20	Nos
vi	5/8" dia	5	Nos
9	Medical Gas Piping	46200	RFT
	Supply and Installation of copper piping type-K and fittings specially proposed for LMedical Gas Complete in all respect as per specification and drawings.		
i	5/8" dia	22341	RFT
ii	7/0" dia	12705	RFT
iii	1-3/8" dia	2013	RFT
iv	1-1/8" dia	7095	RFT
v	1-7/8" dia	528	RFT
vi	1-5/8" dia	858	RFT
viii	2-5/8" dia	363	RFT
ix	2-7/8" dia	297	RFT
10	Medical Gas Outlet	1460	Nos
	Supply & Installation of Medical Outlets complete in all respects as per drawing and specifications (Cem 10) For the followings services Make: Noxerrior - Italy		
i	MA4	400	Nos
ii	MA7	20	Nos
iii	Oxygen	600	Nos
iv	Vacuum	400	Nos

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v	AGS	20	Nos
vi	CO2	20	Nos
11	Medical Gas Valve Box with Alarm Panel (MDZ)	82	Nos
	Supply & Installation of Medical gas valve box and alarm panel Pressure switch Assembly complete with Tee, Adaptor etc. as per drawing & specifications.		
i	1 Medical Gass	36	Nos
ii	2 Medical Gass	20	Nos
iii	3 Medical Gass	8	Nos
iv	4 Medical Gass	2	Nos
v	6 Medical Gass	16	Nos
12	BED HEAD Side Panel with Oxygen, Suction * Medical Air Outlet Point & four Electric multi plug Socket	400	Nos

OR EQUIVALENT

Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE/FDA/MHLW)

Should be: ISO-13485 (Mandatory)

Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment

Central Patient Monitor

Specification

- Advanced **Central Monitoring System (CMS)** designed for real-time aggregated monitoring of multiple patients via networked patient monitors, wireless transport solutions, telemetry transmitters and compatible devices.
- Configurable for **central station, workstations, view stations and mobile access** across hospital networks.
- Scalable architecture suitable for wards, ICUs, telemetry units and large centralized monitoring centers.

Architecture & Capacity

- **3-layer network architecture** with flexible combinations of CentralStation, WorkStation, and ViewStation.
- Supports connection of **up to 1200 networked patient monitoring devices** hospital-wide.
- Each central station supports up to **64 monitored beds**.
- Workstations/ViewStations can be configured to be **fully interactive or view-only**.

Display & Interface

- CentralStation and WorkStation supports **multi-monitor configurations** (up to four displays).
- Supports **19" or larger LCD and touchscreen displays** with customizable layouts.
- Multi-patient display modes (e.g., grid view of multiple patient waveforms and data).
- Tabular trends, full disclosure waveform review, 12-lead ECG display options and event review tools.

Data Acquisition & Management

- **Continuous, real-time monitoring** of vital parameters transmitted from networked

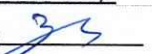


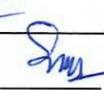
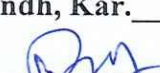
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	<p>bedside monitors and telemetry devices.</p> <ul style="list-style-type: none"> • Full disclosure waveform storage up to 240 hours. • Historical patient database enabling review of up to ~20,000 discharged patient records on some system configurations. • Detailed trends, alarms, events and parameter histories accessible across the network. <p><i>Connectivity & Integration</i></p> <ul style="list-style-type: none"> • Bi-directional communication with bedside monitors for parameter monitoring and alarm integration. • HL7 IHE PCD v2 export via eGateway for integration with hospital systems (ADT/HIS/LIS/EMR). • Connectivity to ECG management modules for centralized 12-lead ECG reporting. • Mobile access supported through smartphone and tablet interfaces (Android/iOS). <p><i>Monitoring Features</i></p> <ul style="list-style-type: none"> • Aggregated view of vital signs, waveforms, alarm statuses, and numeric parameters. • Ability to configure alarm thresholds, parameters and patient groupings. • Full disclosure waveform capture for retrospective review and analysis. • Support for telemetry monitoring via compatible devices like TM80 transmitters. <p><i>Documentation & Reports</i></p> <ul style="list-style-type: none"> • On-screen annotation and print support for detailed reports, trends and ECGs. • Network printing and dual-trace recording capability. • Export of patient data in PDF or other formats for clinical record keeping. • <p><i>Server & Storage</i></p> <ul style="list-style-type: none"> • CentralStation operates as a central server storing all clinical data locally or virtually on hospital servers. • Optional redundancy configurations (enterprise servers) ensure high availability and minimal data loss. • <p><i>Security & System Controls</i></p> <ul style="list-style-type: none"> • Multi-level user authentication & access control. • Data encryption and audit trails for secure hospital IT compliance. • Centralized alarm logging and notification management. <p><i>System Components</i></p> <ul style="list-style-type: none"> • CentralStation server & displays • WorkStations & ViewStations • Central Monitoring System Viewer & Mobile Viewer • Network infrastructure and licensed software components • Optional printers, recorders and remote displays. <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA 510K, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
20.	<p><u>DENTAL UNIT (COMPLETE WITH CHAIR, LIGHT, HAND PIECE UNIT HAND PIECES, SUCTION AND COMPRESSOR 4 HAND-PIECE</u></p> <p>Specification: Patient's Chair Manually adjustable flat headrest. armrest Swiveling for entry and exit of patient Multiple profiles and positions 3 favorite buttons for individualized instrument settings Programmable Starting and Rinsing positions</p>	4	120000

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Extendable foot rest for ergonomic treatment of long patients
 Fully hydraulically self-adjusting Chair with lifting capacity of 200 KGS.
 Automatic Emergency stop of chair once it meets an obstacle. Manual Emergency stop also to be available
 Synchronized movement of backrest and seat cushion by electromechanical motors prevents construction/over extension of the patient. The position of the patient's head on the headrest remains constant when the chair is lowered.
 Easy adjustment of chair & backrest positions.
 Standard Pneumatic Foot switch for controls of hand pieces.
 All the outlet & inlet for the services to the chair should be Concealed in the box to be at the foot area of the chair, as an infection control Measure.

Dentist's Element

Dentist Element with hanging hoses and adjustable arm with pneumatic brake system
 Control buttons for the individual chair functions, Programs, Light on/off and Intensity as well as for spittoon bowl and cup filler. Hand piece holders without lockouts
 Number of Hand piece positions including 3 way syringe: 05
 Hand piece priority system (if one Hand piece in use others will not operate while lifting from holder) 3x Hanging hoses, fiber optic type
 1 x 3-way syringe with autoclave able tip
 1x High Speed air turbine push button type with 400,000 rpm
 1x Slow Speed Air motor with internal water spray. Speed range from 2000-40000 rpm.
 Forward and reverse modes. Complete with straight and contra angle attachments
 1x Built-in Ultrasonic Fiber Optic Scalar frequency 28-36 kHz with sterilize-able hand piece and tips of same manufacturer. Water regulation on the scalar hand piece. Scaling and Endo mode
 Removable silicone tray pad
 Removable hand piece holder and tubing for cleaning and disinfection.

Assistant's Element

Number of hand piece positions including 3way syringe: 04 1 x 3-way syringe with autoclave able tip
 1 x High Volume Evacuation hose, autoclave able suction hand pieces with adjustment suction pressure 1 x saliva ejector hose, autoclave able suction hand piece with adjustment suction pressure

Water Unit

Automatic Bowl Rinse function Fixed on chair base
 Automatic Glass Fill function with adjustment
 Clean water system with the facility to change from clean (water bottle) to tap water with toggle switch Standard Wet suction through micro switches (read to connect to central / wet suction)

Patient's Light LED Light






For optimum illumination of the treatment site Flexible positioning via three flexible joints
 Anti-glare for the patient through clearly confined luminous spot Brightness is 8,000 – 26,000 Lux, 5,000- 6,900 Kelvin

02x Working Stools

Anatomically contoured seat, mounted on 5-castors which can automatically braked when no load is applied to the stool.
 Installation and all accessories must be included
 Operator, service manual and spare parts catalogue must be provided in both hard and digital copy
 All consumables/spare required replacement within 10 years of normal operation must be quoted optionally.
 Must have all tool, instruments and calibration equipment in Karachi
 End-user application training and technical training of engineer to be provided locally by a

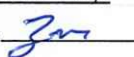
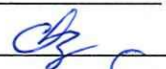

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	<p>trained specialist along with training material as per manufactures guideline OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
21.	<p>Ultrasonic Scaler</p> <ul style="list-style-type: none"> • Detachable & Autoclave able hand piece. • Works on 3 different modes • Automatic frequency tracking • With 5 Titanium Scaling tips (3 S, 1P, 1 Stain Removal) & one Endo attachment • Power input : 100V to 240V ~50Hz/60Hz • Output Power : 3W to 20W • Frequency : 28 kHz + 3 kHz <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW , (Any One Certificates of CE, FDA, MHLW) Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end.</p>	4	18000
22.	<p>128-Slice Computed Tomography (CT) Scanner System- For Clinical Diagnostic Imaging Applications GANTRY</p> <ul style="list-style-type: none"> • System should be capable of acquiring /generating 128 Slices or more per gantry rotation in Realtime. • Gantry bore / aperture to be at least 70 cm or more preferred with physical tilting of $\pm 30^\circ$ or better • Minimum gantry rotation time to be at least 0.35 seconds or better, for more than 128 slices (or more) per 360-degree rotation, for all applications. • Maximum scan field of view to be 50cm or more. Minimum slice thickness of at least 0.6mm. <p>TUBE</p> <ul style="list-style-type: none"> • Heat storage capacity of at least 7 MHU or more or larger without iterative dosage. • Maximum tube current 600 mA or more for all applications. <p>GENERATOR</p> <ul style="list-style-type: none"> • Tube voltage of 70/80kV, 100kV, 120kV, 135kV/140kV • High frequency power generator with minimum power of at least 70kw or more (equivalent rating shall not be acceptable). • Should be capable of variable kV setting insteps • Should have ability to vary the power(mAs) automatically in steps. • real-time dose reduction hardware/ software and with ECG modulation • Able to calculate patient dose in milli-sievert preferably before image acquisition • (CTDI) iterative dose reduction must be offered. • Low contrast detectability (LCD) is the most important specifications of CT scanner. the CT scan must be capable to show LCD of 5mm at 3hu (0.3%) contrast difference with radiation dosage of not more than 10mgy. • Scan length of at least 1.6 meters or more of helical or axial scan in a single acquisition. • Maximum scan time 100sec. or more for handling heavy patient load. • Spatial resolution should be 18 lp/cm or more at MTF 0%. 	1	3900000

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DETECTORS

- Solid state crystal ceramic detectors with conversion efficiency (x-ray to signal strength) of nearly 100% latest technology.
- Isotropic voxel size of 0.35mm or better, in all three axis.
- Minimum 64 physical detectors and detector electronics capable of providing 128 slices per gantry rotation or more.
- Detector's width 38 mm or more per gantry rotation.
- Must mention maximum number of detector elements

COUCH



- Dual motorized control (from console and gantry) of table movements in horizontal and vertical axis.
- Weight allowed on the couch up to 200kg or more covering weights. Horizontal movement speed up to 100mm per second.
- Single acquisition scan range of at least 1.6meter
- Scan with at least 0.25mm accuracy / reproducibility on a 200kg patient.

CONSOLE COMPUTER

- Gantry Built in or ceiling mounted patient Positioning and automated scan planning using AI Deep Learning Technology (prices Must be quoted Separately)
- System architecture and operating system must be based on latest technology (64bit disc or dual xenon processor pc) original.
- Multitasking and parallel processing CPU system. At least 32 GB RAM or more
- Hard disc capacity for image storage of at least 900GB or more. Capable of storing at least 450000 images in 512 x 512 format.
- Image area reconstruction and display matrix dimensions (1024 x1024).
- Console color monitor, TFT type of at least 21 inches or more, medical grade with maximum viewing angle
- CD / EOD and DVD writer.
- Console software with all the latest whole-body software should be supplied as standard.
- User interface software true isotropic volume acquisition Prospective and retrospective ECG gated acquisition Automated contrast media bolus tracking software.
- 3D reconstruction display original company software. A. Maximum and Minimum Intensity Projections
- B. Multiplanar and curved planar reconstruction
- C. 3D Shaded surface display
- D. 3D Volume rendering software
- E. 3D Virtual endoscopy, colonoscopy and bronchoscopy
- F. 3D cone beam correction. CT Angiography
- Image Reconstruction
- Lung Nodule Detection and Analysis
- Fat Index View to calculate body fat area.
- AI based reconstruction (AiCE, DELTA TrueFidelity etc).
- Metal Artifact Reduction Algorithm for implants, Pacemaker Dental implant such as SEMAR, O-MAR, MAR, iMARetc
- Automatic control of tube current over high and low attenuation areas for patient dose reduction software for low dose to patient original / certified.
- Iterative dose reduction software should be applicable for whole body organs.
- Cardiac scanning and coronary examination.

WORK-STATION

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- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

- 1 Standalone Workstation should be supplied from the manufacturer of CT scanner. Local solution will not be acceptable
- High speed link to operator console on DICOM network.
- System architecture and operating system (As per manufacturer recommendation for optimized processing)
- High resolution dual medical grade monitor of 21inch or more.
- DVD RW.
- Workstation Software
 - 3D Reconstruction Display
 - Maximum and Minimum Intensity Projections
 - Multi-planar and curved planar reconstruction
 - 3D Shaded surface display
 - 3D Volume rendering software
 - 3D Virtual Endoscopy, Colonoscopy and Bronchoscopy
 - CT Angiography
 - Brain Perfusion Analysis
 - Cardiac Function Analysis
 - Coronary Analysis
 - Advanced Coronary Vessels Analysis inclusive of Angio view
 - Advanced Peripheral /General Vessels Analysis
 - Lung Nodule Detection and Analysis
 - Lung Volume and Density Analysis
 - DICOM 3 ready (multi-vendor and multimodality compatible for send, receive, achieve, retrieve and print, on main console and workstations).

ACCESSORIES

- Programmable, power injector with flow/volume and temperature. Control mounted on mobile base, with 200 syringes of 150 ml capacity and connecting tubes (Medrad- Bayer, Guerbet, Angiomat, Nemoto, medtron, Seacrown) CE/FDA
- Table Accessories -- Table Pads, ARM Rest patient restraint kit, IV Pole, Infant Cradle, Flat head holder.
- Standard set of phantoms for calibration of CT.
- Pediatric scanning package - software and hardware with small FOV.
- Table accessories – table pads, arms rest, patient restraint kit, IV pole, and flat head holder.
- Online UPS (as per manufacturer recommendation minimum 120KVA)

WARRANTY & POST WARRANTY

- Warranty period of the complete package shall be of three (03) years starting from date of full functional commissioning including CT scan tube and detector (unlimited exposure).
- Maintenance of the machine / equipment during the whole period of warranty shall be responsibility of the vendor failing which, the vendor will have to pay down time penalty as indicated in terms and conditions.
- An annual optimal uptime of 95% is considered as an acceptable level of performance. Uptime should be defined as time available to user for data acquisition and processing on all working days throughout the year.
- If the uptime percentage for the measurement period shall fall short of 95% annually, the following formula will be applied to determine additional days in the warranty / service contract period.
- 100 – 95% No penalty
- 94 – 90% the warranty period will be extended by 1.5 times the number of days as extra downtime.
- 89 – 80% the warranty period will be extended by 2 times the number of days as extra

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downtime.

- Below 80% the warranty period will be extended by 4 times the number of days as extra downtime.
- The 8 hours non-functioning of the equipment or any part there of (all features as per specifications in contract/proposal) will be considered as one day down time. The equipment shall be fully functional as part of uptime and if it is partly functional i.e. some patients/procedures are not done, it should be considered as down time accordingly. If in this case, equipment is 70% functional i.e. 70% patients can be done on the machine, downtime will be 30% and warranty compensation will be made accordingly in terms of warranty extension as mentioned above.
- Down time is defined as the failure in the equipment operation to acquire or process the data, resulting in inability to carry out any procedure properly.
- Down time will start as the end users notifies the designated service / facility verbally or in writing.
- Down time will end when satisfactory repairs have been affected and the system is again fully functional with all parameters available for clinical use.
- The scheduled preventive maintenance shall not be considered as down time and shall not be more than one days.
- Manufacturer / supplier will be responsible for preventive maintenance of the system as per manufacturer recommendation, should keep a check on electrical, magnetic, temperature and humidity conditions. Such a check should be made every four weeks and record should be provided to radiology department.
- Manufacturer / supplier will guarantee the availability of spare parts and accessories for the system for at least 10 years.
- Manufacturer / supplier should also confirm that in event of the services costs falling or reducing in line with the manufacturer policy worldwide due to technical innovations or other reviews, they will reduce the maintenance cost accordingly.

RADIATION PROTECTION

- Lead glass for control room 5x3 feet 0.5 mm Pb Equivalent.
- Lead lining of doors windows as per requirement of the CT Scanner / P.N.R.A. will be responsibility of the vendors.
- Vendor must supply all radiation protection equipment (Lead aprons with hangers)

INSTALLATION AND COMMISSIONING

- The contracting firm will install complete system within 3-4 months starting from date of establishing L/C.
- All Site preparation is the responsibility of the vendor (Air-conditioning, flooring (Antistatic), False Ceiling, furniture, Earthing)

TRAINING

- Local training for doctors (for all reporting), technicians (operation of all packages), and engineers (Service level 1) until satisfaction.
- Clinical demonstration may be requested for Technical Evaluation
- Must have supplied/ installed, a minimum 10 units across Pakistan (satisfactory letter must be provided) and authorized as sole distributor for the last 5 years with certified

OPTIONALS

- Pricing of optional configuration (if any) should be quoted separately.
- All the options available with a vendor should be quoted separately. This will not form the basis of rejection or acceptance.
- List of trained engineering staff must be attached with the tender

Country of Origin: UK, USA, Europe, Japan or equivalent.

Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW

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	<p>(Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificate.</p> <p>Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end</p>		
23.	<p>Defibrillator <i>Specification</i></p> <ul style="list-style-type: none"> • Portable defibrillator/monitor for in-hospital and emergency use. • Combines manual defibrillation, AED function, external pacing and patient monitoring in one unit. • Designed for use in ER, ICU, CCU, ambulances and critical care settings. <p><i>Display</i></p> <ul style="list-style-type: none"> • 8" or more high-definition capacitive touchscreen • Auto-brightness adjustment and gesture control interface; physical buttons/knobs also provided for key operations. • Wide viewing angles for clear visibility. <p><i>Defibrillation</i></p> <ul style="list-style-type: none"> • Biphasic defibrillation waveform with energy up to 360 J. • Quick shock delivery with QShock™ technology — reduces time from power-on to shock delivery (< 5 s). • Manual defib and AED modes supported. • Synchronized cardioversion capability to align with patient R-wave. • External pacing function for temporary cardiac pacing support. <p><i>Monitoring Functions</i></p> <ul style="list-style-type: none"> • ECG monitoring (3-lead or 5-lead). • SpO₂ (oxygen saturation). • NIBP (non-invasive blood pressure). • CO₂ (capnography). • Continuous waveform display and numeric trends. <p><i>CPR Support Features</i></p> <ul style="list-style-type: none"> • CPR Filter: suppresses compression artifact for clearer ECG during chest compressions. • CPR Feedback: real-time feedback on CPR quality (rate, depth, recoil). • CQI™ (Comprehensive Quality Index): quantitative evaluation of CPR effectiveness. • Structured debriefing: enhances post-event review and team improvement. • Training mode: allows realistic CPR/defibrillation training without delivering shocks. <p><i>Data Storage</i></p> <ul style="list-style-type: none"> • Extensive internal memory for storing rescue and monitoring data. • Typical storage: ECG waveforms for ~120 h, trend data for ~200 h, and events/alarms (quantities vary by configuration). • Built-in recorder (thermal printer) for logs of waveforms, shocks, events and alarms. <p><i>Connectivity</i></p> <ul style="list-style-type: none"> • Support for M-Connect™ IT solution — integrates device data with hospital IT. • Network capability for remote access, device management and data export. • Optional Wi-Fi/Bluetooth in supported configurations. <p><i>Power & Battery</i></p> <ul style="list-style-type: none"> • Rechargeable battery pack with compatibility for mains and vehicle power (DC) via magnetic connector (easy coupling). • Fast readiness with rapid shock capability once powered on <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation</p>	12	360000

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	of equipment		
24.	<p>Dental X-Ray Machine Specification: Digital Dental X-Ray Machine DC Type (Mobile) Compatible with Digital Sensors, PSP Image Plate Scanners and Traditional Films 100% imported Scissor arm from the original manufacturer Microprocessor controlled Tube Current 2-4mA or better Tube voltage 60-70 kV or better Exposure time automatic adjustable Patient types: Child and Adult Automatic Selection of dose by Tooth selection Timer with integrated circuit Tube head with 360° rotation and beam limiter Power on light signal. x-ray emission light signal Focal point 0.2mm or better Filtration system Power supply 220V/50Hz Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	2	30000
25.	<p>Dialyzer Reprocessing Unit Specification: Double needle system and single needle with single pump</p> <ul style="list-style-type: none"> • Real time Monitoring of Bicarb • Should be open consumable types, no bonding on consumable and sterilant. It should be universal • Electronic Control of flow rates and blood flow • Large LCD Display with touch screen system for operation services and diagnostic. • Automatic clean, heat disinfect and rising mechanism. • Blood Pump 40 to 600ml/min or better • Heparin Pump 0 to 10 ml/hr. or better • Dialysate - flow 300 to 800ml/min or more • Temperature Control up to 35 to 45 degree adjustable • Venous pressure Monitor • Ultra-Filtration rate control: Range of UFR 0.0 TO 4.0 Liters/ hour. Or better • Air Bubble Detection with detection of Blood Tubing Lines and Blood. • Blood Detection. • Built in heat disinfect system and built in battery backup system. • Blood Pressure Monitor. • Machine should be capable for universal disposables and consumables and brand bonding is not acceptable • Real time hydraulic flow diagram on large screen • Quick and easy troubleshooting by real time function of each hydraulic part. • User friendly software for day maintenance. • With all standard accessories as per our requirement <p>Compatible RO system local assemble with important component</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	2	96000

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	<p>Digital Color Doppler (Echo Cardiography) <i>Specification</i> <i>Transforming ultrasound metrics from conventional beam-forming to channel data-based processing. It overcomes the traditional trade-off limitation among spatial resolution, temporal resolution and tissue uniformity, delivering exceptional image quality for infinite imaging solutions with non-stop improvements</i></p> <p>General</p> <p>Application: Abdomen, Obstetrics, Gynecology, Cardiology, Small parts, U Vascular, Pediatrics, Emergency Medicine, Anesthesia, Others</p> <p>Voice Annotation: Record voices as annotation for images and cine</p> <p>Setting management export/import: Image setting, Measurement setting, Exam configuration</p> <p>System boot-up: Boot-up from Shut-Down <=60 Sec, Boot-up from Standby < Shut-down in<=30 Sec</p> <p>Super-silent design: As quiet as a bedroom 26dB low noise design 21.5-inch High resolution color LCD, or above</p> <p>Monitor: Viewing angle>=176 degrees Tilt: 105°degrees Digital on-screen display of Brightness and Contrast controls Automatic adjustment of monitor light with the changing environ</p> <p>Control panel: Down/up with lifting arm range: 300±20 mm Rotate angle range: 180 degrees</p> <p>Alphanumeric Keyboard: Retractable, User define keys: 8</p> <p>Touch screen: 12 inch high sensitivity anti-glare color touch screen or more Support powerful touch gesture operation, including Image ma touch screen, Page up and down, Measurement on projected in Zoom in/out the projected image on touch screen, Rotate or er projected 3D/4D image on touch screen, 8 user defined gesture two fingers Touch screen panel angle adjustable for easy visualization: 50 in rotation Digital Brightness and Contrast adjustment via Preset Viewing angle>=170 degrees Fast swich for the combinations of recently used transducers a Support either hand writing or with gloves on</p> <p>Transducer connectors: 4 active ports and 1 pencil probe port Continuous scanning time: more than 1h</p> <p>Built-in battery: Full battery lasts for more than 24h in standby mode Battery fully-recharged time: less than 4h</p> <p>Voice control (iVocal): Support English</p> <p>Gel warmer: temperature adjustable</p> <p>Probe parameters</p> <p>Transducer technology: Single crystal transducers for convex, volume and phased arra Advanced linear transducers with crystal of composite materia getter image resolution and uniformity</p>			
26.			2	480000


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Element of probe	Max 192, probe depended		
Scanning method	Electronic convex,Electronic linear,Electronic sector		
Probe scanning angle	Max 196 degree, probe depended		
Scanning method	Electronic convex,Electronic linear,Electronic sector		
Probe types	Linear, Convex, Phase Array, Volume(4D)		
Probe frequency	Broad band multi frequency probe spanning with frequency bandwidth range from 1.2- 13 MHz.		
Biopsy guide	Supported		
Imaging mode			
Imaging mode	B, THI, PSH, M, Anatomic M, Color mode, Free Xros M, Free Xros CM, Color Doppler, Power Dppler, PW, CW, Trapezoid B mode Tissue Harmonic Imaging HD Scope: improve the detail information and image contrast on specific area Dehaze: Suppresses noise effectively, presents a cleaner 2D image Spatial Compounding Imaging, support 3 steps adjustment Frequency Compounding Imaging Speckle suppression imaging, support 7 steps adjustment and turnoff 3D speckle suppression imaging, support 7 steps adjustment and turnoff one- key image automatic and dynamic optimization for B, Color, Power, PW in real-time constantly HR Flow: High resolution flow with extraordinary spatial resolution for accurate vessel profile and less overflow; support both Color and Power mode. Echo Boost: To improve the homogeneity of cardiac images through the whole field of view; Better contrast resolution of myocardium tissue layers; Better noise control in cardiac chambers and muscles		
Special imaging features/technologies			
B imaging parameter			
Gain	0-100		
Focusing	Zone Vue: dynamic pixel focusing in a zone		
STC/TGC control	8 pods		
Max. depth	max 400mm, probe depended		
Dynamic range	30-260		
Gray map	8 types		
Persistence	0-7 levels		
Tint Map	8 types and Off		
B frame rate	Max:600 f/s or more		
Zooming	Zoom function with picture in picture indication on both frozen and live images Pan zoom and Spot zoom (up to 10 times) i Zoom for one key image enlarged to full screen TGC , Gain , Dynamic range , Gray map , Tint map , iClear , L/R Flip , U/D Flip , Rotation , iTouch , LGC , Dual live , Auto Merge , H Scale , Echo Boost , B/iNeedle , Smooth , Zoom , Ref Lines , Dehaze , ExtImage , ZoneVue, Edge Enhance		
Raw Data Post processing			
M imaging parameter			
Display formats	Display formats: V2:3, V3:2, V3:1, H2:3, Full (Karachi horizontal)		

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M sweep speeds	6 steps
Color M available	
Colorize Map	8 types, off
Gray Map	8 types
Raw Data Post processing	Gain , Speed , Dynamic Range , Gray Map , Tint Map , Display format
Spectral Doppler imaging parameter	
Display formats	Display formats: V2:3, V3:2, V3:1, H2:3, Full, Duplex/ Triplex (PW only) (V: vertical, H: horizontal)
Gain	0-100
Angle correction	-89-89 degrees
Sample Volume	0.5-30mm
PRF	PW: 0.7-18.9kHz or more CW: 0.2-100.0kHz or more
Scale	PW: max. 729.2cm/s; min. 21.5cm/s CW: max. 3850.0cm/s; min. 9.6cm/s
Gray map	10 types
Colorize Map	8 types and Off
Raw Data Post processing	Gain , Baseline, Volume, Angle , Speed , Dynamic range, Gray map , Tint Map, Display format , Invert , WF, T/F Res
Color/Power Doppler imaging parameter	
Gain	0-100, 2/step
Color frame rate	Max 222f/s or better
Color map	V0-V10, VV0-VV9
Power map	P0-P3, dP0-Dp3
PRF	0.2-6.3kHz
Post processing	Gain , Baseline , Smooth , Color map , Priority , Dual Live , Invert , Velocity tag , Glazing flow
3D/4D	
iClear	Speckle reduction imaging for 3D/4D image
4D Frame rate	max. 80 vps, dependent on transducers
3D/4D Scenario setting	Smart Scene3D (Spine, Brain, Long Bone, Face, Endometrium, Pelvic)
Color 3D	Supports Color and Power mode for Static3D
STIC	B and Color STIC available Spacing: 0.5-10mm
iPage+	Slice Number: 3-25 Slice layout: 2*2, 3*3, 4*4, 5*5
CMPR	Flip: Thickness, Direction Trace Options: Line, Trace, Spline
3D Layout	Niche 3Slice
iLive(revolutionary technology for realistic view of fetus with new virtual light source)	
Smart V	
auto single volume calculation	auto detect contour of target

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Smart FLC	Automatic follicle calculation in 2D/3D		
IVF package	Specialized IVF program solution, including IVF patient info, measure, growth curve, report, body marks and comments		
Smart Face	One button for fast removal of face occlusions; Structures such as limbs or umbilical cord can be easily recovered from the occlusion.		
Smart Pelvic (2D)	Including auto evaluation package for anterior pelvic compartment, and auto evaluation package for anal levator hiatus.		
Smart OB	Automatic measurements for most frequently used OB items to greatly reduce time and increase productivity Support BPD, FL, HC, OFD, AC Measurement result can be modified by users		
Smart NT	Auto NT measurement based on 2D image Auto detection NT inside the ROI		
Smart Hip	Innovative 2D Graf auto measurement of hips, Automatic detection of key structures based on domain knowledge Automatic α and β measurement for easy Graf classification, for Simple and efficient, accurate and reliable DDH* diagnosis		
Natural Touch Elastography			
Available	linear, endocavity, endocavity volume, bi-plane transducers		
Unique shell analysis function	to analyze infiltration status of the tumor		
UWN Contrast Imaging			
Available on Convex and Linear, Endocavity, bi-plane			
Micro-Flow Enhancement	Micro Flow Enhancement for better visualization of tiny vessel perfusion		
Pro capture	Captures prospective image less than 480 seconds		
Retro capture	Captures retrospective image less than 120 seconds		
Destruct Time	500-2000 ms or more		
Contrast Imaging QA			
Support Time-Intensity Curve analysis			
Freehand ROI	Up to 8 ROIs		
Motion tracking	Reduce the effect of tissue movement A easy and fast way of liver steatosis quantitative assessment		
Smart HRI (Hepatorenal Index)	One key automatic recognition of liver and renal cortex, and auto brightness ratio calculation of liver and renal cortex based on 2D image		
Quantitative flow analysis (CPP)	Auto statistics of color pixel percentage within the Color/Power ROI, ellipse/rect./trace, export CPP data available Automatic and precise lesion trace and measurements,		
Smart Trace	Real-time and automatic boundary tracing calculation during manual trace for higher accuracy and ease of use		



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<p>Glazing Flow</p> <p>iScape View (panoramic imaging) Available on all transducers Acquisition method: B and Power</p> <p>iNeedle (Needle visualization enhancement) Available on all linear and convex transducers</p>	<p>It's a brand new way to demonstrate the Color/Power Doppler flow innovatively in a 3D visualization. Glazing flow is able to provide intuitive and easy visualization of blood flow structures, especially very tiny vessels and boundary definition of crossing vessels.</p>	
<p>RIMT</p>	<p>RF-Data IMT extremely accurate IMT evaluation in real time Calculation of 6 RIMT values, RIMT average value, SD and ROI W Based on RF data, R-VQS measures the change of blood vessel diameter by tracing the distension of vessel wall.</p>	
<p>R-VQS</p> <p>Smart Track</p>	<p>Combined with systolic and diastolic blood pressure values, Pulse wave velocity(PWV) and Hardness coefficient can be calculated. Based on smart track of vessels, it can automatically optimize both Color and PW, including Color box position & angle and PW sample volume position & angle & size & PW sample line's position and angle, for more intelligence during real time scanning of vascular exams.</p>	<p>both sample</p>
<p>Auto IMT</p> <p>V-Mapping</p>	<p>Automatic measurement for intima-media thickness IMT trend graph available for IMT progression analysis Near wall and far wall detection available Intuitive pathology depiction on vascular anatomy map; Draw pathology on vessel map of touchscreen during real-time scanning, show more anatomical info in report</p>	
<p>Free Xros M</p> <p>Display line</p> <p>Display Format</p> <p>Sweep speed</p>	<p>up to 3</p> <p>Display formats: V2:3, V3:2, V3:1, H2:3 (V: vertical, H: horizontal)</p> <p>6 steps</p>	
<p>Free Xros CM</p> <p>Available on TDI mode</p> <p>Display formats:</p> <p>Sweep speeds</p> <p>TDI and Quantitative Analysis</p> <p>Imaging mode</p> <p>TDI frame rate</p> <p>PRF</p>	<p>V2:3, V3:2, V3:1, H2:3 (V: vertical, H: horizontal)</p> <p>6 steps</p> <p>TVI, TEI, TVD, TVM Max frame rate: 3175 f/s 0.4-14.9kHz</p>	<p> Director Health Services Karachi Division</p>

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ROI	UP to 8
ROI tracking	tracking ROI along with cardiac movement
Tissue Tracking Quantitative Analysis	
Views for Analysis	Six views for analysis: ALAX, A4C, A2C, PSAXB, PSAXM, PSAXAP
Parameters	Volume, Speed, Displacement, L Strain, L Strain R, T Strain, T Strain R, Area, R Strain, R Strain R, C Strain, C Strain R, C Rotation, C Rotation R
Trace method	3 point, manual
Auto EF	An intelligent way to analyze 2D echo clips to automatically recognize diastole/systole frames and output EDV/ESV/EF etc. results by Simpson method. Auto workflow protocol, Standardize and simplify the workflow, let you focus more on the patient and diagnosis
iWorks	Templates are user configurable Auto recording regular scanning procedure to generate user-defined protocol Tutorial function as a guidance to show basic scanning skill with graphic of probe position, schematic of anatomy and example clinical image; Support audio broadcast Support ABD, SMP, URO, OB, GYN applications
iScanHelper	
Storage	
HDD	Hard disk (1TB HDD, could be upgraded to 512GB SSD with SSD price)
Cine memory	Maximum cine memory up to 32577 frames (B storage server) or 163.84s (M storage server) (depends on the mode)
Retrospective and prospective storage cine length	Max. time 480s
Single image format	BMP, JPG, TIFF, DCM
Multi-frame images formats	AVI,MP4, DCM, CIN(supports off-line analysis) iStation™ workstation dedicated for patient exam management Patient exam Query/Retrieve Support review of current and past exam Support New exam, Active exam, Continue exam and End exam Support measurements and calculations on archived exam and images Support backup/send to USB devices, DVD-RW, CD-R, DVD+R, DVD-R, DVD+RW media
Patient information management system	
Report	
DICOM 3.0 (option)	Specific report template for the application DICOM Verify/Print/Store/Storage Commitment/Media Exchange DICOM Worklist DICOM Query/Retrieve MPPS Structure reports for OB/GYN, Cardiac Vascular, Breast, Urology, Pediatric, Small Parts, ABD
Built-in wireless adaptor	Can be used as hotspot to provide WiFi freely


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<p>MedSight</p>	<p>An interactive APP that lets you transfer clinical images or cine loops straight from ultrasound system to a smart devices through WiFi, such as mobile phone or tablet. Support both IOS and Android powered smart devices DICOM is not necessary in Ultrasound when using Android powered devices An powerful APP for doctors Support Android and IOS powered smart devices, such as tablet PC or mobile phone</p>		
<p>MedTouch</p>	<p>Remote control ultrasound machine: Gain, Depth, Open Color mode, iZoom, iTouch, Freeze, Save... Remote patient data management: review, query, retrieve patient datas Built-in tutorial software DICOM not necessary</p>		
<p>UltraView (an off-line analysis workstation)</p>	<p>Support patient data management, precise measurement, professional analysis and streamlined connectivity between computer and ultrasound main unit A complete range of measurement and calculation packages for general and specific application, including Abdomen, Obstetrics, Gynecology, Cardiology, Small parts, Vascular, Urology, and Pediatrics etc. Support user defined measurement item and obstetric formula</p>		
<p>Measurement & Calculation</p>			


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General measurement	<p>B mode: 14 items, including</p> <ul style="list-style-type: none"> - Depth (Max: 40cm) - Distance - Area: Ellipse, Trace, Spline, Cross - Trace Length - Double Distance - Parallel - Volume: 3-Distance, Ellipse, Ellipse+Distance - Distance Ratio - Area Ratio - IMT - B Histogram - B Profile - Volume Flow - Color Velocity <p>M mode: 5 items including</p> <ul style="list-style-type: none"> - Distance - Time - Slope - Velocity - Heart Rate <p>Doppler mode: 7 items including</p> <ul style="list-style-type: none"> - D Velocity - Time - Heart Rate - Volume Flow - Acceleration - PS/ED - D Trace
Measurement packages	<p>Including Abd, OB, GYN, Cardiology, Small Part, Urology, Vascular, Emergency, and Nerve</p> <p>Including BPD, HC, AC, FL, GS, CRL, NT etc</p> <p>User define OB table/formula, name editable</p>
Obstetrics package	<p>User define GA formula, name editable</p>
Auto calculation	<p>Auto trace PW wave form, including parameters of PS, ED, MD, PPG, TAMAX, TAMEAN, Volume Flow, DT, MPG, MMPG, VTI, AT, S/D, D/S, PI, RI, HR, PV</p> <p>Support online selection of parameters</p>
Input and output	<p>USB: 6 ports (2 USB 3.0 and 4 USB 2.0)</p> <p>Support ECG signal</p> <p>Microphone, S-Vedio, HDMI, VGA out, Audio out</p> <p>Ethernet</p>
USB 3.0 ports	
Physio Input	
Video/Audio Input/Output	
Others	
Basic components, accessories, special tools and spare parts	
Main unit	1set (with digital beam former)
Wheels	4 wheels lock separately, Central brake optional

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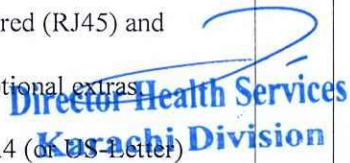
	<p>Monitor 1 set</p> <p>Cable 1 set</p> <p>Operation manual 1 set</p> <p>Electrical power Voltage: 100-240V~, Frequency: 50/60 Hz, Power consumption: 650 VA</p> <p>Transducers</p> <p>Convex probe Single crystal convex probe Frequency: 1.2-6.0MHz Probe element: 128 Scanning angle: 74 degrees</p> <p>Linear probe Frequency: 3.0-13.0MHz Probe element: 128 Field of view: 38.2mm</p> <p>Environment</p> <p>Operating Environment Ambient temperature: 0°C~40°C Relative humidity: 20%~85% (no condensation) Atmospheric pressure: 700hPa~1060hPa</p> <p>Storage & Transportation Environment Ambient temperature: -20°C~55°C Relative humidity: 20%~95% (no condensation) Atmospheric pressure: 700hPa~1060hPa</p> <p><i>OR EQUIVALENT</i></p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
27.	<p>ETT Unit Specification</p> <ul style="list-style-type: none"> • Endoscopy Trolley (ETT Unit) designed for organizing and supporting endoscopy equipment, essential accessories, and instrument storage. • Suitable for use in gastroscopy, colonoscopy, bronchoscopy, cystoscopy, and minor endoscopic procedures. • Robust construction with ergonomic design for ease of movement and procedural efficiency. <p><i>Construction & Materials</i></p> <ul style="list-style-type: none"> • Body Frame: High-quality stainless steel 304 or equivalent corrosion-resistant material. • Top Work Surface: Smooth, non-slip, easy-clean surface (laminated or stainless steel). • Cabinets & Drawers: Lockable, smooth-sliding drawers for scopes, accessories, biopsy forceps, and cleaning tools. • Finish: Scratch-resistant powder coating or medical-grade paint. • Caster Wheels: Heavy-duty, lockable swivel castors for easy maneuverability and stationary locking. <p><i>Dimensions</i></p> <ul style="list-style-type: none"> • Overall: Approx. 900–1200 mm (W) × 500–700 mm (D) × 900–1100 mm (H). • Designed to fit within standard endoscopy procedure rooms. <p><i>Work Surface & Utility Accessories</i></p> <ul style="list-style-type: none"> • Main Work Surface: Large enough to place light sources, processors, monitors and documentation. 	1	120000


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	<ul style="list-style-type: none"> • Instrument Holders: Dedicated holders for biopsy forceps, suction valves, and channel cleaners. • Waste Bin: Built-in removable waste bin with cover. • Sink (Optional): Stainless steel sink with drainage for cleaning tools. <p><i>Drawers & Storage</i></p> <ul style="list-style-type: none"> • Number of Drawers: Minimum of 3–4 drawers with smooth ball bearing slides. • Drawer Locks: Central locking mechanism for security. • Removable Trays: For easy cleaning and sterilization. • Open Shelves: For scopes and electrosurgical accessories. <p><i>Electrical Features</i></p> <ul style="list-style-type: none"> • Power Outlets: Minimum 4–6 GFCI outlets for endoscopy light source, insufflator, monitor, suction, and accessories. • Surge Protection: Built-in surge protector with indicator. • Cable Management: Integrated cable routes and clips to prevent tangling. <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
28.	<p>ECG Machine 06 Channel Specification</p> <ul style="list-style-type: none"> • Screen size: 12-inch touch-screen display or above • Fully laminated display (anti-glare / reduced reflectance) for clear visibility from different angles • Full-screen touchscreen with pinch-to-zoom (two-finger zoom) for ECG trace inspection <p>ECG Recording & Analysis</p> <ul style="list-style-type: none"> • Leads / Channels: 12-lead (12-channel) standard ECG • Recording modes: Resting ECG (standard 12-lead, 10-second acquisition) • ECG analysis algorithms: Supports both the Glasgow 12-lead ECG analysis algorithm and the proprietary 12-lead rest-ECG algorithm from manufacturer — applicable for adults and pediatric patients. • Automatic pacemaker detection: Device can detect pacemaker signals and mark on a separate channel for clarity. • Abnormal beat detection & flagging: Abnormal beats (e.g. PVCs) flagged, with ability to freeze waveform up to 30 minutes for review. • ST-segment analysis & MI (myocardial infarction) visualization tools: Graphical representation of MI location + ST change bar-chart for easier detection of ischemia / infarct. <p>Data Handling & Connectivity</p> <ul style="list-style-type: none"> • Internal storage: Up to ~1200 ECG reports stored internally • Report formats: Multiple report layout options — e.g. 3×4, 3×4+1R, 3×4+3R, 6×2, 6×2+1R, 12×1, 6×1(L), 6×1(C) • Data export / integration: Supports major standard formats / protocols — HL7, DICOM, XML, PDF — enabling easy integration with hospital information systems (HIS / PACS / EMR). • Connectivity: Built-in modern network capabilities — including wired (RJ45) and wireless (Wi-Fi 6) for fast, secure data transfer. • Optional add-ons / accessories: Barcode scanner and trolley are optional extras. <p>Printing / Output</p> <ul style="list-style-type: none"> • Built-in thermal printer — prints ECG reports on Z-folded DIN-A4 (or US Letter) thermal paper. 	8	72000


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	<ul style="list-style-type: none"> • Jam-proof paper outlet — patented design to prevent jams and ensure smooth printing. • Print quality / durability: Clear, uncompressed recordings even after 100,000 meters of printing (long-term reliability). <p style="text-align: center;">Power & Portability</p> <ul style="list-style-type: none"> • Battery: Built-in Lithium-ion battery — allows up to ~ 8 hours of operation (without print function) on a full charge. • Operation without mains: Useful for mobile clinics, emergency use, or locations with unstable power. <p style="text-align: center;">Usability & Workflow Enhancements</p> <ul style="list-style-type: none"> • Visual electrode-status indicator: Helps ensure correct electrode placement and signal quality; shows warnings if signal quality is poor (e.g. red/yellow indicators). ECG acquisition automatically starts when signal is stable — no need to press an extra button. • Support for additional leads for special exams: For right-chest or posterior-wall evaluation (e.g. V3R, V4R, V5R, V7, V8, V9) — device guides placement and name-adjustment of leads in software & report. • Quiet operation: Designed for low-noise printing and general use in clinical environments. <p>Intended Use / Clinical Settings</p> <ul style="list-style-type: none"> • Resting 12-lead ECG diagnostics — suitable for adults, pediatric patients, including pacemaker detection and myocardial infarction / ischemia screening. • Emergency department, cardiology clinic, general wards, mobile clinics — thanks to portability (battery), connectivity (Wi-Fi / LAN / USB), and flexible printing/storage options <p>OR EQUIVALENT Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
29.	<p>ECG Machine 03 Channel Specification</p> <ul style="list-style-type: none"> • Device Type: Portable, three-channel ECG recorder designed for resting 12-lead ECG acquisition, analysis and reporting. • Application: Cardiovascular diagnostic screening and routine ECG monitoring in hospitals, clinics, emergency rooms, ambulances, and point-of-care settings. • Designed for professional use with a high-resolution colour display and integrated printer. <p><i>ECG Acquisition & Lead System</i></p> <ul style="list-style-type: none"> • Channels: 3 simultaneous acquisition channels. • Leads: 12-lead ECG reconstruction from 3-channel data. • Lead Modes: 3/5/12 lead supported (depending on configuration). • Acquisition Modes: Pre-acquisition or post-acquisition for instantaneous ECG capture. <p><i>Display</i></p> <ul style="list-style-type: none"> • Display: 5" colour TFT LCD or above for real-time ECG waveform monitoring. • Resolution: Standard for clear waveform visualization. • Recorder: Built-in thermal recorder supporting 80 mm width thermal paper with selectable print speeds (5, 12.5, 25, 50 mm/s). • Supports both roll paper and Z-fold paper printing configurations. <p><i>4. ECG Analysis</i></p> <ul style="list-style-type: none"> • Diagnostic Algorithm: University of Glasgow ECG analysis algorithm with 12-lead analysis software for accurate interpretation including adult and pediatric references. • Pacemaker Detection: Automatic detection supported. 	7	52500


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- **Waveform Tools:** Rhythm, ST segment, and arrhythmia flags provided by built-in algorithms.

Sampling & Performance

- **ECG Sampling Rate:** ~64,000 samples/sec (A/D) or better
- **Digital Sampling Rate:** 1,000 samples/sec per channel.
- **Pacer Sampling:** 96,000 samples/sec (A/D).
- **Frequency Response:** 0.01 – 500 Hz.
- **Input Impedance:** $\geq 100 \text{ M}\Omega$ 10 Hz.
- **Common Mode Rejection Ratio:** $\geq 140 \text{ dB}$ (AC filter on).
- **Resolution:** 24-bit A/D with $\sim 0.119 \mu\text{V/LSB}$ resolution.
- **Noise Level:** $\leq 12.5 \mu\text{V}$ (p-p).
- **Accuracy:** Meets IEC 60601-2-25 standards for ECG performance.

Physiological Parameters

- **Heart Rate (HR) Range:** 30 – 300 bpm or better
- **HR Accuracy:** $\pm 1\%$ or $\pm 1 \text{ bpm}$ (whichever greater).
- **Sensitivity / Gain Settings:** Auto, 1.25, 2.5, 5, 10, 20 mm/mV (and combinations) $\pm 5\%$ tolerance.

Memory & Data Management

- **Internal Storage:** Stores approx. **800 – 1,000+ ECG reports.**
- **Report Recall:** ECG reports can be retrieved, previewed, re-analysed and optionally transmitted electronically via network.

Power Supply & Battery

- **AC Power:** 100 – 240 VAC $\pm 10\%$, 50/60 Hz, $\sim 60 \text{ VA}$ input.
- **Battery:** Rechargeable **lithium-ion battery** (approx. 11.1 V, $\sim 2500 \text{ mAh}$).
- **Battery Life:** Approx. **6 hours** continuous operation or ~ 500 ECGs on a full charge (varies by usage).
- **Charging Time:** ~ 3.5 hours (device off).
- **Operating Temp:** $\sim 0 - 40 \text{ }^\circ\text{C}$.
- **Humidity:** 15–95% RH (non-condensing).
- **Storage Temp:** $-20 - 60 \text{ }^\circ\text{C}$.

Safety & Standards

- Complies with IEC 60601-2-25 ECG equipment requirements.
- **Defibrillation protected:** Withstands defibrillator discharge (up to 360 J) without data loss.
- Electrocardiograph designed for safe medical use, portable in clinical environments.

Connectivity & Printing

- **USB ports** for data export and firmware updates.
- **Network interface** (RJ45) for report transmission.
- Optional connectivity to hospital systems and external printers.

Accessories

- **12-lead ECG cable** (IEC/AHA compliant).
- Set of 6 chest electrode leads and limb lead cables.
- Thermal paper (roll or Z-fold).
- Rechargeable battery and mains power cord.
- Optional **trolley**, carry bag and barcode reader.

OR EQUIVALENT

Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)

Should be: ISO-13485 (Mandatory)

Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment

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- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. Raj

30.	<p>Electrolyte Analyzer Specification</p> <p><i>Measurement Principle</i></p> <ul style="list-style-type: none"> • Measurement Method: Ion Selective Electrode (ISE) for direct quantification of electrolytes. • Suitable for testing serum, plasma, whole blood, cerebrospinal fluid and diluted urine. <p><i>Analytes / Test Parameters</i></p> <p>Measured Electrolytes:</p> <ul style="list-style-type: none"> • Potassium (K⁺) • Sodium (Na⁺) • Chloride (Cl⁻) <p><i>(Additional analytes such as Ca²⁺, pH, TCO₂, AG, Li⁺, Mg²⁺ are available on extended BKE models, but BKE-A focuses on core electrolytes.)</i></p> <p><i>Performance & Throughput</i></p> <ul style="list-style-type: none"> • Measuring Speed: ≤ 25 seconds per test. • Sample Volume: 60 – 150 μL depending on the test. • Analysis Method: Ion selective electrode (ISE) technology. <p><i>Key Features</i></p> <ul style="list-style-type: none"> • Automatic potential tracking correction for stable performance. • Automatic monitoring and filtering of tiny bubbles for measurement accuracy. • Wave and pipeline flushing to prevent blockages and cross-contamination. • Power-off data protection; results remain stored. • Low consumables cost. • Automatic fault alarm and elimination function. <p><i>Sample Handling</i></p> <ul style="list-style-type: none"> • Manual injection • Designed for use with standard biological fluids as noted earlier. <p><i>Display & User Interface</i></p> <ul style="list-style-type: none"> • 7-inch high-definition touch screen or above for easy operation and clear result display. <p><i>Data Storage</i></p> <ul style="list-style-type: none"> • Internal Storage: Up to 50,000 test results stored digitally. • Printer: Built-in thermal printer for immediate hard-copy reporting. • Interface: RS-232 port for connection to LIS (Laboratory Information System). <p><i>Calibration & Quality</i></p> <ul style="list-style-type: none"> • Supports automatic and manual calibration. • Includes sample volume detection to ensure accuracy and reduce errors. <p><i>Operating Conditions</i></p> <ul style="list-style-type: none"> • Power Supply: AC 100 – 240 V, 50/60 Hz, approx. 70 VA. • Operating Temperature: +10 °C to +40 °C. • Relative Humidity: ≤ 80 % (non-condensing). • Atmospheric Pressure: 86 – 106 kPa. <p><i>Physical Specifications</i></p> <ul style="list-style-type: none"> • External Dimensions: approx. 405 × 214 × 471 mm (W × D × H). • Net Weight: approx. ~12.5 kg. <p><i>Testing Ranges & Resolution</i></p> <ul style="list-style-type: none"> • K⁺: 0.5–20.0 mmol/L (0.01 mmol/L) • Na⁺: 15–200 mmol/L (0.01 mmol/L) • Cl⁻: 15–200 mmol/L (0.01 mmol/L) 	3	49500
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	<p><i>Sample Types</i></p> <ul style="list-style-type: none"> • Enables testing of: <ul style="list-style-type: none"> ○ Serum ○ Plasma ○ Whole blood ○ Cerebrospinal fluid ○ Diluted urine <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
31.	<p>Electronic Digital Infusion Pump</p> <p>Technical Specifications</p> <p>Display: 3 inch or better capacitive touch screen, TFT color LCD</p> <p>MODE: Rate mode, time volume mode, body weight mode</p> <ul style="list-style-type: none"> • Functions: Purge, Bolus, Anti Bolus, KVO • Infusion Rate: 0.1ml/h to 2300ml/h or better • Rate accuracy: within $\leq \pm 1.8\%$ • Bolus rate: 0.01 ml/h to 2300 ml/h • Volume limit: 0.1ml to 9999ml • Maximum infusion pressure: 120kpa or better • Occlusion: High50~1125mmHg support 1mmHg , default 15 levels 450 mmHg (107.4 kPa), Medium <p>Alarms:</p> <ul style="list-style-type: none"> • Audible and Visible • VTBI done, VTBI near done, KVO finish, syringe empty, syringe near empty, syringe disengaged, occlusion, system error, system abnormal, battery low, battery empty, reminder, AC power disconnection, standby. <p>Power Source: 100-240Vac 50/60Hz</p> <ul style="list-style-type: none"> • Built-in battery 6 hours backup and drug library or better • KVO Speed: 0.1-5.0 ml/h <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	30	195000
32.	<p>ENT Treatment Chair (Complete all accessories)</p> <p><i>Specification</i></p> <p>ENT Treatment Unit</p> <ul style="list-style-type: none"> • High-quality, electrolytically galvanized sheet steel housing, aluminium profiles and high-quality plastic, stoved enamel powder coating with antibacterial and antimycotic characteristics with fine structure • Easy to transport thanks to brake able, antistatic heavy-duty castors • Electronic operating and display system: robust, user-friendly glass control panel with touch-sensitive function keys • Ergonomically height-adjustable swivel console for handpieces, fiber optic cable, endoscope quiver and quiver for used rigid endoscopes • LED light strips for alarm and ambient light 	1	240000


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- 2x flat and 2x high drawers size M with Servo-Drive, fully extendable with soft-close mechanism
- Instrument level with stainless steel instrument trays, indirect illumination for instrument levels
- 2x flat acrylic drawers size M with Servo-Drive, fully extendable with soft-close mechanism
- Pull-out writing desk
- Hygiene cover used to be set up for instrument level
- Drawer for used instruments with Servo-Drive
- Waste bin with Servo-Drive, soft-close mechanism
- Mirror warming block for approx. 50 mirrors
- Gallery above instrument level with powder-coated aluminum Shelf 700 x 400 mm
- Headlamp holder (magnetic)

Endoscope Quivers:

- Pre-heated endoscope quiver 5 mm - for preheating endoscopes (2.7 mm or 4.0 mm), max. endoscope length 200 mm
- Pre-heated endoscope quiver 12 mm - for preheating laryngoscopes (10 mm or 11 mm), max. endoscope length 200 mm
- 3x stainless steel quiver for flexible endoscopes with holder, ver. 4 for fibroscopes (quiver depth 490 mm), with 3x stainless steel quiver, inner quiver diameter 28 mm, magnetic holder

SUCTION SYSTEM:

- vacuum pump (oil-free, capacity 60 l/min at -0.85 bar), automatic emptying of suction bottle with rinsing system, vibration-free bracket for vacuum pump, automatic turning on/ off when suction tube is picked up, antibacterial suction tube with quick connector; including syphon pump (water supply connection necessary)
- Vacuum regulator for precise adjustment
- Metal nasal olives for the suction tube (Set of three sizes) small (18 mm), medium (20 mm), large (22 mm)

COMPRESSED AIR SYSTEM:

- Compressor (oil-free, 12 l/min, max. 2.5 bar) pressurized container with autoclavable compressed air filter, autoclavable compressed air handle, antibacterial handle tube with quick connector, incl. 3x medicament sprayer for liquids and holder for spray bottles.
- Compressed air control valve for fine dosing
- Medicament sprayer for powder- incl. detachable sprayer cannula and bottle
- Medicament sprayer bottles for liquids

LED LIGHT SOURCE:

- 2x cold light sources, high power LED - STORZ connection, intensity regulation incl. holder for light cable
- Automatic switching for the light sources - automatic light switch-on when the light guide is removed
- Fiberoptic light cable, 3.5 mm, 0° straight, length 145 cm - incl. STORZ adapter

HEADLIGHT:

- Surgical LED headlight, wireless, adjustable black headband
- powerful focusable headlamp with one white LED, weight 350 g, operating time 3.5 hours, light field 11 to 130 mm, color temperature approx. 6.000 K, headband adjustable, black

ENT CHAIR:

- Hydraulic height adjustment, 200 mm,
- Adjustment of back rest from +9° to -90° by infinitely adjustable safety gas spring.

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- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<ul style="list-style-type: none"> Adjusting lever on both sides. Synchronous movement of the backrest and legrest, with footrest folding to the front. arm rests of integral foam. Tiltable 100° backwards for easy entry from the side. <p>DOCTOR'S STOOL:</p> <ul style="list-style-type: none"> Braked safety castors Ring release, seat upholstery ø 36 cm, High lustre polished aluminium foot Seat height 46 - 58 cm" <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHILW (Any Two Certificate) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
33.	<p>Hematology Analyzer Specification</p> <ul style="list-style-type: none"> 3 Part Differential with 21 Parameters + 3 histograms (RBC, WBC, PLT) Parameters: WBC, LY%, MO%, GR%, LY#, MO#, GR#, RBC, HGB, HCT, MCV, MCH, MCHC, RDW-CV, RDW-SD, PLT. PCT, MPV PDW, P-LCR, Research Parameters: P-LCC*, Mentzer Index*, RDWI*, NLR* Measuring mode: Open mode Throughput: CBC + WBC 3 part differential: Approx. 60 samples/h Measuring time: CBC WBC 3 part differential: Approx. 45 s/ sample* Sample volume: Normal mode: CBC WBC 3 part differential 20µL Predilution mode: CBC 10 or 20µL Capillary mode: CBC 20µL Measuring method / Principle: WBC, RBC, and PLT count: Electric Impedance method (DynaHelix Flow technology) HGB: Colorimetric method HCT: Calculated from RBC histogram WBC differential: Calculated from WBC histogram Data storage capacity: 50,000 data including histograms in the memory of the analyzer Data transfer: Celltac +supports seamless data transfer to laboratory information systems through the LAN port or RS-232C port. ASTM protocol is available Quality Hematology Testing: DynaHelix Flow technology perfectly aligns RBC and PLT cells for high impedance counting precision using an advanced hydrodynamic-focused sheath flow before passing through the aperture. This newly-developed advanced DynaHelix Flow Technology greatly improves counting precision and accuracy. Integrated QC Program: QC Program is available. The same QC material can be used for CBC, 3 part diff. Automatic priming & cleaning. Automatic/manual startup, electronics self-checking, filling of all hydraulic lines Automatic reagent monitoring system. External Printer Option. 	3	90000


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	<ul style="list-style-type: none"> Panic value measurement system. <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
34.	<p>Hemodialysis Machine Specification: Double needle system and single needle with single pump</p> <ul style="list-style-type: none"> Real time Monitoring of Bicarb Should be open consumable types, no bonding on consumable and sterilant. It should be universal Electronic Control of flow rates and blood flow Large LCD Display with touch screen system for operation services and diagnostic. Automatic clean, heat disinfect and rising mechanism. Blood Pump 40 to 600ml/min or better Heparin Pump 0 to 10 ml/hr. or better Dialysate - flow 300 to 800ml/min or more Temperature Control up to 35 to 45 degree adjustable Venous pressure Monitor Ultra-Filtration rate control: Range of UFR 0.0 TO 4.0 Liters/ hour. Or better Air Bubble Detection with detection of Blood Tubing Lines and Blood. Blood Detection. Built in heat disinfect system and built in battery backup system. Blood Pressure Monitor. Machine should be capable for universal disposables and consumables and brand bonding is not acceptable Real time hydraulic flow diagram on large screen Quick and easy troubleshooting by real time function of each hydraulic part. User friendly software for easy maintenance. With all standard accessories as per our requirement <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	10	600000
35.	<p>Incinerator / Biomedical Waste Treatment System 1. Scope of Supply The bidder shall supply, install, test, and commission a fully integrated biomedical waste treatment system designed for on-site treatment and sterilization of infectious healthcare waste generated in hospital laboratories, operating rooms, wards, and diagnostic units. The system shall combine:</p> <ul style="list-style-type: none"> Preliminary shredding Steam sterilization Volume reduction Safe discharge of treated waste <p>The system must ensure complete decontamination of biohazardous waste prior to disposal in compliance with international biomedical waste management standards.</p> <p>2. Functional Requirements The biomedical waste treatment system shall:</p> <ul style="list-style-type: none"> Perform automatic shredding of infectious waste prior to sterilization Use high-temperature saturated steam sterilization to deactivate pathogens. Provide volume reduction of waste to reduce disposal costs. 	1	420000

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- Operate as a **fully automated closed system** to minimize operator exposure.
- Provide **cycle traceability and data recording**.
- Ensure safe handling of **liquid and solid infectious waste**.

The system shall be suitable for treatment of:

- Infectious laboratory waste
- Sharps containers
- Blood bags and body fluid bags
- Contaminated plastics
- Microbiology culture waste
- Operating theatre disposable waste

3. System Configuration

The system shall consist of the following integrated modules:

1. **Waste loading chamber**
2. **Automatic shredding unit**
3. **Steam sterilization chamber**
4. **Integrated steam generator**
5. **Water softening system**
6. **Air compressor**
7. **Control and monitoring system**
8. **Waste discharge mechanism**
9. **Cycle recording and traceability module**

4. Technical Specifications

4.1 Loading Chamber

Parameter	Requirement
Loading chamber capacity	Minimum 40 liters
Loading chamber dimensions	Approx. 320 × 247 × 520 mm
Material	Stainless steel with protective coating
Waste containers supported	Standard autoclavable waste containers or biohazard bags

4.2 Waste Treatment Capacity

Parameter	Requirement
Waste load per cycle	Approx. 3–8 kg
Treatment capacity	Minimum 4–10 kg/hour
Cycle time	30–50 minutes
Liquid waste handling	Minimum 12 liters per cycle

The system shall automatically adjust cycle duration based on **waste density and humidity**.

4.3 Shredding System

The system shall include a **heavy-duty integrated shredder** designed for:

- Pre-treatment volume reduction
- Improved sterilization efficiency

Specifications:

- Shredder structure: **Stainless steel**
- Blades: **High-strength hardened steel**
- Capable of shredding:
 - Plastic containers
 - Sharps containers
 - Laboratory disposables

4.4 Sterilization Chamber

Parameter	Requirement
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Material	AISI 304L stainless steel
Sterilization method	Saturated steam sterilization
Temperature	High temperature pathogen inactivation
Standards compliance	International biomedical waste sterilization standards

4.5 Steam Generator

The unit shall include an **integrated steam generator**, eliminating the need for an external steam supply.

Specifications:

- Chamber material: **AISI 304L stainless steel**
- Corrosion-resistant components
- Automatic steam generation for sterilization cycles

4.6 Control System

The system shall feature a **fully automated microprocessor-based control panel** with:

- Programmable sterilization cycles
- Automatic process monitoring
- Alarm system for faults
- User-friendly touchscreen interface

The system shall provide:

- **Cycle traceability**
- **Built-in printer**
- **USB data export**

5. Construction and Materials

Component	Material
Loading chamber	Stainless steel
Treatment chamber	AISI 304L stainless steel
Shredder structure	Stainless steel
Shredder blades	Hardened steel
Piping	Stainless steel / PTFE
Chassis	Industrial grade steel
Outer body	Composite or painted steel

6. Utilities Requirements

Electrical Requirements

- Supply voltage: **380–400 V, 3-phase**
- Frequency: **50 / 60 Hz**
- Power consumption: **Approx. 15 kW**

Water Requirements

- Softened water (4–8° TH)
- Consumption: **Approx. 10 liters per cycle**

Drainage

- Heat-resistant drain
- Minimum **32 mm internal diameter**

Compressed Air / Steam

- Integrated steam generator and air compressor
- No external connection required

7. Dimensions and Installation

Parameter	Value
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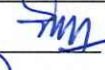

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- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. RB

	<p>External dimensions Approx. 1300 × 895 × 1450 mm</p> <p>Net weight Approx. 580 kg</p> <p>The equipment shall be suitable for installation within hospital biomedical waste treatment rooms.</p> <p>8. Safety Features The system shall include:</p> <ul style="list-style-type: none"> • Automatic door locking during operation • Over-temperature protection • Pressure safety system • Emergency stop • Waste containment system • Operator protection interlocks <p>9. Accessories and Consumables The bidder shall supply:</p> <ul style="list-style-type: none"> • Autoclavable biohazard waste bags • Waste containers compatible with the system • Starter set of consumables • Maintenance tool kit <p>10. Compliance The equipment must comply with:</p> <ul style="list-style-type: none"> • International biomedical waste treatment standards • Hospital infection control guidelines • CE or equivalent international certification • ISO-compliant manufacturing standards <p>11. Installation and Commissioning The supplier shall provide:</p> <ul style="list-style-type: none"> • Installation and commissioning • Operator training • Technical documentation • Maintenance manuals • Minimum 1 year warranty <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of One year starting from date of satisfactory installation of equipment</p>		
36.	<p>Incubator (Sterilizer) Specifications: Temperature range 10 to 100° C Control Accuracy ± 0.7° C Volume 60 -100 liters No of Racks Two Temperature Control PID Display LED Operating Voltage 220V</p> <p>Ventilation & Control Forced air circulation Parameters adjustable temperature (Celsius or Fahrenheit), Programmed stored in case of power failure</p> <p>Over Temperature Protection with audible and visual alarm Over temperature monitor</p> <p>Texture Fully insulated stainless steel door with 2-point locking (compression door lock) Inner glass door Easy-to-clean interior,</p> <p>Temperature</p>	1	285000

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	<p>Min. 10 °C above ambient up to +80 °C</p> <p>Accessories: Complete with standard accessories, software, Operating manual, Services Manual, error code book, part list and software if any</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any one Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
37.	<p>Indirect Ophthalmoscope Specification</p> <ul style="list-style-type: none"> Diagnostic medical device used for wide-field binocular indirect ophthalmoscopy to examine the retina, vitreous, optic nerve, macula, and posterior pole. Provides stereoscopic, erect fundus view with excellent depth perception. Designed for use in ophthalmology clinics, eye hospitals, emergency/ward consultations and surgical screening. <p><i>Illumination System</i></p> <ul style="list-style-type: none"> High-intensity LED light source (preferred) or halogen/halogen LED hybrid. Adjustable illumination intensity for optimal retinal visualization in different pupil sizes. Uniform, white light with minimal flicker or aberration. Long LED life (> 10,000 hours) with low heat generation. <p><i>Optics & View</i></p> <ul style="list-style-type: none"> Binocular optics with high-quality lenses and prisms. Wide field of view for efficient peripheral retinal examination. Stereo viewing with excellent depth perception. Adjustable interpupillary distance and diopter compensation for examiner comfort. <p><i>Headband & Ergonomics</i></p> <ul style="list-style-type: none"> Comfortable, padded headband with adjustable headgear and forehead support. Lightweight construction balanced for ergonomic use. Adjustable lens turret for varied optics and diopter settings. Easy assembly/disassembly for cleaning and maintenance. <p><i>Lenses & Diopters</i></p> <ul style="list-style-type: none"> Diopter adjustment range: Typically -6 D to +6 D (± 6 diopters) or wider as specified. Smooth, continuous or step-type diopter adjustment. Optional accessory lenses (20 D, 30 D, 78 D, 90 D, 120 D + auxiliary lenses) for varied examination types. <p><i>Power Source</i></p> <ul style="list-style-type: none"> Rechargeable battery pack with charger (preferred) <i>or</i> AC mains adapter with battery. Battery life sufficient for ≥ 5 hours continuous operation. Quick-release battery for simple replacement. Low-battery indicator and auto-sleep feature to conserve power. <p><i>Accessories</i></p> <ul style="list-style-type: none"> Breath shield (optional) to reduce condensation on lenses. Carrying case or pouch for portability. Lens cleaning cloth and toolkit. Variety of lens options for examination (20 D, 28 D, 30 D, 78 D, etc.). <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	2	24000


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38.	<p>Infant Warmer Specification:</p> <ul style="list-style-type: none"> • Type: Infant radiant warmer with modular, user-friendly design for optimal thermal support of newborns. • Designed for neonatal intensive care, delivery rooms, emergency departments and operating theatres. • Application: Thermoregulation, pre-warming, manual heating and servo-controlled baby mode. <p><i>Heating & Temperature Control</i></p> <ul style="list-style-type: none"> • Heating Source: Radiant heater with ceramic resistances in warmer head for even heat distribution. • Operating Modes: Baby (servo) mode, Pre-warm mode, Manual mode. • Skin Temperature Set Range: 34 – 38 °C in 0.1 °C increments. • Temperature Measurement Accuracy: ± 0.1 °C. • Heater Output: 0 – 100 % in 10 % increments. • Skin Temperature Display Range: 18 °C – 42 °C. • Intelligent alarm system for prolonged warm-up, sensor failures and safety limits. <p><i>Mechanical & Physical</i></p> <ul style="list-style-type: none"> • Dimensions (approx): <ul style="list-style-type: none"> ○ Width: 90 cm ○ Depth: 110 cm ○ Height (standard): 177 cm ○ Height (adjustable, optional): 177 – 197 cm ○ Mattress Size: 70 × 55 cm ○ Maximum Baby Load: 10 kg ○ Standard Mattress Height: 93 cm ○ Adjustable Mattress Height (optional): 93 – 113 cm. • Bed Tilting: ± 12°. • Wheels: Castor wheels with brakes for mobility. (manual) <p><i>Illumination & Display</i></p> <ul style="list-style-type: none"> • Examination Light: LED lamps (typically 2 × 5 W). • Clear digital display for temperature, settings and alarm status. <p><i>Control Panel & Features</i></p> <ul style="list-style-type: none"> • Control Panel: Digital with mode and setting buttons. • SmartSilence: Hands-free alarm silence function to maintain sterile hands. • SmartTilt: Electronic Trendelenburg and reverse Trendelenburg positioning. • SmartMemory System: Stores two memory positions for bed tilting angles. <p>Country of Origin: UK, USA, Europe, Japan, (Any One Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	4	96000
39.	<p>Infusion Pump Technical Specifications Display: 3 inch or better capacitive touch screen, TFT color LCD MODE: Rate mode, time volume mode, body weight mode</p> <ul style="list-style-type: none"> • Functions: Purge, Bolus, Anti Bolus, KVO • Infusion Rate: 0.1ml/h to 2300ml/h or better • Rate accuracy: within $\leq \pm 1.8\%$ 	30	157500

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	<ul style="list-style-type: none"> • Bolus rate: 0.01 ml/h to 2300 ml/h • Volume limit: 0.1ml to 9999ml • Maximum infusion pressure: 120kpa or better • Occlusion: High50~1125mmHg support 1mmHg , default 15 levels 450 mmHg (107.4 kPa), Medium <p>Alarms:</p> <ul style="list-style-type: none"> • Audible and Visible • VTBI done, VTBI near done, KVO finish, syringe empty, syringe near empty, syringe disengaged, occlusion, system error, system abnormal, battery low, battery empty, reminder, AC power disconnection, standby. <p>Power Source: 100-240Vac 50/60Hz</p> <ul style="list-style-type: none"> • Built-in battery 6 hours backup and drug library or better • KVO Speed: 0.1-5.0 ml/h <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
40.	<p>Spirometer Specification:</p> <ul style="list-style-type: none"> • Spirometer with 1000 or above test memory • Records best 3 trials Up to 8 blows on one • Screen size at least 5" or above • Internal temperature sensor for BTSP conversion • FVC, VC with breathing pattern plus MVV tests with real time curves • Over 30 parameters with automatic interpretation and test quality control • PRE/POST bronchodilator comparison • Built-in thermal printer for full Spiro-metric report printing. • Rechargeable battery and mains power • Turbine flow sensor. • Auto calibration mode. <p>Accessories:</p> <ul style="list-style-type: none"> • Complete main unit with: Nose Clip, Mouthpiece & Thermal Paper • Operation Manual & Carrying Case • Spiro meter software • Two hours or more backup time through battery <p>Country of Origin: UK, USA, Europe, Japan or equivalent.</p> <p>Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificate.</p> <p>Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end..</p>	1	24000
41.	<p>L.E.D OT Light Specification</p> <p>Λ ceiling-mounted double dome LED surgical/operating theatre light engineered to provide shadow-free, high-intensity illumination for surgical procedures. Designed for orthopedic, general, ENT, gynecological, cardiovascular, neurosurgery and minimally invasive surgery.</p> <p><i>Illumination Performance</i></p> <ul style="list-style-type: none"> • Maximum Illuminance (E_c at 1 m): ≥ 160,000 lux + 160,000 lux (per dome) • Light Field Diameter (1 m): Typically 140 – 270 mm (adjustable) 	6	450000

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	<ul style="list-style-type: none"> • Depth of Illumination: <ul style="list-style-type: none"> ○ 60 % level: approx. 600 mm ○ 20 % level: approx. 1,300 mm • Uniformity & Shadow Performance: Very high uniformity; minimal shadowing using multi-patch superposition technology (MPST), ensuring consistent illumination even if partially blocked during surgery. <p><i>LED Technology & Light Quality</i></p> <ul style="list-style-type: none"> • Light Source: High-quality LED modules providing long life and stable performance. • Color Temperature: <ul style="list-style-type: none"> ○ Standard 4,350 K ○ Optional adjustable 3,500 – 5,100 K or better to enhance tissue visualization and true colour reproduction. • Color Rendering Index (CRI): Ra ≈ 99; R9 ≈ 97 or above — excellent colour fidelity for distinguishing anatomical details. • LED Life: > 50,000 hours or above <p><i>Optical & Field Characteristics</i></p> <ul style="list-style-type: none"> • Spot Diameter Range (1 m): Approx. 100 – 400 mm adjustable. • Shadow Dilution: Very low — designed for multi-LED overlap and multi-beam superposition to reduce surgeon-shadow impact. • Multi-Level Illumination Steps: 0–9 or stepless adjustment for intensity modulation. <p><i>Head & Dome Features</i></p> <ul style="list-style-type: none"> • Double Dome: Two independent light heads (satellites) improve field coverage and flexibility of beam direction. • Rotation & Positioning: Each dome supports smooth multi-axis rotation for precise positioning over surgical field. • Sterilisable Handles: Removable handles for aseptic handling. Panorama or absorption-mounted handles optional. <p><i>Control & Adjustment</i></p> <ul style="list-style-type: none"> • Control Methods: <ul style="list-style-type: none"> ○ Panel control (touch keypad or touchscreen) ○ Optional remote/ tablet control (depending on configuration) • Dimming Range: Typically from low to 100 % output. • Colour Temperature Control: Adjustable via panel or remote (where supported). <p><i>Power & Electrical</i></p> <ul style="list-style-type: none"> • Power Supply: AC 110-240 V, 50/60 Hz • Power Consumption: Approx. 30 W per dome (plus control unit and arms). • Ceiling Suspension: Robust ceiling mount with flexible boom arms allowing optimized reach, positioning and stability. • Ceiling Height: Typically accommodates standard OR ceiling heights (~2,200 – 3,200 mm). <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
42.	<p>Mammographic Unit with Cassettes Set</p> <p>Technical Specifications</p> <p>Equipped with an intelligent after-sales remote service system, allowing the manufacturer to monitor the detailed usage status of the equipment in real-time, and to automatically feedback faults or errors to the manufacturer (require relevant certification documents as proof)</p> <p>Main Technical Specifications and Requirements</p>	1	120000


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High Voltage Generator

The high-voltage generator and the whole unit are of the same brand (provide inspection report proof)

Host power: $\geq 4.5\text{kW}$

Output voltage: $\geq 20 \sim 40\text{kVp}$

Maximum mAs: $\geq 500\text{mAs}$

Equipped with Automatic Exposure Control Function

Manual exposure can be directly adjusted through the acquisition software, without a separate exposure control station

Equipped with Fault Status Display Function

X-ray Tube Assembly

Focal Spot Size: $\leq 0.1/0.3\text{mm}$

Maximum Focus Power: $\geq 5\text{KW}$

Anode heat capacity: $\geq 300\text{KHU}$

Tube Anode Rotation Speed: Low Speed $\geq 3000\text{rpm}$; High Speed $\geq 10000\text{rpm}$

Anode target angle: $\leq 15^\circ$

Flat Panel Detector

Flat Panel Detector of the Same Brand as the Whole Unit (Inspection Report Provided)

Amorphous Silicon Full Plate

Effective Imaging Size of the Detector: $\geq 310\text{mm} \times 230\text{mm}$ (Inspection Report Provided)

Detector Pixel Matrix: $\geq 4\text{k} \times 3\text{k}$

Detector Unit Size: $\leq 80\text{um}$

Dynamic Range: $> 16\text{bit}$

Time from Exposure to Image Display on Monitor: $\leq 15\text{s}$

DQE (Quantum Detection Efficiency) Value: $> 50\%$ at 1Lp/mm

High contrast resolution: $\geq 6\text{Lp/mm}$ (provide inspection report proof)

Mammography Stand

Uses a Multi-functional Vertical Mammography Stand Imaging System

Minimum Vertical Distance from Ground: $\leq 675\text{mm}$

Swing angle range: $\geq -135^\circ \sim +180^\circ$

Distance from focus to image receptor: $\geq 650\text{mm}$

Projection positions: ≥ 4 types: RCC, LCC, RMLO, LMLO

After the equipment has stopped running, the compression device should provide a manual method to relieve compression, allowing patients to enter and exit as well as to be released (provide relevant proof documents)

According to the needs of clinical positioning operations, it should be possible to freely switch between electric and manual compression modes, allowing the operating physician to adjust the pressure according to the patient's response in a timely manner (provide relevant proof documents)

Mammography Grid

Type: Mobile anti-scatter grid, capable of completely fading grid lines (provide inspection report as proof)

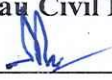
Dimensions: $\geq 298\text{mm} \times 326\text{mm}$

Grid ratio: $\geq 5:1$

Focal length: $\geq 0.65\text{m}$

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- Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<p>Grid frequency: ≥ 361 P/cm</p> <p>Collimator</p> <p>Inherent Filtration: ≥ 0.02 mm Al/75kV</p> <p>Irradiation field (SID=65mm): \geq maximum 240mm\times300mm, minimum 0mm\times0mm</p> <p>Operation Mode: Electric</p> <p>Additional Filtration: 0.03mm Mo, 0.025mm Rh</p> <p>Field Margin Contrast: ≥ 4</p> <p>Image Acquisition Workstation</p> <p>The Image Acquisition Workstation software interface is all in Chinese</p> <p>The image acquisition workstation should include the following image processing functions: Adjusting or presetting window width/window level, positive/negative image inversion, image flipping and rotation, image magnification and panning, local magnification/restoration of original image, text/number annotation, image labeling, and ruler line segment measurement.</p> <p>The exposure settings such as kV and mAs can be displayed on the printed film.</p> <p>Patient images can be queried in various ways, and the query method can be customized</p> <p>Image Diagnosis Workstation</p> <p>3M Mammography Dedicated Medical Display: ≥ 2 sets (require proof of medical device product technical requirements)</p> <p>The image diagnosis workstation should include the following image processing functions: Window width/window level, synchronous window width/window level, automatic window width/window level, preset window width/window level, positive/negative image inversion, image flipping, rotation, synchronous image zooming and panning, image interpolation edge enhancement, text/number annotation, image labeling, ruler line segment measurement, area measurement, and electronic cutting.</p> <p>The diagnostic software is produced by the same brand as the whole unit</p> <p>Diagnostic workstation: Supports mammography-specific hanging protocol, convenient for doctors to read films (require proof of medical device product technical requirements)</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
43.	<p>Microscope</p> <p>Specification:</p> <p>Standard microscope with infinity color corrected optics Binocular head, adjustable interpupillary distance</p> <p>Tube head with an inclination of 30 Degree or more Rotating quadruple/quintuple nose piece 2-layer with mechanical sliding stage, XY moving range Condenser carrier, vertically/horizontal adjustable Bright field condenser, N.A. of 1.25</p> <p>Aperture iris diaphragm LED illumination</p> <p>220V 50 Hz, AC</p> <p>User Adjustable Settings:</p> <p>Coaxial coarse and fine focusing system, with focusing stop mechanism Variable intensity control system</p> <p>Eyepiece lenses: -</p> <p>10x wide field, focusable, Objective lenses (Achromat): - 4x Scanning lens</p> <p>10X</p>	6	45000

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- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<p>20X 40x 100x oil immersion Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
44.	<p>Mobile X-Ray Machine 100 MA Specification</p> <ul style="list-style-type: none"> • High Frequency Analogue Mobile X-Ray Machine • X-Ray Generator High Frequency 40 KHZ • System with 10.4" LCD Touch Screen Operating Console • 4KW X-Ray Generator • X-Ray Tube 40KHU • X-Ray Tube Focal spot 1.8mm Stationery Anode X-Ray Tube • KVP Range: 40-110 KVP • System must have two or three Point X-Ray Technique • System with 84 Anatomical Programmed Radiography • Max mA range: 80mA • Mas range: 200 mAs or Better • High Intensity Halogen Lamp For Collimation • X-Ray Machine Collimation Rotation +/- 90° and Arm Rotation +/- 90° • X-Ray Container For at Least 6 Cassettes 35x43cm • Supply Voltage 220Vac, 50Hz • Lead Apron Qty-01 • Country of Manufacturer and Origin: USA/Europe/ Japan <p>International Quality Certificates: CE/FDA/MHVL (Any one)</p> <ul style="list-style-type: none"> • High Frequency Analogue Mobile X-Ray Machine • X-Ray Generator High Frequency 40 KHZ • System with 10.4" LCD Touch Screen Operating Console • 4KW X-Ray Generator • X-Ray Tube 40KHU • X-Ray Tube Focal spot 1.8mm Stationery Anode X-Ray Tube • KVP Range: 40-110 KVP • System must have two or three Point X-Ray Technique • System with 84 Anatomical Programmed Radiography • Max mA range: 80mA • Mas range: 200 mAs or Better • High Intensity Halogen Lamp For Collimation • X-Ray Machine Collimation Rotation +/- 90° and Arm Rotation +/- 90° • X-Ray Container For at Least 6 Cassettes 35x43cm • Supply Voltage 220Vac, 50Hz • Lead Apron Qty-01 • Country of Manufacturer and Origin: USA/Europe/ Japan or 	4	735000

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- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<p>International Quality Certificates: CE/FDA/MHFWL (Any one)</p> <ul style="list-style-type: none"> • High Frequency Analogue Mobile X-Ray Machine • X-Ray Generator High Frequency 40 KHZ • System with 10.4" LCD Touch Screen Operating Console <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, JIS, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	
45.	<p>MRI 1.5 Tesla Helium Free Technical Specifications 1.5 Tesla Magnetic Resonance Imaging (MRI) System</p> <p>1. Magnet System The offered MRI system shall be based on a high-performance superconducting magnet capable of producing a magnetic field strength of at least 1.5 Tesla. The magnet must be a helium-free magnet design with zero liquid helium consumption, ensuring minimal operational and maintenance requirements. The magnet shall have 0 liters liquid helium capacity and should incorporate advanced cryogenic technology.</p> <p>The total magnet weight shall not be greater than 4500 kg, while the magnet length shall not exceed 157 cm to allow compact installation and optimized room planning.</p> <p>The system shall incorporate a comprehensive shimming system, including passive, active, and dynamic shimming technologies, to ensure excellent magnetic field uniformity and stability during clinical scanning.</p> <p>The magnetic field homogeneity across different diameters of spherical volume (DSV) shall meet the following performance criteria:</p> <ul style="list-style-type: none"> • ≤ 1.0 ppm within 50 cm DSV • ≤ 0.2 ppm within 40 cm DSV • ≤ 0.043 ppm within 30 cm DSV • ≤ 0.012 ppm within 20 cm DSV • ≤ 0.003 ppm within 10 cm DSV <p>The system shall maintain magnetic field stability of ≤ 0.1 ppm per hour, ensuring reliable imaging quality during extended scanning sessions.</p> <p>The 5-Gauss fringe field shall be confined within ≤ 4 meters in the axial direction and ≤ 2.5 meters in the radial direction.</p> <p>The magnet shall provide a patient bore (aperture) of at least 60 cm to ensure patient comfort and accommodate a wide range of clinical examinations.</p> <p>2. Gradient System The MRI system shall be equipped with a high-performance gradient system designed for rapid imaging and advanced clinical applications.</p> <p>The maximum gradient strength per axis shall be at least 35 mT/m, while the maximum gradient slew rate per axis shall be at least 175 mT/m/ms, enabling high-speed data acquisition and advanced imaging techniques.</p> <p>The minimum gradient rise (climbing) time shall be ≤ 0.2 ms, allowing precise gradient switching for fast imaging sequences.</p> <p>3. Spectrometer and RF System The MRI system shall utilize a fully digital RF transmission and reception architecture to ensure optimal signal quality and system stability.</p> <p>The RF system shall include:</p> <ul style="list-style-type: none"> • RF amplifier power of at least 20 kW • Transmission bandwidth ≥ 600 kHz • Receiving bandwidth ≥ 1 MHz 	1 3942000


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- Receiving dynamic range ≥ 165 dB

The system must support oversampling technology to reduce aliasing artifacts and improve image quality.

The MRI system shall support at least 24 independent receiving channels, enabling high-resolution imaging and advanced parallel imaging techniques.

4. Receiving Coils

The MRI system shall provide a comprehensive range of multi-channel receiving coils to support various clinical applications.

The system shall include integrated receiving coils and transmitter/receiver coils.

Minimum coil specifications shall include:

- Head and Neck Combined Coil with at least 24 channels
- Spine Coil with at least 24 channels
- Body Coil with at least 12 channels, capable of combining with the spine coil to achieve 24 channels
- Knee Coil with at least 16 channels
- Multi-flexible Coil with at least 8 channels

These coils shall support high signal-to-noise ratio imaging and flexible patient positioning.

5. Patient Table and Control System

The MRI system shall include a motorized patient table capable of automatic movement in and out of the magnet bore, controllable directly from the operator console.

The patient table shall provide:

- Longitudinal movement ≥ 2000 mm
- Vertical movement ≥ 350 mm
- Minimum table height ≤ 52 cm
- Maximum patient weight capacity ≥ 250 kg

The patient positioning system shall include a positioning LCD display screen to assist operators during patient setup.

Positioning accuracy shall be ± 1 mm to ensure precise alignment during imaging procedures.

The patient table shall include control buttons on both sides of the rack, allowing convenient control of table movement.

6. Computer System

The MRI console computer shall operate on Windows 10 or later operating system versions and support multi-language interface switching.

The system shall include a high-performance processor with maximum dominant frequency of at least 5.2 GHz and minimum memory of 16 GB to support fast data processing.

The workstation shall include dual hard disk configuration, consisting of:

- Solid State Drive (SSD) ≥ 256 GB
- Mechanical Hard Disk ≥ 2000 GB

The system shall support image storage capacity of at least 10 million uncompressed images with a 256×256 matrix.

The image reconstruction speed shall be at least 15,000 FFT/s at 512×512 resolution.

The operator console shall include a high-resolution monitor of at least 24 inches, with 2-megapixel resolution (1920×1200).

The system shall fully comply with DICOM 3.0 standards, enabling transmission, reception, query, storage, and printing via DICOM laser camera.

7. Clinical Imaging Parameters

The MRI system shall support flexible imaging parameters suitable for a wide range of clinical applications.

Key imaging parameters shall include:

- Maximum Field of View (FOV): ≥ 500 mm
- Minimum Field of View (FOV): ≤ 5 mm
- Minimum 2D slice thickness: ≤ 0.1 mm

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- Minimum 3D slice thickness: ≤ 0.05 mm
- Maximum acquisition matrix: $\geq 2048 \times 2048$

8. Sequence and Imaging Technology

The system shall support a comprehensive set of pulse sequences and advanced imaging technologies, including but not limited to:

Spin Echo Sequences

- T1-weighted imaging (SE T1WI)
- T2-weighted imaging (SE T2WI)
- Proton Density imaging (PDWI)
- Fast Spin Echo (FSE) sequences
- Single Shot Fast Spin Echo (SSFSE)
- Inversion Recovery Spin Echo
- STIR (Short Time Inversion Recovery)
- FLAIR (Fluid Attenuated Inversion Recovery)

Gradient Echo Sequences

- T1-weighted and T2*-weighted Gradient Echo
- Fast Gradient Recalled Echo
- Steady-State Free Precession
- Balanced Steady-State Free Precession
- Volumetric acquisition with lipid suppression
- Time-of-Flight MRA (2D and 3D)
- Phase Contrast imaging
- GRE Echo Planar Imaging
- Contrast Enhanced MR Angiography (CEMRA)

Fast Acquisition Techniques

The system shall support advanced acceleration technologies such as:

- Partial Fourier
- Partial Readout
- Rectangular Field of View
- Parallel Imaging
- GRAPPA dual-direction acceleration
- Compressive Sensing based ultrafast imaging
- Elliptical acquisition

Fat Suppression Techniques

Including:

- Frequency selective Fat Saturation
- ASPIR
- Spectral excitation
- STIR
- IR-EPI based fat suppression
- Water-fat separation imaging

Spatial Saturation Techniques

Including regional, parallel, and tracking saturation bands with interactive graphical planning.

Artifact Suppression Techniques

The system shall support:

- Flow compensation
- Respiratory triggering
- Multi-breath-hold scanning
- Averaging mode

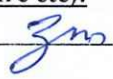




Image Quality Enhancement

Image quality optimization shall include:

- Multi-channel signal combination


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- Geometry correction
- Uniformity tuning (uTune)
- Image filtering
- Image interpolation

Artificial Intelligence Technologies

The MRI system shall incorporate AI-based imaging technologies, including:

- AI intelligent localization
- AI intelligent denoising

9. Clinical Application Software Packages

The system shall include standard and specialized clinical software packages for:

- Standard clinical applications
- Neurology imaging
- Oncology imaging
- Orthopedic imaging
- Angiography applications
- Fetal imaging

10. Advanced Clinical Applications and Post-Processing

The MRI system shall provide advanced clinical applications and post-processing tools including:

- DIXON imaging
- Silent scanning technology
- Motion artifact correction
- Susceptibility Weighted Imaging (SWI)
- Diffusion Tensor Imaging (DTI)
- Single Voxel Magnetic Resonance Spectroscopy (SVS-MRS)
- Whole spine imaging
- Brain perfusion imaging

11. Additional Requirements

The vendor shall provide and install the following supporting equipment and infrastructure:

- RF shielding and interior decoration of the MRI room
- Precision constant temperature and humidity air-conditioning system
- Standard quality test phantom for system calibration
- Non-magnetic ladder for maintenance and patient handling
- **Optional Items:**
- **MRI compatible Anesthesia machine**
- **MRI compatible Patient Monitor**
- **MRI compatible Wheel chair**
- **MRI compatible Stretcher**
- **MRI compatible contrast injector dual head**

- **optional prices for following additional coils are required:**
- Breast coil
- Pediatric coil
- Extremity coils (knee, shoulder, wrist)
- Online UPS system
- **Optional safety items:**
- MRI-compatible fire extinguishers
- Ferromagnetic detection system
- hand held metal detectors (5pcs)

Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW)

Should be: ISO-13485 (Mandatory)

Warranty: Warranty period shall be of three years starting from date of satisfactory installation

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- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. Sunny
- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. Rajeev

46.	<p>of equipment</p> <p>Multipara Monitor Technical Specification Display & Interface</p> <ul style="list-style-type: none"> • Display Size: 13 inch or above color capacitive touch-screen. • Waveform Support: Up to 10 waveform channels for simultaneous parameter visualization. • User Interface: Touchscreen with gesture support and flat UI design for intuitive operation. <p>Monitored Parameters The base configuration typically includes these essential 5 parameters:</p> <ol style="list-style-type: none"> 1. ECG (Electrocardiogram) 2. RESP (Respiration) 3. SpO₂ (Oxygen Saturation) 4. NIBP (Non-invasive Blood Pressure) 5. TEMP (Temperature) <p>ECG Monitoring</p> <ul style="list-style-type: none"> • Lead Sets: Automatic recognition of 3-lead or 5-lead ECG configuration. • Gain Levels: x0.125, x0.25, x0.5, x1, x2, x4, Auto. • Sweep Speeds: 6.25 / 12.5 / 25 / 50 mm/s. • Heart Rate Range: <ul style="list-style-type: none"> • Adult: 10–300 bpm • Pediatric/Neonate: 10–350 bpm • ST Segment Monitoring: Range: –2.5 to +2.5 mV with 0.01 mV resolution. <p>Respiration</p> <ul style="list-style-type: none"> • Respiration Rate (RR): Measured from ECG and Resp sensors. • RR Resolution: 1 rpm. <p>SpO₂ Monitoring</p> <ul style="list-style-type: none"> • Range: 0–100% • Resolution: 1% • Accuracy: ±2% (70–100% adult/pediatric), ±3% (70–100% neonate). • Pulse Rate (from SpO₂): 20–300 bpm (typical). • SPO2 Algorithm should be Nelcor / Masimo <p>NIBP (Non-invasive Blood Pressure)</p> <ul style="list-style-type: none"> • Modes: Manual, Auto, STAT (measurement modes). • Parameters: Systolic, Diastolic, Mean. • Typical Range: Adult: 25–290 mmHg (systolic), Neonate and Pediatric ranges also supported. • Resolution: 1 mmHg. <p>Temperature (TEMP)</p> <ul style="list-style-type: none"> • Channel: 1 or 2 channels supported (model dependent). • Range: 0–50 °C (32–122 °F). • Resolution: 0.1 °C. • Accuracy: ±0.1 °C (without probe). <p>Battery & Power</p> <ul style="list-style-type: none"> • Battery Type: Rechargeable lithium-ion battery. • Continuous Operation Time: Up to 12 hours depending on battery configuration and usage. • Power Supply: AC 100–240 V, 50/60 Hz. (Standard mains input) • Drop Protection: Withstands drops from ~0.75 m. • Water Resistance: IPX1 water ingress protection. 	76	684000
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	<ul style="list-style-type: none"> • Operating Temperature: ~0–40 °C. <p><i>Additional Features</i></p> <ul style="list-style-type: none"> • External USB storage: For data export and storage. • Large data memory: For trend and waveform storage. <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
47.	<p>Operation Table Electric Remote Control</p> <p>Technical Specification</p> <p>Specification</p> <ul style="list-style-type: none"> • Stainless steel structure with slow rebound latex foam mattress • Must have Electro Hydraulic option • Five section body layouts for multiple surgical position request • Reliable 6-movement and silent lifting • Table top sliding for X-ray and C-Arm • Individual kidney bridge elevation system • Built-in back up battery <p>TECHNICAL FEATURES</p> <ul style="list-style-type: none"> • Designed specially to meet the different demands of general surgical operations, latex foam mattress, • concealed rubber lift locker, single remote controller • Full Length: 2050mm or above • Width: 520mm or above • Height adjustment: 720-1070mm • Reversed Trendelenburg: 30° • Tilt left/right: +25/25° • Longitudinal sliding: 300mm (Optional) • Dynamic Loading capacity: 230kg • Leg plate up/down: +20°/-90° • Head rest up/down: +45°/-90° • Back plate up/down: +80°/-40° • Split leg place: 90° (each) • Kidney bridge elevation: 120mm • Backup battery: included, for 80 movements • Power supply: 100-240V/ 50-60Hz <p>Standard accessories:</p> <ul style="list-style-type: none"> • mattress pad (1 piece), • cable controller (1 pc), • arm support (1 pair), • shoulder support (1 pair), • body support (1 pair), • leg support (1 pair), • anesthesia frame(1 set) <p>Country of Origin: UK, USA, Europe, Japan, (Any One Certificate)</p> <p>Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW</p> <p>(Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates.</p> <p>Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	6	720000


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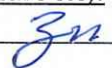


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48.	<p>Phototherapy Unit Technical Specification . General Description</p> <ul style="list-style-type: none"> • Device Type: Overhead phototherapy unit for neonatal jaundice treatment. • Purpose: Provides intensive phototherapy for newborns/infants with hyperbilirubinemia. • Design: Lightweight, removable head unit with optional mobile stand; adjustable height; suitable for NICU, incubators, radiant warmers, or bassinets. <p>2. Light Source & Optical Specifications</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td>Light Source</td> <td>16 pcs Blue Super LEDs</td> </tr> <tr> <td>Wavelength</td> <td>440–460 nm (optimal for bilirubin breakdown)</td> </tr> <tr> <td>LED Lifetime</td> <td>≥ 50,000 hours</td> </tr> <tr> <td>Light Intensity / Irradiance</td> <td>35–110 μW/cm²/nm (5-level adjustable)</td> </tr> <tr> <td>Effectiv Coverage Area</td> <td>~54 × 32 cm</td> </tr> <tr> <td>Uniform Light Distribution</td> <td>Even across the full infant body</td> </tr> <tr> <td>Adjustable Intensity</td> <td>Yes, 5 levels</td> </tr> </tbody> </table> <p>Environmental & Operational Conditions</p> <ul style="list-style-type: none"> • Operating Temperature: 20 °C – 30 °C • Relative Humidity: As per neonatal unit specifications • Storage Conditions: Dry, clean environment <p>6. Accessories / Included Items</p> <ul style="list-style-type: none"> • Main LED head unit • Mobile adjustable stand (optional) • Infant eye protection masks • Power adapter, cables, and user manual <p>7. Clinical Applications</p> <ul style="list-style-type: none"> • Treatment of neonatal jaundice (hyperbilirubinemia) • Suitable for NICU, neonatal ward, delivery room • Adjustable intensity to tailor therapy based on bilirubin levels and infant size <p>8. Safety, Maintenance & Standards</p> <ul style="list-style-type: none"> • LED lifespan ≥ 50,000 h, low maintenance • Use radiometer to verify irradiance regularly • Protective eye covers mandatory for infants • Avoid use in combustible anesthetic environments • Clean and maintain per manufacturer guidelines <p>Country of Origin: UK, USA, Europe, Japan, (Any One Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Other than UK, USA, Europe, Japan will be accepted if have Two certificates Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	Parameter	Specification	Light Source	16 pcs Blue Super LEDs	Wavelength	440–460 nm (optimal for bilirubin breakdown)	LED Lifetime	≥ 50,000 hours	Light Intensity / Irradiance	35–110 μW/cm ² /nm (5-level adjustable)	Effectiv Coverage Area	~54 × 32 cm	Uniform Light Distribution	Even across the full infant body	Adjustable Intensity	Yes, 5 levels	4	72000
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Uniform Light Distribution	Even across the full infant body																		
Adjustable Intensity	Yes, 5 levels																		
49.	<p>Portable Light with Halogen shadow less lamp for lab our Room (Split Light) with battery backup Specification</p> <ul style="list-style-type: none"> • Maximum Central Illuminance (Ec @ 1 m): 160,000 lux • Light Field Diameter (Dmax @ 1 m): 140 – 270 mm • Depth of Illumination (60 %): ~600 mm (typical) • Depth of Illumination (20 %): ~1,300 mm • Uniformity (D50/D10): ~60 % at maximum patch light field 	9	360000																

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	<p><i>Light Quality</i></p> <ul style="list-style-type: none"> • Colour Temperature (CCT): • Standard: ~4,350 K • Adjustable Range: 3,500 – 5,100 K (multi-step) — helps distinguish different tissues and perceived colour accuracy. • Colour Rendering Index: Ra ≈ 99, R9 ≈ 97 — excellent true colour rendering for precise surgical discrimination. <p><i>Control & Operation</i></p> <ul style="list-style-type: none"> • Control Methods: • Integrated touch/ touch-key panel control • Multifunction hand grip for intuitive adjustments • Optional tablet/remote control app for wireless light management. • Adjustable Parameters: • Illuminance intensity • Colour temperature • Light field diameter • Preset illumination patterns. <p><i>Mechanical & Mounting</i></p> <ul style="list-style-type: none"> • Ceiling Mount: Designed for flexible positioning with multi-axis articulated arms. • Stopless Rotation: Light head supports free rotation across multiple joints for precise beam direction. <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p><i>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
50.	<p>Portable OT Light</p> <p>Specification:</p> <p>Portable OT light with battery backup Unit should have Patented, proven reflector technology. Unit should have Optimum hygiene High R9 LEDs provide highest ability to identify a red tissue structure (R9 > R7). Compact size & minimum no. of LED components which allow the compact luminary design. High power LEDs provide high lumen to watt ratio with less energy consumption. Radiant energy is <3.2mW/lm which increased light life. Unit should have Safety glass for best possible clarity. Should have light intensity of 160,000 lux Should have Color temperature adjustment 3500 – 5000 Kelvin or better 4 steps adjustable Should have Temperature increase at head height ≤2°C Should have Color rendering index to ≥ 96Ra or better Should have Life time of LED greater than >50,000 or more.</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any Two Certificates of CE, FDA, MHLW)</p> <p>Should be: ISO-13485 (Mandatory)</p> <p><i>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	2	21000
51.	<p>Pulse Oximeter</p> <p>Specification:</p> <p>Digital display LCD/LED Method: Oscillometric Principle Numeric: Systolic, Diastolic, and Mean Pressure Selectable auto inflate interval settings Rising Cuff / Continuous Pressure Display NIBP Measurement Record: 2000 or more</p>	10	36600


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- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<p>Pulse Oximeter with Plethysmograph waveform and Pulse Strength Indication Complete with all standard accessories SPO2 probe pads and adult, NIBP cuff and etc. Rechargeable battery with 2 hours or more battery backup Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
52.	<p>Reverse Osmosis Plant RO Plant 2,000 Gallon per day with discharge pumps with backup including water storage tank capacity of 1,000 L or more. Locally assembled with imported components and compatible with system Installation and commissioning are the responsibility of the supplier. Imported Online UPS for controller with backup of 30 min Air compressor: (as per manufacturer recommendation), make and model must be quoted. Warranty: 03 years from the date of satisfactory installation. Three phase DB Panel with phase Sequencer (local) End-user application training and technical training of engineer to be provided locally by a foreign trained specialist along with training material as per manufactures guideline. Installation and commissioning including (UPS, DB Panel with phase sequencer, Air Compressor and all kind of attachment Pipe, Wire and etc.) are the responsibility of the supplier Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW) Should be: ISO-13485 (Mandatory) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	2	240000
53.	<p>Spot Light Specification: LED type, life at least 50000 hours. Hermetically dust proof lamp head. Minimum light output 60,000 lux or better Color temperature 4300 Kelvin or better Field of illumination: up to 12 cm or better Working distance 30 cm to 50 cm Mobile / Fixed Mobile trolley Power requirements 220 V; 50 Hz Must have battery backup. Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	4	27000
54.	<p>Suction Machine Portable Specification: • Should have ability to be used in the emergency dept., intensive care, operating theatre. • The pump should have accurate vacuum setting with the membrane vacuum regulator • Should have piston/cylinder system for a vibration free and noiseless operation. • The vacuum range should start from -95 kPa / 613 mmHg or better. • The flow rate should be adjustable from 60 OR more liter/min. • Power Requirement:</p>	12	48600

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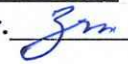


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	<p>Line Voltages 100-240 VAC Line Frequency 50/60Hz Should be Supplied with: Two reusable suction jars of 4 liters Mobile Trolley Original with two lockable castor Antibacterial Filter Clamp Holder Disposable Patient Tubing Power Cord Operating Manual Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
55.	<p>Suction Machine (Heavy Duty) Specification:</p> <ul style="list-style-type: none"> • Should have ability to be used in the emergency dept., intensive care, operating theatre. • The pump should have accurate vacuum setting with the membrane vacuum regulator • Should have piston/cylinder system for a vibration free and noiseless operation. • The vacuum range should start from -95 kPa / 713 mmHg or better. • The flow rate should be adjustable from 60 OR more liter/min. • Power Requirement: <p>Line Voltages 100-240 VAC Line Frequency 50/60Hz Should be Supplied with: Two reusable suction jars of 4 liters Mobile Trolley Original with two lockable castor Antibacterial Filter Clamp Holder Disposable Patient Tubing Power Cord Operating Manual Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	25	150000
56.	<p>Surgical Diathermy 400 Watts Specification:</p> <ul style="list-style-type: none"> • Microprocessor based electrosurgical unit for normal and under water cutting usages. • Automatic power adjustments • Operation in radio frequency range. • Controls for cutting, coagulation, spray and blends. • Monopolar cutting power of 300 watts with change of 05 watts or with less increments. • Mono polar coagulation power of 200 Watts or more. • Bipolar Cutting power of 100 watts or more • Bipolar coagulation power of 120 Watts or more. • Spray coagulation power of 120 watts or more • Different gradations of blending of cutting and coagulation power. • Digital display of all controls and set values of cutting and coagulation power. • Audio and visual alarms. • Power Supply: 220V, 50 Hz. <p>Accessories:</p> <ul style="list-style-type: none"> • Monopolar handle with cord. • Bipolar forcep with cord. • Attachment for monopolar coagulation. • Knife electrode. • Surgical electrode, ball-shaped. 	6	360000

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	<ul style="list-style-type: none"> • Wire loop electrode. • Needle electrode. • Ball electrode. • Bipolar coagulation forceps. • Reusable patient plate. • Double paddle foot switch, explosion proof. • Trolley with lockable antistatic castors may be provided locally. <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
57.	<p>Tissue Processor Specification A fully automatic Tissue Processor designed for routine histopathology laboratories for dehydration, clearing, and paraffin infiltration of tissue specimens. The system should ensure reliable processing with minimal user intervention.</p> <p>System Type</p> <ul style="list-style-type: none"> • Fully automatic microprocessor controlled tissue processor • Carousel or vacuum type processing system • Suitable for routine and research histopathology laboratories <p>Processing Capacity</p> <ul style="list-style-type: none"> • Minimum 200–300 tissue cassettes per cycle • Stainless steel specimen basket with secure locking system <p>Reagent Stations</p> <ul style="list-style-type: none"> • Minimum 10–12 reagent stations or better for alcohol, xylene, and other reagents • Minimum 2 paraffin wax stations • Minimum 1 cleaning station <p>Temperature Control</p> <ul style="list-style-type: none"> • Paraffin temperature adjustable from 45°C to 70°C • Reagent temperature control system • Over-temperature protection system <p>Processing Programs</p> <ul style="list-style-type: none"> • Minimum 10 programmable protocols • Adjustable processing time for each station • Automatic start and delayed start options <p>Display & Control</p> <ul style="list-style-type: none"> • Large LCD / Touchscreen display • Real-time monitoring of process parameters • Microprocessor controlled operation <p>Agitation / Vacuum System</p> <ul style="list-style-type: none"> • Built-in vacuum infiltration system for better reagent penetration • Adjustable agitation system for improved processing <p>Safety Features</p> <ul style="list-style-type: none"> • Fume control and filtration system • Overheating protection • Alarm system for reagent level, temperature, and system errors • Power failure protection with memory backup <p>Construction</p> <ul style="list-style-type: none"> • Corrosion-resistant housing • Stainless steel internal components 	1	27000


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	<ul style="list-style-type: none"> • Chemical resistant reagent containers <p>Power Requirements</p> <ul style="list-style-type: none"> • 220–240 V, 50/60 Hz single phase • Built-in voltage protection <p>Accessories</p> <ul style="list-style-type: none"> • Tissue baskets and cassette holders • Reagent containers • Paraffin containers • Waste container • User manual and service manual <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
58.	<p>Ultrasound Machine Specification</p> <ul style="list-style-type: none"> • Full digital beam former system is capable to handle multi frequency probes from 3.0 – 12.0 MHz (probe dependent) <p>Display MODES:</p> <ul style="list-style-type: none"> • B, B/B, B/M, M, Quad B, PW. • Multi Frequency Convex probe 35C50EB, 2.0-5.0 MHz • B/M Mode Available • B/M Mode available <p>Image adjustments:</p> <ul style="list-style-type: none"> • B-gain, M-gain 0 to 100db • Dynamic Range 30db to 240db • 0 – 3 types Correction • 1- 6 steps swipe Speed • Mode: indicate the intensity of echo signal by easy operation L M H UH, 4 steps • Gray scale: 256. • 0 – 100 dB with 1 dB incremental • Up to 37.8 cm depth • Focusing with 4 steps and dynamic • Acoustic power (7%-100%, 3%/step) • Standard alpha numeric with track ball • Standard THH function • Cine memory of minimum up to 11959 frames • 2 USB ports for data transfer • Post processing: Image inversion, edge/echo enhancement correlation / persistence/Dynamic range/Gamma Curve. • Image magnification 10x in real time • 12 inch color LCD screen or more • Standard two active probe connectors • Measurements package: Abdominal, Obs , Nt and AF <p>Accessories:</p> <ul style="list-style-type: none"> • Thermal Printer 256-Gray scale can be provided • Compatible UPS • 50 High Density Rolls. <p>Country of Origin: UK, USA, Europe, Japan or equivalent.</p>	5	300000

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59.	<p>Ventilator for ICU Specification Features</p> <ul style="list-style-type: none"> • Suitable for Adult, Pediatric and Neonate Patients • 15" Color active matrix TFT touch screen or above • Pneumatically driven & electronically controlled ventilator • Automatic system & check procedure. • Both Invasive & non-invasive ventilation which is used to inside & outside ICU. • Optional air backup supply properly working in emergency condition and no air & Electricity supply. • Gas & pressure electronic display. • Inspiratory & expiratory flow sensor to ensure the ventilation accuracy. Inspiratory & Expiratory module is detachable and autoclavable (134°C). • Modular designed main-stream / side-stream CO₂ concentration monitoring, which is compatible with patient monitors. (Optional) • Modular designed SpO₂ measurement is with compatible patient monitors <p>Ventilation Modes Invasive & Non-invasive Ventilation Modes.</p> <ul style="list-style-type: none"> • V-A/C (Volume Assist/Control) • P-A/C (Pressure Assist/Control) • V-SIMV (Volume-Synchronized Intermittent Mandatory Ventilation) • P-SIMV (Pressure-Synchronized Intermittent Mandatory Ventilation) • PSV (Pressure Support Ventilation) • CPAP (Continuous positive airway pressure ventilation) • nCPAP (nasal Continuous positive airway pressure ventilation) • Duo level (Dual Level Positive airway pressure ventilation) • APRV (Airway Pressure Release Ventilation) • PRVC (Pressure Regulated Volume Control) • PRVC-SIMV (PRVC-Synchronized Intermittent Mandatory Ventilation) • VS(Volume support) • Apnea Back-up • AMV (Adaptive minute ventilation) • CPRV (Cardio-pulmonary resuscitation ventilation) <p>Procedures Decision Supportive Function</p> <ul style="list-style-type: none"> • Sigh function • High flow O₂ Therapy • Pneumatic Nebulizer • Expiratory Hold • Inspiratory Hold • Manual breath • O₂ Enrichment • Suction support • Low flow PV tool to decide optimal PEEP setting & calculate display upper and lower infection points and have store up 4 historical measurement. • ATRC automatic tube resistance compensation. 	23	2070000


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	<p>Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any Two Certificate) Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
60.	<p>Video Colposcope Specification</p> <ul style="list-style-type: none"> · Working length: 1700mm · Total length: 2000 mm · Distal end outer diameter: 9.8mm · Instrument channel inner diameter: 3.2mm · Depth of field: 2 – 100mm · Field of view: 170° · Angulation range: U210°, D180°, L160°, R160° · Chromoendoscopy mode facility with 2 CBI mode · Colo smart assistance for elastic bending, adjustable stiffness and sync force transmission <p><i>Standard set of accessories</i> Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	1	75000
61.	<p>Video Endoscope Complete System Specification</p> <p>a. FHD Camera System With Integrated LED light source Technical Specification: Functions and Features Illumination – 3 LED Light source Chromoendoscopy – CBI REGULAR / CBI INDIGO Image Enhancement – Structure / edge / HBE Brightness Adjustment – Automatic / manual mode Digital Zoom - 1x , 1.2x, 1.5x , 1.8x, 2.0x, 4x Freeze and Playback – Freeze the real time image and play it back IRIS - Peak / Average / Auto Internal Storage – 500 G , 500 User profile , 100,000 examination record External Storage - USB User Interface – 10.1 inch customizable touch screen DICOM – Support DICOM 3.0 protocol</p> <p>Full HD Video Gastroscope: Technical Characteristics:</p> <ul style="list-style-type: none"> • Full HD mega pixel Gastroscope. • Necessary enhancement with close focus and wide angulations which enables mucosal observation. • Digital electronic zoom with water jet system. • Insertion/bending tube diameter 9.6mm • Angle of view 145° • Focal range: 2 – 100mm • Instrument channel 3.2mm • Working length 1050mm • Wide range 4-way angulations • Up: 210° 	1	240000

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- Down: 120°
- Right: 100°
- Left: 100°
- All standard lists of accessories included.

Full HD Video Colonoscope:

Technical Characteristics:

- Full HD mega pixel Colonoscope for detailed, clear & improved visualization of mucosa.
- Necessary enhancement with close focus and wide angulations which enables mucosal observation.
- GDF (Graduated decreasing flexibility), Adaptive bending & True force transmission to increase the patient comfort & examination procedure.
- Digital electronic zoom with water jet system.
- Insertion/bending diameter 11.8mm
- Angle of view 170°
- Focal range: 2 – 100mm
- Instrument channel 3.8mm
- Working length 1700mm
- Wide range 4-way angulations:
- Up: 180°
- Down: 180°
- Right: 160°
- Left: 160°
- All standard lists of accessories included.

b. 27" FHD MONITOR

- To display the clinical findings
- Resolution should be 3840 x 2160 or more

c. ENDOSCOPIC IRRIGATION PUMP

Technical Specification:

- For cleaning a lens of scope
- Press and flush or automatically stop after 20 second
- Continuous flushing to avoid water waste
- 09 level water flow control maximum 450ml / min
- Warning for loose cover
- Detachable pump head, easy to clean
- Compact

d. ENDOSCOPIC TROLLEY with software

Technical Specification:

- Medical Grade Trolley
- 04 layers
- Keyboard drawer
- 04 wheels castor with breaks
- Software (to be used with existing PC of the hospital)

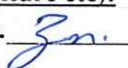



Country of Origin: UK, USA, Europe, Japan or equivalent.

Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate)

Warranty: *Warranty period shall be of three years starting from date of satisfactory installation of equipment*

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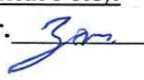
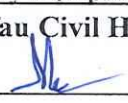



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62.	<p>Overhead Warmer Specification:</p> <ul style="list-style-type: none"> • Type: Infant radiant warmer with modular, user-friendly design for optimal thermal support of newborns. • Designed for neonatal intensive care, delivery rooms, emergency departments and operating theatres. • Application: Thermoregulation, pre-warming, manual heating and servo-controlled baby mode. <p><i>Heating & Temperature Control</i></p> <ul style="list-style-type: none"> • Heating Source: Radiant heater with ceramic resistances in warmer head for even heat distribution. • Operating Modes: Baby (servo) mode, Pre-warm mode, Manual mode. • Skin Temperature Set Range: 34 – 38 °C in 0.1 °C increments. • Temperature Measurement Accuracy: ± 0.1 °C. • Heater Output: 0 – 100 % in 10 % increments. • Skin Temperature Display Range: 18 °C – 42 °C. • Intelligent alarm system for prolonged warm-up, sensor failures and safety limits. <p><i>Mechanical & Physical</i></p> <ul style="list-style-type: none"> • Dimensions (approx): <ul style="list-style-type: none"> ○ Width: 90 cm ○ Depth: 110 cm ○ Height (standard): 177 cm ○ Height (adjustable, optional): 177 – 197 cm ○ Mattress Size: 70 × 55 cm ○ Maximum Baby Load: 10 kg ○ Standard Mattress Height: 93 cm ○ Adjustable Mattress Height (optional): 93 – 113 cm. • Bed Tilting: ± 12°. • Wheels: Castor wheels with brakes for mobility. (manual) <p><i>Illumination & Display</i></p> <ul style="list-style-type: none"> • Examination Light: LED lamps (typically 2 × 5 W). • Clear digital display for temperature, settings and alarm status. <p><i>Control Panel & Features</i></p> <ul style="list-style-type: none"> • Control Panel: Digital with mode and setting buttons. • SmartSilence: Hands-free alarm silence function to maintain sterile hands. • SmartTilt: Electronic Trendelenburg and reverse Trendelenburg positioning. • SmartMemory System: Stores two memory positions for bed tilting angles. <p>Country of Origin: UK, USA, Europe, Japan or equivalent, (Any One Certificates of CE, FDA, MHLW) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Should be: ISO-13485 (Mandatory) Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	4	36000
63.	<p>X-Ray Machine 300MA Specification High Frequency Generator Output should be 40kW kV range should be from 40 to 125 KV or more mA range should be from 10mA to 300 mA or more Should have exposure time of 0.001 to 10 sec or better</p>	2	570000


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Should have Error Detection & Diagnosis
Network integration must be present
Image acquisition system must be able to display and control the parameters and status of generator
Should have at least 600 anatomical programming for radiography
Should have an automatic exposure control interface

X-Ray Tube Assembly

High-speed rotating anode dual focus tube
Focus spot should be 0.6mm / 1.2mm or better
Should have tube over load protection
Anode heat capacity of 150 KHU or more

Chest Bucky Stand

Detector travel range should be 370mm to 1750mm from the center of detector to the floor with a tolerance of (+/-20mm)

Auto Tracking of x-ray tube to the chest bucky

Radiographic Integrated Table

Patient load should be 200 kg or more
Tabletop size 210 x 80 cm or more
Height adjustable should be 68 to 90cm or better
Tube stand longitudinal Travel must be 240 cm or better
X-ray tube rotation along horizontal arm +/-120 degree
X-ray tube vertical travel (tube focus to floor) 52.5cm to 182 cm
Tube column rotation 0-180 degree or better with lockable option at 90 degree and 180 degree
Bucky travel longitudinal must be 54cm or better
Grid ratio must be 10:1
Attenuation equivalent of table top should be less than 1.2 mm Al

Collimator with laser

Manual collimator
Source to image Distance must be 1000mm or better
LED light beam Max 430mm x 430 mm and min 0mm x 0mm

Acquisition Workstation

CPU >3GHz, RAM 4GB, Hard Drive 1TB, CD-ROM, DVD Burning
Must be equipped with USB, 1000MB Network interface, DVI/HDMI display output interface
LCD Monitor 24" or better with minimum resolution of 1920x1080
Operating system must be Windows 7 or better
Image Acquisition: acquisition condition setting, mechanical position setting APR setting and display other features

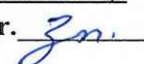

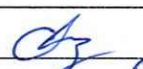


Data Management

Patient registration, patient information and image management, report management
Exposure Data Record and Display
DICOM Service: send, receive, storage, query, WORKLIST, MPPS, verification etc.
DICOM SR: report preparation, storage, printing, sending
Data Statistics: Statistics of exposure counting, body part, patient number etc. in specific date or period
Support RIS.

Image processing

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- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<p>Window width/ level, Auto window width/ level setting, preview, preset Window width/ level, positive and negative image reversal; Image flipping, rotating, zooming, roaming; Image interpolation edge enhancement, restore original image annotation, Character/ number annotation , image annotation, Tape measurement, area measurement, auto-sub setting.</p> <p>Image Printing</p> <p>DICOM Printing, Paper Printing, Manually Select Images Displayed for Printing, One-key Printing of Annotated Images, various printing equipment compatible, Printing in film format, Number of printing, Print Queue Control, Stop/ Start Presetting.</p> <p>Other Functions</p> <p>Users can define a display format or layout; various methods can be used to view the images of patients, and the way to look up information can be defined. Reservation function, pixel optimization, the software interface of image processing in diagnostic workstation is in English, supports high-speed transfer of lossless compression, support online decompression.</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent.</p> <p>Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates.</p> <p>Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
64.	<p>X-Ray Machine 500MA with Fluoroscopy Microprocessor based Floor mounted X-Ray Unit. High frequency, 50kW X-Ray generator. 500 mA at 100 kV kV Upto 150 kV with range from 40 to 150 Anatomical Programmed Radiography. Main Console with 23" Touch screen Display of all set parameters 8" or higher digital display on Tube head for additional control and precise working on the X-ray table side Rotating anode X-Ray tube, with dual focus 0.6 & 1.2 mm. Anode heat storage capacity of at 400 KHU or more Electronic timer with exposure time of 1msec. System with AEC facility for Table and Chest Stand including accessories Chambers etc. Capable of lateral Radiography. 4-way floating X-Ray Table having Weight capacity 290Kg or more Chest stands with Bucky Complete with grid 10:1 ratio. Automatic over-load protection device and automatic line compensation. 3-phase, 380 V, 50 Hz. One wireless Flat Panel detector with active image size of 14"x17" or better Cesium (CsI) scintillator or better Pixel size 140 µm or better. Hot swap feature for easy battery change. Spatial Resolution 3.5 lp/mm or better or DQE 70% or more. Matrix size approximately 2520x 3000 or better 16 bits or better detector depth. High-resolution digital imaging reconstruction. Image display with DICOM network connection, complete with 19-inch color TFT display. Intel Core i3, 3.6 GHz, Memory 16 GB, Hard Disc 500GB or better. Storage of Minimum 5,000 or more images. Imaging System should be capable of patient and study Administration Exposure and post processing</p>	1	1050000

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

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	<p>Image documentation, archiving, display of image markers. Organ program selection and configuration. Image processing functions such as rotate, mirror, zoom, window, filter, insert comment line and system must have Pneumothorax, Smart Grid, Tube and line Visualization, Padiatric Imaging & Bone suppression software. DICOM 3.0 (Print, Store, MWL) fully comply. Three-Tray DICOM 3.0 compliant dry LASER printer 650DPI Resolution with output of 160 films of 14x17/hour X-Ray Machine, FPD detectors, imaging software and Dry LASER printer. Lead Apron (0.5mm lead eq) Two with hanger. The firm shall be responsible for Lead Lining in the X-Ray Room (approximate size 20x20 ft) and coordinate with the PNRA for getting required certification/ approval. Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
65.	<p>Air Drill with Attachment Specification 1. Type <ul style="list-style-type: none"> • Pneumatic (air-driven) surgical drill system 2. Operating Pressure <ul style="list-style-type: none"> • 90 – 120 psi (6.2 – 8.3 bar) 3. Speed (RPM) <ul style="list-style-type: none"> • High speed: up to 40,000 – 80,000 RPM (depending on attachment) • Variable speed control 4. Torque <ul style="list-style-type: none"> • High torque suitable for bone drilling and cutting 5. Air Consumption <ul style="list-style-type: none"> • Approx. 150 – 300 L/min 6. Handpiece <ul style="list-style-type: none"> • Lightweight, ergonomically designed • Autoclavable stainless steel construction • Anti-slip grip 7. Noise Level <ul style="list-style-type: none"> • Low noise operation (<75 dB preferred) 8. Attachments (Included/Compatible) <ul style="list-style-type: none"> • Straight attachment • Angled attachment (e.g., 45° / 90°) • Burr attachments (various sizes) • Saw attachment (optional) • Reamer or wire driver attachment (optional) 9. Chuck Type <ul style="list-style-type: none"> • Keyless or standard chuck system • Quick coupling mechanism 10. Sterilization <ul style="list-style-type: none"> • Fully autoclavable components (134°C) 11. Hose & Connector <ul style="list-style-type: none"> • High-pressure flexible air hose • Standard quick-connect coupling (compatible with OT gas outlets) 12. Control System <ul style="list-style-type: none"> • Foot pedal or hand-controlled trigger </p>	1	120000


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	<p>13. Lubrication</p> <ul style="list-style-type: none"> Requires medical-grade pneumatic oil (as per manufacturer guidelines) <p>14. Safety Features</p> <ul style="list-style-type: none"> Overheat protection Secure attachment locking mechanism <p>15. Applications</p> <ul style="list-style-type: none"> Orthopedic surgery (bone drilling, fixation) ENT procedures Neurosurgery (depending on attachments) <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
66.	<p>Autoclave Sterilizer, 50 liters capacity</p> <p>Specification</p> <ul style="list-style-type: none"> 16x30 50 liter Capacity: Auto clave 50L (16x30) Horizontal Drum: Double chamber (Jacket & Chamber) Material: MS Mild steel and SS Stainless steel (SS sheet size 2.5 MM for double chamber and 1.5 for single chamber) Working pressure: 30 – 35 pound (can be used up to 50-pound pressure if needed) Power: Electric 3 phase + Gas Wika Gauges: Water pressure gauge, steam pressure gauge and chamber pressure gauge. Valves: Safety valves & emergency steam release valves. <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	3	36000
67.	<p>Blood Bank Scale</p> <p>Specification</p> <p>1. Type</p> <ul style="list-style-type: none"> Digital blood weighing scale with mixer/agitator <p>2. Weighing Capacity</p> <ul style="list-style-type: none"> 0 – 1,000 g (minimum) Suitable for standard blood bags (350 ml / 450 ml) <p>3. Accuracy</p> <ul style="list-style-type: none"> ±1 g <p>4. Display</p> <ul style="list-style-type: none"> Digital LCD/LED display Simultaneous display of weight and volume (ml) <p>5. Conversion</p> <ul style="list-style-type: none"> Automatic conversion of weight to volume (ml) <p>6. Mixing Function</p> <ul style="list-style-type: none"> Continuous gentle agitation for proper anticoagulant mixing Adjustable mixing speed (approx. 25–35 cycles/min) <p>7. Collection Monitoring</p> <ul style="list-style-type: none"> Preset target volume (e.g., 350 ml / 450 ml) Automatic clamping or alarm at target volume <p>8. Alarm System</p>	4	24000


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



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	<ul style="list-style-type: none"> • Audio-visual alarm for: <ul style="list-style-type: none"> ○ Target volume reached ○ Low/high flow rate ○ Completion indication <p>9. Clamp Mechanism</p> <ul style="list-style-type: none"> • Automatic tube clamp to stop blood flow when target reached <p>10. Tray/Platform</p> <ul style="list-style-type: none"> • Stainless steel or ABS tray • Removable and easy to clean <p>11. Power Supply</p> <ul style="list-style-type: none"> • AC 220–240V, 50 Hz • Built-in rechargeable battery backup (optional) <p>12. Operating Conditions</p> <ul style="list-style-type: none"> • Temperature: 10°C to 40°C • Humidity: ≤85% RH <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consigne end</p>		
68.	<p>Blood Bank Tube Sealer</p> <p><u>Specification</u></p> <p>1. Type</p> <ul style="list-style-type: none"> • Portable bench-top blood tube sealer • Radio Frequency (RF) / High-frequency sealing technology <p>2. Application</p> <ul style="list-style-type: none"> • Sealing PVC blood bag tubing during blood collection and processing <p>3. Sealing Time</p> <ul style="list-style-type: none"> • ≤ 1–3 seconds per seal <p>4. Tube Compatibility</p> <ul style="list-style-type: none"> • Suitable for PVC tubing (standard blood bag tubing 3–6 mm OD) <p>5. Seal Quality</p> <ul style="list-style-type: none"> • Uniform, leak-proof hermetic seal • Creates strong segments for component separation <p>6. Operation Mode</p> <ul style="list-style-type: none"> • Automatic / Semi-automatic operation • Single-button activation <p>7. Display/Indicators</p> <ul style="list-style-type: none"> • LED indicators for power, sealing status, and errors <p>8. Power Supply</p> <ul style="list-style-type: none"> • AC 220–240V, 50 Hz • Optional battery-operated portable model <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHILW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	4	36000
69.	<p>Blood Refrigerator 200 bags capacity</p> <p><u>Specification</u></p> <p>Auto Defrost Forced – Air Circulation Temperature control</p>	2	48000


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	<p>Safety Control System Ergonomic design Transparency Design Voltage(V/Hz) 220V/50Hz/60Hz Temp. range (°C):4±1 Capacity: 100-200 Bags Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
70.	<p>Blood Shaker 10-12 bags <u>Specification</u> Specification: Accept all major brands of bag available in the local market Mixing of blood bags LCD/LED Display of parameters Self-Calibration Measuring and shaking of blood bags Battery operated User Adjustable Settings: Weight range 1-999 gr/ml Displayed Parameters: Accuracy +/- 2 % Error Indication Accessories: With all Standard Accessories Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	4	96000
71.	<p>Centrifuge Machine <u>Specification</u> Maximum capacity: 12 x 15mL Maximum speed: 300-5000 rpm, adjustable in increments of 100 rpm Time setting: 1-99 minutes, in increments of 1 minute; HOLD Temperature range: 2°C to 40°C Control system: Microprocessor User interface: Large, brightly-lit LED display Noise level: <55 dBA Power Supply (VAC/ Hz): 220-240 VAC/ 50 Hz Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	4	21000
72.	<p>E.N.T Microscope <u>Specification</u> Floor mounted stand with counter balanced arm and motorized balancing Microscope body with linear motorized zoom (1:6) or better Motorized fine focusing Adjustable speed for focus and zoom Continuously variable focal length 225 to 600 mm without changing front lens Binocular tiltable 0o to 180o with IPD adjustment Coaxial illumination Variable spot illumination Eye pieces 10X/12.5X with dioptic adjustment Fully apochromatically corrected optics with high light transmission Dust cover Sterilization protective caps for all drive knobs LED/Xenon illumination with controllable intensity Waterproof foot control panel Stereo co-observation attachment with inclination with</p>	2	48000


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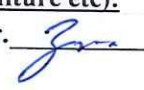




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	<p>straight binocular tube Beam splitter HD camera attachment Recorder with hard drive and 21" or more LCD / LED screen Country of Origin: UK, USA, Europe, Japan or equivalent, Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificate. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
73.	<p>Eye Surgery Microscope Specification 1. Floor stand mount microscope body with zoom (ratio 1:5 or better). 2. Linear/Continuous zooming 3. Built-in coaxial illumination with red reflex. 4. Motorized fine focusing and manual or motorized coarse focusing 5. Objective f=175mm/ f=200 mm 6. Binocular tube: inclined at a variable angle 7. Eyepiece: 10 X or 12.5X with dioptic adjustment 8. Halogen/LED illumination with controllable intensity with/without fiber optic cable 9. Water proof foot control panel. 10. Sterilizable protective caps for all drive knobs Accessories: 1. 06 spare halogen lamps (in case of halogen illumination). 2. Dust cover. Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificate. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment.</p>	1	600000
74.	<p>Hand Drill with Attachment Specification: 1 DRILLANDREAMER Speed max. Depending of attach.Cannulation 4.0mm Weight (incl. battery & lid)1000 - 1500g Attachments 2 REAMERATTACHMENTJACOBSCHUCK REAMERATTACHMENT with Jacobs chuck0.5-7.5mmchuck 0-250 rpm or better;4.0 mm; 3 REAMERATTACHMENTAO-LARGEREAMERATTACHMENT 0-250 rpm or better;4.0 mm; 4 REAMER ATTACHMHUDSON/ZIMMER REAMER ATTACHMENT 0-250 rpm or better;4.0mm; 5 Researchable Battery with 4hrs or more battery backup 6 LID 7 DRILL ATTACHMENT AO-SMALL DRILL ATTACHMENT 0-1,200 rpm or better;2.8mm; 8 DRILL ATTACHMENT HUDSON/ZIMMER DRILL ATTACHMENT</p>	1	6000


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	<p>0-1,000 or better rpm;4.0mm;</p> <p>9 UNIVERSAL K-WIRE ATTACHMENT K-WIRE ATTACHMENT For K-wires from 0.6-4.0 mm 0-1,200 rpm or better</p> <p>10 CHARGING UNIT</p> <p>11 Mains voltage ranges 220V~to240V~</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
75.	<p>Hospital Laundry plant equipment</p> <p style="text-align: center;">TECHNICAL SPECIFICATIONS</p> <p>HYGIENE BARRIER WASHER EXTRACTOR (DOUBLE DOOR) High efficient Hygiene Barrier washer extractor, fully automatic, programmable (20,programmable cycles) microprocessor controlled with front loading back unloading. Color touch screen display 7" or better with swipe function, user friendly screen with operating system instructions. Graphic display. Memory capacity for 99 programs. Automated service reminders. On screen timer so operator exactly know waht time cycle will take. Cloud based platform to easily monitor your laundry everywhere and at any time. Allowing a full modification of every step of the wash cycle such as temperature, times, soap levels & number of rinses. It also allows a constant monitoring and analysis of the wash programmed. Stainless steel, drum, cabinet, tub and stainless-steel side panels. Multi liquid supply connection/liquid soap signals as standard. Equipped with latest technology that use less energy, water and detergents based on the water absorption level of the linen instead of weight of the linen. Large door opening easy loading and unloading. Automatic drum positioning. Equipped with USB port. Light and sound signalization of end of washer cycle. Insulation for energy, heat and noise reduction. Built-in weighing system. Cloud based platform to monitor loandry from anywhere in the world. Capacity: 36-40 kg (1:10) Drum Volume: 360-400 L Wash speed: 41-50 rpm Extraction 900-1000rpm G Factor: 350 -400 Heating: Dual (Steam & Electric)</p> <p>DRYING TUMBLER Fully automatic, Microprocessor controlled freely programmable (30 programmable drying cycles), factory painted. Large door. Stainless Steel drum. Equipped with rotation sensor. Equipped with moisture sensing mechanism. Equipped with fire suspension system in case of emergency.</p>	1	495000


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Reversing system to prevent the tangling of the linen.
 Automatic service reminders.
 Temperature & time can be freely programmed.
 Equipped with the latest technology that will dry the linen to the programmed moisture level at programmed temperature, resulting in a pinpoint dryness reading throughout the entire load. This helps eliminate over-drying, increases throughput and reduces utility consumption, time, labor cost and extend the life of the linen.
 Equipped with built in fire suspension system.
 Equipped with built in moisture sensing feature.
 Equipped with rotation sensor.
 Color touch screen display 7" or better with swipe function, user friendly screen with operating system instructions.
 Built in fire suspension system.

Capacity: 27-30 kg (1:18)
 Drum Volume: 1020-1100 lit or above
 Drum Dia: 1100-1200 mm
 Min temp: 38-40 centigrade
 Max temp: 88-90 centigrade
 Door opening dia: 680 mm or above
 Heating: Electric

FLATWORK IRONER WITH AUTOMATIC COOL DOWN SYSTEM

Easy to operate Microprocessor with 20 preset ironing programs. Unit must be equipped with reversing mode option. Automatic speed adjustment.
 7" Color touch screen display with swipe function free service reminders. Finger protection and emergency button for more safety. Feeding belts are assembled by means of connecting latches. Nickel Chromium plated cylinder for a better thermal conduction. Indication of ironing speed and temperature. Equipped with adjustable speed mechanism based on temperature. Equipped with foot paddle easy to operate.

Type/Version: Compact Free-Standing type, Factory assembled state,
 Roller dryer ironer, front feeding and receiving,
 Roller dia: 500-600 mm or above
 Working width: 2700-3000 mm
 Heating: Electric
 Speed: Adjustable ironing speed: 1.5-8 m/min

UTILITY PRESS

Air operated laundry press adjustable squeezing pressure between head and buck.
 Fitted with timer and two hand push buttons.
 Steam heating
 Built-in 1 HP compressor with 24 lts. tank

Supplied with water spray gun, condenser and support.

STEAM HAND IRONER WITH VACCUM TABLE

Steam heated iron, with mechanical steam valve, steam and return pipes with support, pipes connections set, with cut off valve and thermodynamic trap, iron rest.

SEWING MACHINE

Motorized, heavy duty with sewing machine table.

WEIGHING SCALE

Digital display.
 Capacity 300 kg.
 Supplied with platform


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MANUAL TROLLEY WASHER

Manual Cleaning of transport trolleys and carts. Washer nozzle gun for trolley wash with adjustable pressure with mounting.

Water pressure up to 5 bar.

Automatic dosing of detergents.

Hose length 1-2 meter.

Complete with all accessories and cleaning gun.

PACKING/ SORTING TABLE

The main structure is completely built with tubular profiles in Stainless Steel AISI 304, with plain in plate strengthened and supported in the underlying part. Tabletop also in S.S. AISI304.

Dimensions: 60"X26"X36"

LOADING UN LOADING TROLLEYS

Dimensions: 42"x30"x36"

Complete Structure (walls, bottom) of Aluminum/ SS plate

Bottom edges to be covered properly. Drain taps at the bottom

Red color upper edge reinforced with round profile.

4 imported casters of 150mm with 2 brakes, bumpers on all sides

Framework for supporting wheels and bottom reinforcement, in robust extruded section bar of S.S.

PAK MADE**STORAGE RACKS**

Hospital Linen Storage Racks with Solid 5-6 Shelves

To be built of Stainless Steel AISI-304

Each shelf to hold up to 150-200kg of evenly distributed weight Dimensions: 42"x20"x 72"

To dispatch linen, a lockable S.S window of 3'x6"x4' with frosted tempered glass will be provided and fixed as per site and sample approval.

PAK MADE**DISTRIBUTION TOLLEYS**

Dimensions: 42"x26"x48"

Lockable double door with magnets, 270° opening with anti-dust gasket

Two internal shelves, one clipboard holder

2 horizontal push handles, one for each short side of the trolley Complete Structure of AISI-304 stainless steel

4 imported casters of 150mm with 2 brakes, bumpers on all sides.

Framework for supporting wheels and bottom reinforcement, in robust extruded section bar of S.S. Upper edge reinforced with round profile.

PAK MADE**RO PLANT**

Water Treatment System will be compatible with the System (Laundry).

As per requirement of the whole system.

Designed as per local water testing report (responsibility of firm).

Soft water supplied to sink.

Imported parts locally assembled.


05 years extend warranty offered in financial offer.

PAK MADE"

- For Laundry installation; MS/copper/ SS pipes will be used as per standards. The complete flooring of laundry with anti-bacterial sheet, anti-bacterial paint on walls, dumba false ceiling will be installed. The partitioning will be made with 2mm Aluminum sheet. Floor cleaning/ polishing machine will be the part of furnishing.
- The furnishing of all rooms including changing, sorting, sitting, waiting etc will also be done along with chairs and tables etc.
- Computer I7 qty 01 with table and chair along with Laser Printer branded, UPS (10/15

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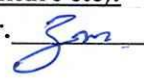
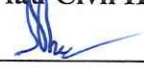



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	<p>minutes).</p> <ul style="list-style-type: none"> • Thermon disinfects able shoes 10 pairs. • Wooden cabinet with draws to keep gloves, head cap, mouth caps, shoes etc. • All types of disposables for sterilizers, washer disinfectant, H2O2 Sterilizer for 50 cycles as starter kit. • Automatic shoe cover machine qty. 01 • Air conditioning scope will be provided by the building contractor for dirty, clean and sterilized area with required pressure and institute will ensure the same through HVAC contractor. • Standard warranty 01 year with parts and free services, however firms have to mention there after sales services for 2nd, 3rd, 4th and 5th year with parts. <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
76.	<p>Plasma Expresser Specification 1. Type</p> <ul style="list-style-type: none"> • Manual / Mechanical plasma expressor (bench-top type) <p>2. Application</p> <ul style="list-style-type: none"> • Used for separation of plasma from whole blood bags after centrifugation <p>3. Operation</p> <ul style="list-style-type: none"> • Manual pressure control using handle/plate mechanism • Smooth and uniform expression of plasma into satellite bag <p>4. Capacity</p> <ul style="list-style-type: none"> • Suitable for standard blood bags (350 ml / 450 ml / 500 ml) <p>5. Plate Design</p> <ul style="list-style-type: none"> • Transparent front plate (acrylic/polycarbonate) for visibility • Movable pressure plate for controlled extraction <p>6. Frame Material</p> <ul style="list-style-type: none"> • Mild steel with epoxy powder coating or stainless steel (SS) <p>7. Pressure Mechanism</p> <ul style="list-style-type: none"> • Spring-loaded or screw-type pressing system • Adjustable pressure control <p>8. Stability</p> <ul style="list-style-type: none"> • Non-slip rubber feet for firm bench placement <p>9. Clamp/Holder</p> <ul style="list-style-type: none"> • Integrated clamp or provision for tubing support <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	4	24000
77.	<p>Plasma Elevator Specification Type</p> <ul style="list-style-type: none"> • Plasma extractor with elevator mechanism (manual / semi-automatic) <p>2. Application</p> <ul style="list-style-type: none"> • Used for controlled extraction of plasma from blood bags after centrifugation <p>3. Operation</p> <ul style="list-style-type: none"> • Smooth lifting (elevator) mechanism to raise blood bag gradually • Ensures uniform plasma transfer into satellite bag 	2	600

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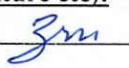




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	<p>4. Capacity</p> <ul style="list-style-type: none"> • Compatible with standard blood bags (350 ml / 450 ml / 500 ml) <p>5. Platform / Elevator System</p> <ul style="list-style-type: none"> • Adjustable lifting platform with smooth movement • Controlled elevation to avoid RBC disturbance <p>6. Plate Design</p> <ul style="list-style-type: none"> • Transparent front plate (acrylic/polycarbonate) for clear visibility • Movable pressure plate for controlled plasma expression <p>7. Frame Material</p> <ul style="list-style-type: none"> • Mild steel with epoxy powder coating or stainless steel (SS) <p>8. Pressure Mechanism</p> <ul style="list-style-type: none"> • Spring-loaded / screw-type / gravity-assisted system <p>9. Stability</p> <ul style="list-style-type: none"> • Anti-slip rubber feet for firm placement <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
78.	<p>Plasma Freezer Specification</p> <p>1. Type</p> <ul style="list-style-type: none"> • Vertical deep freezer (plasma storage) • Laboratory / blood bank grade <p>2. Temperature Range</p> <ul style="list-style-type: none"> • -20°C to -40°C (adjustable) • Standard setting: $\leq -30^\circ\text{C}$ for plasma storage <p>3. Capacity</p> <ul style="list-style-type: none"> • 100 – 400 liters (depending on requirement) • Storage for plasma bags (FFP) <p>4. Temperature Control</p> <ul style="list-style-type: none"> • Microprocessor-controlled digital system • Digital display (LED/LCD) <p>5. Accuracy & Uniformity</p> <ul style="list-style-type: none"> • Temperature accuracy: $\pm 1^\circ\text{C}$ • Uniform cooling throughout chamber <p>6. Cooling System</p> <ul style="list-style-type: none"> • CFC-free refrigeration system • High-efficiency compressor <p>7. Alarm System</p> <ul style="list-style-type: none"> • Audio-visual alarms for: <ul style="list-style-type: none"> ○ High/low temperature ○ Door open ○ Power failure ○ Sensor fault <p>8. Backup System</p> <ul style="list-style-type: none"> • Battery backup for display and alarms (minimum 4–6 hours) <p>9. Insulation</p> <ul style="list-style-type: none"> • High-density PUF insulation for temperature retention <p>10. Shelves/Storage</p>	2	48000


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	<ul style="list-style-type: none"> Stainless steel or coated wire shelves Adjustable compartments for plasma bags <p>11. Door Type</p> <ul style="list-style-type: none"> Solid insulated door with magnetic gasket Lockable door for safety <p>12. Defrost System</p> <ul style="list-style-type: none"> Manual or automatic defrost <p>13. Power Supply</p> <ul style="list-style-type: none"> AC 220–240V, 50 Hz <p>14. Energy Efficiency</p> <ul style="list-style-type: none"> Low power consumption design <p>15. Build & Construction</p> <ul style="list-style-type: none"> Interior: Stainless steel or corrosion-resistant coating Exterior: Powder-coated steel <p>16. Mobility</p> <ul style="list-style-type: none"> Castor wheels for easy movement (optional) <p>17. Operating Conditions</p> <ul style="list-style-type: none"> Temperature: 10°C to 35°C Humidity: ≤85% RH <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
79.	<p>Retinoscope Specification</p> <p>Specification: Halogen/LED light for true tissue color and consistent, long-lasting illumination Apertures: micro, small, large, fixation target, slit, red-free filter 28 focusing lenses with a range of -20 to +40 or better diopters</p> <p>Accessories:</p> <ol style="list-style-type: none"> Rechargeable handle with charger & batteries. 3 spare bulbs (in case of Halogen). Carrying case <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>	2	9000
80.	<p>Temporary Pace maker Specification</p> <p>1. Type</p> <ul style="list-style-type: none"> External temporary cardiac pacemaker Single chamber or dual chamber (preferred) <p>2. Pacing Modes</p> <ul style="list-style-type: none"> VVI, AAI, DDD (for dual chamber models) <p>3. Pulse Amplitude (Output)</p> <ul style="list-style-type: none"> Adjustable: 0.1 mA to 20 mA <p>4. Pulse Width</p> <ul style="list-style-type: none"> Adjustable: 0.1 ms to 2.0 ms <p>5. Pacing Rate</p> <ul style="list-style-type: none"> Adjustable: 30 – 180 beats per minute (BPM) 	15	112500


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	<p>6. Sensitivity</p> <ul style="list-style-type: none"> Adjustable sensitivity for atrial and ventricular sensing Range: approx. 0.5 mV to 20 mV <p>7. Display</p> <ul style="list-style-type: none"> LCD/LED display for: <ul style="list-style-type: none"> Heart rate Output settings Battery status Mode indication <p>8. Controls</p> <ul style="list-style-type: none"> Rotary knobs or digital push buttons Easy-to-use interface <p>9. Leads Compatibility</p> <ul style="list-style-type: none"> Compatible with standard temporary pacing leads and cables <p>10. Power Supply</p> <ul style="list-style-type: none"> Internal rechargeable battery Battery backup: minimum 8–12 hours <p>11. Alarms & Indicators</p> <ul style="list-style-type: none"> Audio-visual alarms for: <ul style="list-style-type: none"> Low battery Lead disconnection Loss of capture/sensing <p>12. Safety Features</p> <ul style="list-style-type: none"> Output protection against overload Isolation protection for patient safety <p>13. Data/Monitoring (Optional)</p> <ul style="list-style-type: none"> Event memory or basic data logging <p>14. Build & Design</p> <ul style="list-style-type: none"> Compact, lightweight, portable Durable medical-grade casing <p>15. Operating Conditions</p> <ul style="list-style-type: none"> Temperature: 10°C to 40°C Humidity: ≤85% RH <p>16. Applications</p> <ul style="list-style-type: none"> ICU / CCU Emergency departments Cardiac procedures (temporary pacing support) <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificates. Warranty: <i>Warranty period shall be of three years starting from date of satisfactory installation of equipment</i></p>		
81.	<p>Amalgam Mixture Specification Digital Operating Timer 0-30 Sec Quite & Low Vibration Operating Speed : High 5000rpm All types of capsules Certification: ISO 13485 (Mandatory) and FDA/CE/MHLW/JIS any one</p>	4	24000


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	Country of origin: USA/EUROPE/JAPAN or Equivalent Warranty: 03 years from the date of satisfactory installation.		
82.	<p>Bronchoscopy Flexible Comp Machine</p> <p>Specification:</p> <ul style="list-style-type: none"> Bronchoscope should be of at least CMOS type or better. It should have Full HD 1920x1080p imaging technology Freeze option should be available. Image processor should be built-in or separate. Water proof design to avoid damage to scope. Suction channel should be available. Biopsy channel should be available (2.0mm) <p>Video Processor Specifications: -</p> <ul style="list-style-type: none"> Minimum of Full HD 1920x1080p resolution (latest model) Virtual Chromoendoscopy technology (SVI or NBI, I-Scan or HLI) R-TLC Technology (Multi-Dimension Image Enhancement or optical enhancement or TXI/RDI) AGC (Automatic gain control) should be present. USB attachment for data transfer. Should have data storage for picture & video recording integrated or separate device 500 GB or better. One button freeze option should be present. Auto white balance option should be available. Outputs: DVI & SDI <p>LIGHT SOURCE SPECIFICATIONS: -</p> <ul style="list-style-type: none"> Multi-LED (latest technology) or 300-watt Xenon Automatic light intensity control. <p>FULL HD EXTERNAL MONITOR DISPLAY SPECIFICATIONS: -</p> <ul style="list-style-type: none"> External Monitor 27 Inch LCD or LED (from same manufacturer) Resolution 1920 * 1080P motion, static capture, can choose to receive HD-SDI, DVI, <p>PC CONFIGURATION:</p> <ul style="list-style-type: none"> Dell Vostro 3888, I5 processor, 8G RAM, 128G SSD, 1000G hard Drive Or Compatible with User Friendly Reporting Software. Reporting Software Includes case data entry, Images, enquiry and reporting. Color Laser Printer. <p>MOVEABLE TROLLEY (supplied locally)</p> <ul style="list-style-type: none"> Should be compatible with above bronchoscopy system <p>ACCESSORIES:</p> <ul style="list-style-type: none"> Cleaning Brushes. Leakage Testing Device. Disposable Forceps Any Type. <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	1	120000


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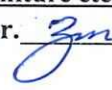


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83.	<p>Head Light Specification</p> <p>Surgical LED Headlight should have the ability to be untethered from a light source or remote battery pack, while providing bright, white light with a homogeneous spot.</p> <p>FEATURES:</p> <ul style="list-style-type: none"> • Should have 30,000 lux output at 16"/ 40cm distance with a bright, clean, uniform spot • Should be 20 – 110mm spot variability at 16"/ 40cm working distance • Should have 4 hour battery life for fully charged battery at maximum output • Battery Recharge Time 4 – 5 Hours • Color temperature should be 4,500° K or more • Color Rendering Index (CRI) should be 75 or more • LED life: >50,000 hours <p>System should have the following</p> <ul style="list-style-type: none"> • Side mounted battery holder • Rechargeable Batteries <p>Single or two Bay Charger Imported/Export Quality</p> <p>Should be: ISO Approved or CE Certified</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>	4	36000
84.	<p>Hot Air Oven Specification</p> <p>Specification:</p> <p>Microprocessor based PID control Inner stainless steel and outer powder coated Stainless steel chamber with adjustable shelves and a tough ended glass inner viewing door At least two shelves made of stainless steel with adjustable height positions the outer cabinet is to be rust resistant Fitted with circulation fan Chamber Capacity: 50-60 Liters or more Power Source 220V, 50HZ AC</p> <p>User Adjustable Settings:</p> <p>Adjustable temperatures from ambient +5C up to 250C Stability: 0.5C</p> <p>Insulated control box</p> <p>Displayed Parameters:</p> <p>Temperature Control for accurate results Digital display to show the chamber temperature and time Indicator lamps to show when the heater is active and if an over temperature condition exists The over temperature safety cutout to be set by the user</p> <p>Accessories:</p> <p>Servo Controlled Voltage Stabilizer with surge protection facility Operating Manual with a Soft Copy</p> <p>Country of Origin: UK, USA, Europe, Japan or equivalent.</p> <p>Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificate.</p> <p>Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end</p>	2	15000
85.	<p>Plasma Incubator Specification</p> <p>1. Type</p>	4	360000


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- Plasma incubator / Fresh Frozen Plasma (FFP) thawing unit
 - Water bath type or dry thaw system
 - 2. Temperature Range**
 - +30°C to +37°C (adjustable)
 - Standard setting: 37°C for plasma thawing
 - 3. Temperature Accuracy**
 - ±0.5°C or better
 - 4. Temperature Control**
 - Microprocessor-controlled digital system
 - Digital display (LED/LCD)
 - 5. Capacity**
 - 4 to 12 plasma bags (depending on model)
 - 6. Heating System**
 - Uniform heating with rapid thawing capability
 - Gentle circulation (for water bath type)
 - 7. Timer Function**
 - Adjustable timer with audible alarm
 - 8. Alarm System**
 - Audio-visual alarms for:
 - High/low temperature
 - Low water level (for water bath type)
 - System fault
 - 9. Chamber / Tank Material**
 - Stainless steel inner chamber
 - Corrosion-resistant body
 - 10. Basket / Holder**
 - Removable stainless steel basket for plasma bags
 - 11. Lid / Cover**
 - Transparent lid for monitoring
 - Insulated to maintain temperature
 - 12. Safety Features**
 - Over-temperature protection
 - Low water cut-off (for water bath)
 - Electrical safety protection
 - 13. Power Supply**
 - AC 220 -240V, 50 Hz
 - 14. Hygiene & Maintenance**
 - Easy-to-clean design
 - Drain valve for water bath models
 - 15. Operating Conditions**
 - Temperature: 10°C to 40°C
 - Humidity: ≤85% RH
 - 16. Applications**
 - Blood banks
 - Hospitals
 - Laboratories
- Country of Origin:** UK, USA, Europe, Japan or equivalent.
Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate)
Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment


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86.	Plasma Thawing Bath Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	4	36000
87.	Refrigerated Centrifuge (Cryofuge) 10-12 rotors Specification TECHNICAL SPECIFICATION: Capacity: Refrigerated centrifuge for the processing of 16 bags of 500 ml, Quadruple, triple, double in single run, RCF: 5000 to 7,500 X G or better RPM: 4000 to 6,000 or better Acceleration Rates: 08-12 or better Deceleration Rates: 08-12 or better Temperature Range: -20°C to +40°C Rotor Type: Rotor can easily accommodate 12 X 500 ml quadruple, triple, double blood bags Memory: Storage of Minimum 20 program memory Control System: Microprocessor control, self-diagnostics for servicing, Accumulated Centrifugal Effect (ACE) Integrator, Pre-Cooling Function Safety Features: Automatic Lid lock, Imbalance detection up to 130g, Securitykey Switch Display: VIDEO set graphics (includes run graph), Info/Error messages in two Languages Motor: High-performance Induction (brushless) Electrical Requirement: 220 - 240V 50Hz Accessories: All with UPS Accessories: Complete with standard accessories, software, Operating manual, Services manual, error code book, part list and software if any. Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment	2	120000
88.	Shaker for test Tube Specification Import 1. Type <ul style="list-style-type: none"> • Bench-top blood tube shaker / mixer • Fixed speed or variable speed model 2. Application <ul style="list-style-type: none"> • Mixing blood samples in tubes to prevent clotting • Suitable for laboratories and blood banks 3. Mixing Motion <ul style="list-style-type: none"> • Rocking / tilting motion or orbital shaking 4. Speed Range <ul style="list-style-type: none"> • 20 – 100 RPM (adjustable for variable models) 5. Capacity <ul style="list-style-type: none"> • 10 – 30 test tubes (depending on rack size) • Compatible with standard tubes (2–15 ml) 6. Platform / Rack <ul style="list-style-type: none"> • Detachable tube rack • Anti-slip tube holders 7. Timer Function <ul style="list-style-type: none"> • Adjustable timer (0–60 minutes or continuous mode) 8. Display <ul style="list-style-type: none"> • Digital or analog control panel • LED indicators for operation status 9. Motor Type	1	600


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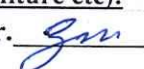




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	<ul style="list-style-type: none"> • Quiet, maintenance-free motor <p>10. Noise Level</p> <ul style="list-style-type: none"> • Low noise operation (≤ 60 dB preferred) <p>11. Build & Construction</p> <ul style="list-style-type: none"> • Mild steel body with powder coating or ABS housing • Durable and corrosion-resistant <p>12. Stability</p> <ul style="list-style-type: none"> • Anti-slip rubber feet for stable operation <p>13. Power Supply</p> <ul style="list-style-type: none"> • AC 220-240V, 50 Hz <p>14. Safety Features</p> <ul style="list-style-type: none"> • Overload protection • Continuous operation capability <p>15. Operating Conditions</p> <ul style="list-style-type: none"> • Temperature: 10°C to 40°C • Humidity: $\leq 85\%$ RH <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Any One Certificate) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>		
89.	<p>Slit Lamp converging Type Specification Specification:</p> <ul style="list-style-type: none"> • Stereoscopic converging binocular microscope. • 3 Step magnifications changing by rotating drum. • Long life and power-saving LED illumination. • Superior function and compact design. Joy stick device, Easy coarse and fine adjustment for vertical and lateral movement of main body by one hand. • Microscope Magnification 10X, 16X, 25X. Eye piece 12.5X. Diopter adjustment:- 5D ~ +3D. • Total magnification. Field of view: 10X ($\text{Æ}22.5\text{mm}$), 15.98X ($\text{Æ}14.1\text{mm}$), 25.53X ($\text{Æ}8.8\text{mm}$) • Slit Illumination Light source: LED(Light Emitting Diode) • Aperture diameter: Continuous from 1 to 14, $\text{Æ}0.3, 1, 5, 10, 14\text{mm}$. • Slit width Continuous from 0 to 14mm. • Slit length Continuous from 1 to 14mm. • Slit angle 0° to 180°. • Filters Blue, Red-free. • Primary input: AC 120/220 50-60Hz. <p>Country of Origin: UK, USA, Europe, Japan or equivalent. Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (Other than UK, USA, Europe & Japan) will be accepted if equivalent have any Two Certificate. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end.</p>	1	24000

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- a. S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M. Pfau Civil Hosp. Kar. 
- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. 
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. 
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

SECTION B
Supply of Hospital & General Furniture Items

Technical Evaluation Criteria for Section "B" Maximum Allocable Marks Score 70% to Qualify

Check List (Mandatory Documents)

If any bidder failed to submit any of the following documents, the same shall be disqualified.

Sr. No.	DOCUMENT DESCRIPTION	YES / NO	PAGE #
1	Tender Purchase Receipt (Original)/Pay order		
2	Bid Security Copy with value hidden in Technical Proposal; Original in Financial)		
3	Technical Proposal on Bidder's Letterhead		
4	Compliance sheet on letter head		
5	Undertaking (as per sample form)		
6	Income Tax & GST Registration Certificate		
7	Valid Professional Tax Certificate		
8	FBR Income Tax Returns (last 3 years)		
9	Audited Financial Statement (last 3year)		
10	Factory / Workshop Details (duly equipped)		
11	Valid Authorization Letter from Manufacturer in reference to this particular tender.		
12	Catalogue / Brochures / Drawing		
13	ISO 9001 of Bidders / Manufacturer (where applicable) (website link must be provided for verification)		

Note:

- All pages of the bid, except for un-amended printed literature, shall be initialed by the Bidder.
- Documents must be submitted in binding, with filled Table of Content, Page Numbering and tagging wherever required.

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BIDDER EVALUATION CRITERIA

Bid found to be responsive with maximum accumulative points (Technical + Financial) shall be accepted as the **most advantageous bid** as per SPPR, 2010 (Amended 2021).

Bids will be evaluated on the basis of following evaluation criteria.

A. TECHNICAL EVALUATION

- i) Technical evaluation has 70% weightage
- ii) Bids will be evaluated on a Bidder's capacity and capability to undertake supplies and on quoted item quality, performance and conformity to the required specifications.
- iii) Technical capacity of a bidder includes availability of workshop, tools, technical staff, number of installation and experience in the province of Sindh for prompt services to Past performance of the bidder at **Office of the Director Health Services Karachi Division** will also be reviewed.
- iv) A bidder must achieve a minimum of 70 points out of total 100 points in technical evaluation, to be considered for financial evaluation.

B. FINANCIAL EVALUATION

- i) Financial evaluation has 30% weightage.
- ii) Only financial proposal of bidders with responsive technical proposal will be opened. Financial proposal of bidders who do not meet required mandatory documents and minimum 70 points out of total 100 points in technical evaluation will be returned unopened.
- iii) Bidder who has offered the lowest value for the item will get 30 points.
- iv) All remaining bidders after the lowest shall get points on their financial proposal, calculated as per the following formula.

$$\frac{\text{Value of lowest bidder}}{\text{Value of higher bidder}} \times 30$$

[2nd, 3rd, 4th, etc.]

C. FINAL BID EVALUATION

- i) Points obtained by bidders in technical and financial evaluation shall be prorated and finalized as follows.

Evaluation	Weightage
Technical	70%
Financial	30%
Total	100%

Bid of a bidder who is found technically responsive with highest accumulated points will be considered as the most advantageous bid.

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

SECTION B

Supply of Hospital & General Furniture

S. No	Name of items	QTY	FIXED BID SECURITY
1.	<p>Cardiac Care Bed (Electric)</p> <p>General Description</p> <ul style="list-style-type: none"> - Electrically operated cardiac care bed suitable for use in Cardiac Care Units (CCU), Intensive Care Units (ICU), and critical care environments. - Designed to provide safe patient positioning, comfort, and ease of nursing care during cardiac monitoring and treatment. - Robust construction suitable for continuous hospital use. <p>Technical Parameters</p> <ul style="list-style-type: none"> - External Dimensions (L × W × H): Approximately 2105 × 980 × 400–710 mm (±10 mm tolerance). - Mattress Platform Size (L × W): Approximately 1920 × 820 mm (±10 mm tolerance). - Backrest Adjustment Range: 0° to 84° (±10°). - Knee Rest Adjustment Range: 0° to 47° (±10°). - Height Adjustment Range: 400 mm to 710 mm (±10 mm). - Equipped with auto-contour function allowing synchronized movement of backrest and knee sections to enhance patient comfort and reduce sliding. <p>Control System</p> <ul style="list-style-type: none"> - Supplied with one handheld controller for easy operation of bed positioning functions. - Control unit designed for safe and convenient adjustment by healthcare staff. <p>Mobility System</p> <ul style="list-style-type: none"> - Bed mounted on four heavy-duty covered castors with diameter of approximately 5 inches for smooth movement and stability. <p>Safety and Structural Features</p> <ul style="list-style-type: none"> - Foldable side rails with six-column structure to ensure patient safety and prevent accidental falls. - Polypropylene head and foot boards with safe locking mechanism for secure attachment and easy removal. - Head and foot boards equipped with integrated wall bumpers (Ø60 mm) to prevent damage during bed movement. <p>Accessories and Attachments</p> <ul style="list-style-type: none"> - Stainless steel IV pole with four plastic hooks for infusion bottles or fluid bags. - Four drainage hooks for drainage bag support. - Two polypropylene mattress retainers to prevent mattress displacement. <p>Certification and Compliance</p> <ul style="list-style-type: none"> - Equipment must comply with CE certification requirements (mandatory). - Manufacturer should comply with recognized international medical equipment quality standards. <p>Country of Manufacturer</p> <ul style="list-style-type: none"> - Manufacturer origin should be USA, Europe, Japan, or an equivalent internationally recognized manufacturing location, provided that the equipment meets all specified quality and certification requirements. <p>Warranty</p> <p>Minimum one-year comprehensive warranty starting from the date of satisfactory installation and acceptance of equipment.</p>	20	360000


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2. ICU Bed (Electric – Critical Care Bed)

General Description

- Electrically operated ICU bed designed for use in Intensive Care Units and critical care environments.
- Main structural frame constructed from high-strength steel tubular pipes ensuring durability and stability during continuous hospital use.
- Bed platform equipped with double auto-regression mechanism to reduce abdominal compression and enhance patient comfort during backrest elevation.
- Integrated patient assist handle provided to help patients safely sit up and get on/off the bed.

Technical Parameters

- External Dimensions (L × W × H): Approximately 2085 × 1025 × 455–745 mm.
- Mattress Platform Size: Approximately 1925 × 900 mm.
- Safe Working Load Capacity: Minimum 250 kg.
- Backrest Adjustment Range: 0° to 75° (±10°).
- Knee Rest Adjustment Range: 0° to 32° (±10°).
- Trendelenburg Position: 0° to 12°.
- Reverse Trendelenburg Position: 0° to 12°.

Structural and Functional Features

- Mattress platform made of polypropylene (PP) panels with integrated mattress retainers, removable for easy cleaning and sterilization.
- Bed equipped with double auto-regression function to minimize patient sliding and reduce pressure on the abdomen during positioning.
- Designed to support safe and comfortable positioning of critically ill patients.

20

360000

Control System

- Supplied with one handheld controller for easy adjustment of backrest, knee rest, height, and positioning functions.

Mobility and Locking System

- Bed mounted on four 5-inch double side Secure® castors for smooth mobility and stability.
- Central locking system provided to ensure secure positioning of the bed during patient care.
- Two central locking pedals provided for convenient operation by medical staff.

Safety Features

- Extra-height polypropylene side rails provided to enhance patient safety and prevent accidental falls.
- Plug-in type polypropylene head and foot boards with safe locking mechanism for secure attachment and easy removal.
- Four bumper wheels with diameter of approximately 65 mm installed to protect walls and equipment during bed movement.

Accessories and Attachments

- Intravenous (IV) pole with four hooks for infusion equipment.
- Four IV pole provisions integrated into the bed frame.
- Two drainage hooks provided for urine bags or drainage systems.
- Integrated patient weighing system for accurate monitoring of patient weight without

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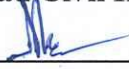

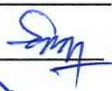

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	<p>transferring the patient.</p> <p>Certification and Compliance</p> <ul style="list-style-type: none"> • Equipment must comply with CE certification requirements (mandatory). • Manufacturer shall comply with recognized international medical equipment quality and safety standards. <p>Country of Manufacturer</p> <ul style="list-style-type: none"> • Manufacturer origin should be USA, Europe, Japan, or equivalent internationally recognized manufacturing location, provided the equipment meets the required certification and quality standards. <p>Warranty</p> <ul style="list-style-type: none"> • Minimum one-year comprehensive warranty from the date of satisfactory installation, commissioning, and acceptance of the equipment. 		
3.	<p>Orthopedic Bed with Traction Attachment</p> <p>General Description</p> <ul style="list-style-type: none"> • Orthopedic hospital bed designed for orthopedic patient care and traction therapy. • Suitable for use in orthopedic wards, trauma units, and rehabilitation departments. • Bed shall provide stable patient positioning, adjustable sections, and traction support for clinical orthopedic treatment. • Robust construction designed for continuous hospital use with safe and comfortable patient support. <p>Technical Parameters</p> <ul style="list-style-type: none"> • External Dimensions (L × W × H): Approximately 2230 × 1060 × 435–755 mm. • Mattress Platform Size: Approximately 1925 × 900 mm. • Backrest Adjustment Range: 0° to 75° (±10°). • Knee Rest Adjustment Range: 0° to 35° (±10°). • Height Adjustment Range: 435 mm to 755 mm. • Trendelenburg Position: 0° to 12°. • Reverse Trendelenburg Position: 0° to 12°. <p>Frame and Structural Construction</p> <ul style="list-style-type: none"> • Bed frame constructed from high-strength steel structure ensuring durability and stability. • Side guardrails manufactured from ABS material, designed for convenient lowering and secure locking when raised. • Guardrails designed to provide patient safety, comfort, and easy access for caregivers. • Steel frame fabricated using standard square tubing with high structural strength. <p>Mattress Platform</p> <ul style="list-style-type: none"> • Mattress platform made of pressed steel plates providing stable support for orthopedic patients. • Platform designed to support patient loads up to approximately 150 kg. • Steel platform finished with smooth bright finishing and reinforced structure for durability and hygiene. <p>Mattress Specifications</p> <ul style="list-style-type: none"> • Mattress Size (L × W × H): Approximately 1900 × 870 × 100 mm • Mattress designed to fit standard hospital orthopedic beds. • Mattress cover made from flexible medical-grade PVC cloth, resistant to fluids and easy to clean. 	20	300000

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- Mattress core made from high-density polyurethane foam (approximately 28 kg/m³ density) for patient comfort and pressure distribution.
- Mattress cover shall be removable for cleaning and maintenance.
- Mattress Thickness: Approximately 100 mm (10 cm).

Surface Treatment and Manufacturing

- Steel components manufactured using robotic welding technology to ensure smooth and durable welding joints.
- Structural components fabricated from heavy-duty square tubing to provide high strength and stability.
- Surface finishing designed to provide corrosion resistance and easy cleaning for hospital environments.

Motor and Mechanical System

- Bed equipped with electric linear motor system designed to provide stable and reliable movement for positioning functions.
- Motor system compliant with international electrical safety standards such as UL, RoHS, or EN.
- Motor mechanism designed for long operational life with approximately 20,000 operating cycles or more.

Traction System

- Bed supplied with aluminum Balkan frame traction system suitable for orthopedic traction therapy.
- Balkan frame designed to support directional traction adjustments and repositioning according to clinical treatment requirements.
- Frame shall be strong, adjustable, and suitable for various orthopedic traction configurations.

Head and Foot Boards

- Bed equipped with full ABS head and foot boards.
- Boards designed to be removable for easy maintenance, cleaning, and emergency access.
- Secure locking system provided to ensure stability during patient care.

Technical Configuration and Accessories

The bed shall be supplied with the following components:

- Linear Motors: 4 units.
- Double-side castors with central locking system: 4 units.
- ABS side rails with integrated angle indicators: 1 set.
- ABS head and foot boards with safe locking mechanism: 1 set.
- Drainage hooks: 2 units.
- Aluminum Balkan frame for traction therapy: 1 set.

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Certification and Compliance

- Equipment must comply with CE certification requirements (mandatory).
- Manufacturer shall comply with recognized international medical equipment quality and safety standards.

Country of Manufacturer

- Manufacturer origin shall be USA, Europe, Japan, or equivalent internationally recognized manufacturing location, provided the equipment meets required






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	certification and quality standards. Warranty • Minimum one-year comprehensive warranty starting from the date of satisfactory installation, commissioning, and acceptance of the equipment.		
4.	Aseptic Table with S.S Top Specification adjustable backres with cluch lever 6'x2'x2-1/2' Imported/Export Quality Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	8	7200
5.	Baby Cots complete with mattresses. Technical Parameters: Manual pediatric hospital bed with 2 crank system for backrest and knee rest adjustment. Backrest adjustment: up to 75°; Knee rest adjustment: up to 35°. Overall dimensions: approx. 1800 mm (L) × 860 mm (W) × 1100 mm (H); Bed height: 600 mm. Mattress platform size: approx. 1600 × 760 mm. Full-length safety side rails with integrated bed ends. IV pole provision with 1 IV pole included. Accessories: 2 drainage hooks, 1 shoe holder, anti-slip bed feet covers. Supplied with basic operation and maintenance manual. Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	12	16200
6.	Blood Donor Couches Specification Specification: Parameter Value Description Size of Donor Couch Length: 1828 mm; Width: 609 mm; Base seating and height: 660 mm. Additional hand rest 200mm width on each side. Power Consumption 230 Volts, 50Hz Castor wheels 4 Lockable castor wheels Compliance 73/23/EEC(LVD) 89/336/EEC (EMC) 93/68/EEC Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	6	11700
7.	Chair for Seminar Hall Specification Dimension width (20"); depth (19"); seat height (20"), frame metal, frame finish power coated, fabric stain resistant with good quality foam, Country of Origin: IMPORTED/ EXPORT QUALITY. Imported/Export Quality Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	50	18000
8.	Dressing Trolley Technical Parameters: Size (LxWxH): 670x450x900mm;	6	27000

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




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	<p>Complete stainless steel body; Two stainless steel shelves; Push handle at both side; Railings on three side at every layer; Round tube frame, $\Phi 25 \times 1.2$mm and $\Phi 13 \times 1$mm; 3-inch covered castors, two with brakes; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>		
9.	<p>Drip stands Technical Parameters: Size : $\Phi 520 \times 1350-2250$mm; Rubber five feet with Castors; SS telescopic with four hooks Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	265	31800
10.	<p>Emergency Resuscitation Trolley Technical Parameters: Size (LxWxH): $750 \times 475 \times 950$mm; Material: ABS; Multifunctional Platform: 1pc; Trash Can: 2pcs; Net Basket: 1pc; Utility Container: 1pc; Central Lock: 1set; Sliding Side Shelf: 1pc; Defibrillator Shelf: 1pc; CPR Board: 1pc; Handwashing Fluid Shelf: 1pc; Sharp Container: 1pc; Oxygen Cylinder Holder: 1set; Power Outlet: 1pc; IV Pole: 1pc; Silent Wheels: 4pcs, 2with brakes; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	53	207750
11.	<p>Examination Couch Technical Parameters: External Size (LxWxH): $1900 \times 600 \times 680$mm; Back-rest Adjustment: $0-70^\circ (\pm 10^\circ)$; Technical Configuration: Stainless steel heavy duty bed feet; Anti-slip Bed Feet Cover: 4pcs; Mechanical Level to Adjust Back Rest: 1set; Country of Origin: IMPORTED/ EXPORT QUALITY Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	64	67200
12.	<p>Fiber Glass Chairs four seaters Technical Parameters: Size: $1780 \times 710 \times 900 \pm 10$mm</p>	155	46500


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	<p>armrest foot 1: using high-quality cold-rolled steel plate, cold-pressed forming through a special large-scale fine pressure mold, positioning and welding using a robot imported from Japan and a special mold, grinding and polishing and rust removal treatment, electrostatic powder spraying;</p> <p>armrest foot 2: aluminum alloy material, large precision casting mold, direct polishing after die-casting, electrostatic powder spraying;</p> <p>Seat plate and back plate: high-density polyurethane (PU) built-in steel frame, molded;</p> <p>Beam: Made of high-quality triangular steel pipe, sprayed with air conditioning outdoor paint powder, strong and durable;</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: IS0 9001</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>		
13.	<p>Fowler Beds 3 Crank with side railing</p> <p>Technical Parameters:</p> <p>External Size(L*W*H):2105*980*400-710mm±10mm;</p> <p>Mattress Platform(L*W):1920*820±10mm;</p> <p>Back-rest Adjustment:0-75°(±10°);</p> <p>Knee-rest Adjustment:0-40°(±10°);</p> <p>Height Adjustment:400-710mm±10mm;</p> <p>Technical Configuration:</p> <p>Manual Cranks:3pcs;</p> <p>5-inch Covered Castors:4pcs;</p> <p>Foldable Side Rail 6 columns:1set;</p> <p>PP Bed Ends with Safe Lock and Integrated Φ60mm Wall Bumper:1set;</p> <p>SS IV Pole with 4 Plastic Hooks:1set;</p> <p>IV Pole Prevision:4pcs;</p> <p>Drainage Hook:4pcs;</p> <p>PP Mattress Retrainer:2pcs;</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: IS0 9001</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>	158	284400
14.	<p>Instrument cabinet i/c Glass Door 6'x3'x1-1/2'</p> <p>Specification</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: IS0 9001</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>	6	6300
15.	<p>Chair With hydraulic System</p> <p>Specification</p> <p>Imported/Export Quality</p> <p>Should be: IS0 Approved or CE Certified</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>	10	45000
16.	<p>Instrument Trolley Two S.S Shelves</p> <p>Technical Parameters:</p> <p>Size (LxWxH): 670x450x900mm;</p> <p>Complete stainless steel body;</p> <p>Two stainless steel shelves;</p> <p>Push handle at both side;</p> <p>Railings on three side at every layer;</p> <p>Round tube frame, Φ25x1.2mm and Φ13x1mm.</p> <p>3-inch covered castors, two with brakes;</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: IS0 9001</p>	14	23400


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	Warranty: Should be Standard 03 Years Warranty consignee end		
17.	Mattresses with Cover Technical Parameters: Size (LxWxH): 1900*870*100mm Standard size to match each hospital bed Mattress cover with flexible, PVC cloth The mattress core are made of polyurethane foam with high density sponge 28kg/m3 It is possibility for easy removing the cover Thickness: 10cm Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	248	111600
18.	Medicine Trolley Technical Parameters: Size (LxWxH):625*475*950mm; Material: ABS Trash Can: 2pcs; Central Lock: 1set; Utility Container: 1pc; Silent Wheels: 4pcs, 2with brakes; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	17	76500
19.	Steel Almirah made of 20 gauge Specification Specification: Size: 3"x6"x18" made of MS Sheet 20 gauge solid 4 shelves Inter lock system with fine quality brass handle Spray paint Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	6	5400
20.	Stretcher Trolley Technical Parameters: Size (LxWxH): 1960x600x810mm; Separated into two parts: stretcher and trolley; Stainless steel frame; Mattress: 9mm thickness wood, 40mm thickness foam and PU cover.; 5-inch Covered Castors with brake: 4pcs; Stainless steel Side Rail: 1set; IV Pole: 1set; Debris basket: 1pc; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	31	60450
21.	Surgical trolley Technical Parameters: Size (LxWxH):750*475*950mm; Material: ABS; Multifunctional Platform: 1pc; Trash Can: 2pcs;	12	21600


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

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	<p>Net Basket: 1pc; Utility Container: 1pc; Central Lock: 1set; Sliding Side Shelf: 1pc; Defibrillator Shelf: 1pc; CPR Board: 1pc; Handwashing Fluid Shelf: 1pc; Sharp Container: 1pc; Oxygen Cylinder Holder: 1set; Power Outlet: 1pc; IV Pole: 1pc; Silent Wheels: 4pcs, 2with brakes; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>		
22.	<p>Treatment Couches Specifications: - Dimensions: 72" x 24" x 28" - Body frame made up of 16SWG 1¼" MS round pipe - Welded base for stable operation - Backrest adjustable, with range up 40° to 50° and down 10° to 15° with friction clutch lever - Lying area 3" thick in two parts upholstered with foam & Rexene - PVC boots on feet for grip and noiseless operation - Electrostatic epoxy powder coated paint finish - OR Equivalent Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	5	6150
23.	<p>Ward Screen 3 fold made of tubular steel with curtain Screen mounted on swivel castors; positioned in broad stance for good stability. Material: Is be resistant to corrosion (ref. to tropical environment) and decontamination (referring to chlorine solution) Frame: Epoxy powdered coated steel Curtain : Parachute and washable Dimensions : Bed screen: 3 panel of approx. 96 x 61 (inches) Swivel castors: Approximately diameter 3" (imported) Plastic bushes in all sections for easy movement without friction Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	49	66150
24.	<p>Hydraulic Chair Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	6000
25.	<p>Ward Screen 3 fold made of tubular steel with curtain Screen mounted on swivel castors; positioned in broad stance for good stability. Material: Is be resistant to corrosion (ref. to tropical environment) and decontamination (referring to</p>	10	9000

DR SAQIB ALI SHAIKH
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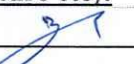




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- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	chlorine solution) Frame: Epoxy powdered coated steel Curtain : Parachute and washable Dimensions : Bed screen: 3 panel of approx. 96 x 61 (inches) Swivel castors: Approximately diameter 3" (imported) Plastic bushes in all sections for easy movement without friction Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end		
26.	Attendant Benches with cushion Specification: Frame made of mild steel tubular pipe 1" Top fitted with wooden strips Quality Shish wood with polish Legs provided with longitudinal support bar Plastic rubber pads on legs ends All metal parts are powdered coating finished Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	248	148800
27.	Bed Side Locker Specification: Dimension: 16 x 18 x 32 (inches) Cabinet made of 1 mm thick galvanized steel sheet Stainless steel top Drawer 3" depth having sheeted inbuilt handle with full extension ball bearing railing. Cabinet door having sheet inbuilt handle and magnetic strip with firm grip. Recessed shelf, removable Mobile on 2" imported twin castors Electrostatic epoxy powdered coating finished Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	296	266400
28.	Cabin structures for Administration and Accounts (2 Unit) Specification Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	2	12000
29.	Central Table for Committee Room Specification Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	1	3000
30.	Chair for Staff & PG Students Specification Wooden with cushion, back & arm rest. Mattress molty or equivalent and the sham or equivalent Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	100	15000
31.	Couches for Examination Room Technical Parameters:	2	1440

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




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	<p>External Size (LxWxH): 1900x600x680mm; Back-rest Adjustment: 0-70°(±10°); Technical Configuration: Stainless steel heavy duty bed feet; Anti-slip Bed Feet Cover: 4pcs; Mechanical Level to Adjust Back Rest: 1set; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>		
32.	<p>Couches for Procedure Room Technical Parameters: External Size (LxWxH): 1900x600x680mm; Back-rest Adjustment: 0-70°(±10°); Technical Configuration: Stainless steel heavy duty bed feet; Anti-slip Bed Feet Cover: 4pcs; Mechanical Level to Adjust Back Rest: 1set; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	3	2160
33.	<p>Couches for Tutorial Room Technical Parameters: External Size (LxWxH): 1900x600x680mm; Back-rest Adjustment: 0-70°(±10°); Technical Configuration: Stainless steel heavy duty bed feet; Anti-slip Bed Feet Cover: 4pcs; Mechanical Level to Adjust Back Rest: 1set; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	11	7920
34.	<p>Delivery Table S/S Specification</p> <ul style="list-style-type: none"> - Gynecological examination and delivery table, 3 sections - Mounted on 4 sturdy supports, all Vanished with fixed height - All sections fitted with non-removable padded upholstery 4" Mattress (Master) - Robust mechanics allow for manual repositioning of all sections between &Gynecological and obstetric use - Transfer bars connect all lower distal portions of the 4 supports, providing maximal structural strength - Back section: - Adjustable via secured clutch lever, safe for patient and operator - Pelvic section: - Fixed base position for sitting - Sides of this section are fit with side rails collapsible - Padded lithotomy poles are height adjustable, set with robust clamps with heavy knob - This section integrates a support for a slide-out basin-tray - Leg section: - Recesses entirely downwards, 90 degrees 	3	45000

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- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<ul style="list-style-type: none"> - When elevated and fully extended, all sections align to a perfectly flat surface. - High resistance to corrosion (tropical environment) - Frame: epoxy coated steel; all metal parts are epoxying coated steel - Feet covered with PVC - Padded upholstery: high-density polyurethane foam, density 27-33 kg/m3 - Cover: plastic, flexible highly tear resistant, anti-static, flame retardant, disinfectant- and liquid proof, washable - Basin-tray: Austenitic stainless steel, 18/10 - All 3 sections extended, including padding: 6.5 x 2.5 x 3 ft - Carrying capacity: 135-165 kg - Slide-out basin-tray, capacity: 4L - Knockdown construction <p>Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>		
35.	<p>Examination table Technical Parameters: External Size (LxWxH): 1900x600x680mm; Back-rest Adjustment: 0-70°(±10°); Technical Configuration: Stainless steel heavy duty bed feet; Anti-slip Bed Feet Cover: 4pcs; Mechanical Level to Adjust Back Rest: 1set; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	20	12000
36.	<p>Executive Table <u>Specification</u> Table with a dimension of length 84"x width 42"x height 30", material Al-Noor lasani MDF lamination, on top leather writing pad, wood edges, storages drawer, file cabinet Country of Origin: IMPORTED/ EXPORT QUALITY. Warranty: Should be Standard 03 Years Warranty consignee end</p>	3	5400
37.	<p>File Cabinets with four drawers 20 gauge steel <u>Specification</u> Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	174	163500
38.	<p>Foot Steps Technical Parameters: Size (LxWxH): 490x410x170/340mm; Stainless steel frame; Rubber anti-slip surface; Double steps; Country of Origin: IMPORTED/ EXPORT QUALITY Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end</p>	59	4230
39.	<p>Hospital Pharmacy Furniture & Fixture) <u>Specification</u> Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001</p>	1	9000

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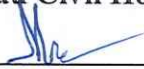

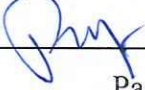
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	Warranty: Should be Standard 03 Years Warranty consignee end		
40.	Hospital Store (Furniture, Fixture & cold Storage) Specification Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	1	240000
41.	ICU Bed (Electric – Critical Care Bed) General Description <ul style="list-style-type: none"> Electrically operated ICU bed designed for use in Intensive Care Units and critical care environments. Main structural frame constructed from high-strength steel tubular pipes ensuring durability and stability during continuous hospital use. Bed platform equipped with double auto-regression mechanism to reduce abdominal compression and enhance patient comfort during backrest elevation. Integrated patient assist handle provided to help patients safely sit up and get on/off the bed. Technical Parameters <ul style="list-style-type: none"> External Dimensions (L × W × H): Approximately 2085 × 1025 × 455–745 mm. Mattress Platform Size: Approximately 1925 × 900 mm. Safe Working Load Capacity: Minimum 250 kg. Backrest Adjustment Range: 0° to 75° (±10°). Knee Rest Adjustment Range: 0° to 32° (±10°). Trendelenburg Position: 0° to 12°. Reverse Trendelenburg Position: 0° to 12°. Structural and Functional Features <ul style="list-style-type: none"> Mattress platform made of polypropylene (PP) panels with integrated mattress retainers, removable for easy cleaning and sterilization. Bed equipped with double auto-regression function to minimize patient sliding and reduce pressure on the abdomen during positioning. Designed to support safe and comfortable positioning of critically ill patients. Control System <ul style="list-style-type: none"> Supplied with one handheld controller for easy adjustment of backrest, knee rest, height, and positioning functions. Mobility and Locking System <ul style="list-style-type: none"> Bed mounted on four 5-inch double side Secure® castors for smooth mobility and stability. Central locking system provided to ensure secure positioning of the bed during patient care. Two central locking pedals provided for convenient operation by medical staff. Safety Features <ul style="list-style-type: none"> Extra-height polypropylene side rails provided to enhance patient safety and prevent accidental falls. Plug-in type polypropylene head and foot boards with safe locking mechanism for secure attachment and easy removal. Four bumper wheels with diameter of approximately 65 mm installed to protect walls and equipment during bed movement. 	78	918000

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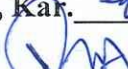
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- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<p>Accessories and Attachments</p> <ul style="list-style-type: none"> Intravenous (IV) pole with four hooks for infusion equipment. Four IV pole provisions integrated into the bed frame. Two drainage hooks provided for urine bags or drainage systems. Integrated patient weighing system for accurate monitoring of patient weight without transferring the patient. <p>Certification and Compliance</p> <ul style="list-style-type: none"> Equipment must comply with CE certification requirements (mandatory). Manufacturer shall comply with recognized international medical equipment quality and safety standards. <p>Country of Manufacturer</p> <ul style="list-style-type: none"> Manufacturer origin should be USA, Europe, Japan, or equivalent internationally recognized manufacturing location, provided the equipment meets the required certification and quality standards. <p>Warranty</p> <ul style="list-style-type: none"> Minimum one-year comprehensive warranty from the date of satisfactory installation, commissioning, and acceptance of the equipment. 		
42.	<p>Medicine Racks</p> <p>Specification</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: ISO 9001</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>	15	10500
43.	<p>Medicine Trolley</p> <p>Specification</p> <p>Technical Parameters: Size (LxWxH):625*475*950mm; Technical Configuration: Material: ABS Trash Can: 2pcs; Central Lock: 1set; Utility Container: 1pc; Silent Wheels: 4pcs,2with brakes;</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: ISO 9001</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>	6	20400
44.	<p>Office Chair for Committee Room</p> <p>Specification</p> <p>Round Shape made of sheesham wood Polish in good material. Seat back cushioned with cloth and foam(Master Foam).</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: ISO 9001</p> <p>Warranty: Should be Standard 03 Years Warranty consignee end</p>	30	4500
45.	<p>Office Chairs</p> <p>Specification</p> <p>Round Shape made of sheesham wood Polish in good material. Seat back cushioned with cloth and foam(Master Foam).</p> <p>Country of Origin: IMPORTED/ EXPORT QUALITY.</p> <p>Should be: ISO 9001</p>	372	55800

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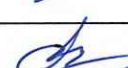


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	Warranty: Should be Standard 03 Years Warranty consignee end		
46.	Office chairs for class Room Round Shape made of sheesham wood Polish in good material. Seat back cushioned with cloth and foam(Master Foam). Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	240	36000
47.	Office Table Specification <ul style="list-style-type: none"> - wood frame with lamination top in heavy duty finish - Three drawers on one side with handles, locks and sliding on imported rails in full extension - High quality matt finish wood lacquer polish - Dimensions: L 42" x W 24" x H 26" Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	186	139500
48.	Over Bed Table. Technical Parameters: Size: L890*W400-H890-1190mm; Table top is made of HDPE, easy clean; U type base is made of powder coated steel, can be used in combination with bedside cabinets; Height adjustment by gas spring, used single-handed according to the convenience of the user; With four noiseless castors, 2-inch diameter, two with brakes; Great resistance to impacts and scratches; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	278	208500
49.	Revolving Chairs Specification <ul style="list-style-type: none"> - Medium back with arm rests revolving chair - Moulded P U Foam - Seat: 20" x 18" - Fabric upholstered seat & back cushions - High quality gas spring lift for height adjustment Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	110	46200
50.	Revolving Chairs for committee Room Specification <ul style="list-style-type: none"> - Medium back with arm rests revolving chair - Moulded P U Foam - Seat: 20" x 18" - Fabric upholstered seat & back cushions - High quality gas spring lift for height adjustment Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001	20	8400


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	Warranty: Should be Standard 03 Years Warranty consignee end		
51.	Revolving Stool Specification: <ul style="list-style-type: none"> • Legs are made by 1" Round Pipe in 16 Gauge • Top is made by Stainless Steel • Finished by Epoxy Powder Coated OR Equivalent Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	68	11430
52.	Sofa Sets Specification 5-seater, Leather Cushion & Mattress Molty or equivalent. Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	3	4500
53.	Steel Almirah made of 20 gauge Specification Size: 3"x6"x18" made of MS Sheet 20 gauge solid 4 shelves Inter lock system with fine quality brass handle Spray paint Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	10	600
54.	Stretcher Trolley Technical Parameters: Size (LxWxH): 1960x600x810mm; Technical Configuration: Separated into two parts: stretcher and trolley; Stainless steel frame; Mattress: 9mm thickness wood, 40mm thickness foam and PU cover.; 5-inch Covered Castors with brake: 4pcs; Stainless steel Side Rail: 1set; Debris basket: 1pc; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	13	25350
55.	Ward Screen 3 fold made of tubular steel with curtain Specification Screen mounted on swivel castors; positioned in broad stance for good stability. Material: Is be resistant to corrosion (ref. to tropical environment) and decontamination (referring to chlorine solution) Frame: Epoxy powdered coated steel Curtain : Parachute and washable Dimensions : Bed screen: 3 panel of approx. 96 x 61 (inches) Swivel castors: Approximately diameter 3" (imported) Plastic bushes in all sections for easy movement without friction Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: ISO 9001 Warranty: Should be Standard 03 Years Warranty consignee end	12	2160

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

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56.	Wheel Chairs Technical Parameters: Size: 1020*630*910mm; Features of the vehicle: Oxford cloth soft seat cushion, breathable; Frame: Made of high-quality steel pipe, double cross-bar support structure; Surface spray-coated Wall thickness \geq 1.0mm, steel pipe diameter \geq 22mm; High-quality rubber solid tires; Front steel brake, linked rear handbrake control, four brakes, folding, with seat belt, PVC soft armrest, metal anti-slip foot pedal; Folding width260mm; Seat cushion 430mm*420mm; Ground clearance 470mm; Large wheel diameter 610mm; Small wheel diameter 170mm; Net weight: 13KG; Gross weight: 15.5KG; Maximum load \geq 100KG; Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	70	64000
57.	White Board Specification Size 5x6 feet, board 0.5 inch thickness, Frame steel aluminum. Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	10	3000
58.	Wooden Rack,Cabinets for Books. Specification Country of Origin: IMPORTED/ EXPORT QUALITY. Should be: IS0 9001 Warranty: Should be Standard 03 Years Warranty consignee end	1	24000


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SECTION C

Supply & Installation of Medical Instruments & Devices, IT Equipment and Miscellaneous Items
Technical Evaluation Criteria for Section "C" Maximum Allocable Marks Score 70% to Qualify

Document Check List (Mandatory Documents)

If any bidder failed to submit any of the following documents, the same shall be disqualified.

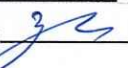




Sr. No.	DOCUMENT DESCRIPTION	YES / NO	PAGE #
1	Tender Purchase Receipt (Original)/Pay order		
2	Bid Security Copy with value hidden in Technical Proposal; Original in Financial)		
3	Technical Proposal on Bidder's Letterhead		
4	Compliance sheet on letter head		
5	Undertaking (as per sample form)		
6	Income Tax & GST Registration Certificate		
7	Valid Professional Tax Certificate		
8	FBR Income Tax Returns (last 3 years)		
9	Audited Financial Statement (last 3year)		
10	Factory / Workshop Details (duly equipped)		
11	Valid Authorization Letter from Manufacturer in reference to this particular tender.		
12	Catalogue / Brochures / Drawing		
13	ISO 9001 of Bidders / Manufacturer (where applicable) (website link must be provided for verification)		

Note:

- All pages of the bid, except for un-amended printed literature, shall be initialed by the Bidder.
- Documents must be submitted in binding, with filled Table of Content, Page Numbering and tagging wherever required.


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EVALUATION / QUALIFICATION

- 1.1 The procuring agency reserves the right to evaluate and compare the bids on itemized basis OR on the basis of a group of similar nature goods OR goods compatible with each other.
- 1.2 The following merit point system for weighing evaluation factors/criteria will be applied for technical proposals.
- 1.3 Bidders achieving minimum total 70% marks will be considered to qualify. Documentary evidence must be attached in support of each parameter.
- 1.4 Any Bid not meeting the mandatory requirements of evaluation criteria will be disqualified / rejected straight away and will not be considered for further evaluation.

A. PRODUCT EVALUATION

S#	PARAMETERS / SUB-PARAMETERS	Total Marks
1	Conformity to the Purchaser's Specifications (Mandatory)	40
1.1	Fully compliant with the required specifications	40
1.2	Compliant with minor deviation (up to 10% subject to main function is not affected)	30
1.3	Non-compliant to required specifications	Disqualify
2	Product Certification	15
2.1	USA Food & Drug Administration (USA-FDA) and European Community (CE) MDD and Japan Industrial Standard (JIS) / Japan Quality Assurance Organization (JQAO) / Certificate issued by Ministry of Health, Labor and Welfare Govt. of Japan	15
2.2	European Community (CE) MDD and Japan Industrial Standard (JIS) / Japan Quality Assurance Organization (JQAO) / Certificate issued by Ministry of Health, Labor and Welfare Govt. of Japan OR USA - Food and Drug Administration (USA-FDA) and European Community (CE)	12
2.3	USA - Food and Drug Administration (USA-FDA)	10
2.4	European Community (CE) MDD	08
2.5	Japan Industrial Standard (JIS)/Japan Quality Assurance Organization (JQAO)/ Certificate issued by Ministry of Health, Labor and Welfare Govt. of Japan	08
TOTAL MARKS PRODUCT EVALUATION (A)		55

B. BIDDER EVALUATION

S#	PARAMETERS / SUB-PARAMETERS	Total Marks
1	Manufacturer's Authorization	10
2	Delivery Schedule at consignee's end	10
2.1	Up to 40 days DDP	10
2.2	More than 40 days	00
3	Past Experience / Performance of Last 3 years	10
3.1	Last three Years' Experience of five Public Sector Tertiary Care Hospitals(1 Marks of each)	05
3.2	Last three Years' Experience of five Private Sector Tertiary Care Hospitals(1 Marks of each)	05

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Director Health Services
Karachi Division

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S#	PARAMETERS / SUB-PARAMETERS	Total Marks
4	Average Annual Turnover during last three (03) financial years (Audited Statements of Accounts and Income Tax Return Forms must be attached as supporting documents)	10
4.1	Turn over below PKR 100 million	00
4.2	Turn over above PKR 100 million	04
4.3	Turn over above PKR 200 million	06
4.4	Turn over above PKR 300 million	08
4.5	Turn over above PKR 500 million	10
5	Replacement Warranty	05
5.1	Replacement Warranty for 1 year	05
	TOTAL MARKS BIDDER EVALUATION (B)	45
	GRAND TOTAL (A + B)	100


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BIDDER EVALUATION CRITERIA

Bid found to be responsive with maximum accumulative points (Technical + Financial) shall be accepted as the **most advantageous bid** as per SPPR, 2010 (Amended 2021).

Bids will be evaluated on the basis of following evaluation criteria.

A. TECHNICAL EVALUATION

- i) Technical evaluation has 70% weightage
- ii) Bids will be evaluated on a Bidder's capacity and capability to undertake supplies and on quoted item quality, performance and conformity to the required specifications.
- iii) Technical capacity of a bidder includes availability of workshop, tools, technical staff, number of installation and experience in the province of Sindh for prompt services to Karachi Division. Past performance of the bidder at **Director Health Services Karachi Division** will also be reviewed.
- iv) A bidder must achieve a minimum of 70 points out of total 100 points in technical evaluation, to be considered for financial evaluation.

B. FINANCIAL EVALUATION

- i) Financial evaluation has 30% weightage.
- ii) Only financial proposal of bidders with responsive technical proposal will be opened. Financial proposal of bidders who do not meet required mandatory documents and minimum 70 points out of total 100 points in technical evaluation will be returned unopened.
- iii) Bidder who has offered the lowest value for the item will get 30 points.
- iv) All remaining bidders after the lowest shall get points on their financial proposal, calculated as per the following formula.

$$\frac{\text{Value of lowest bidder} \quad \times 30}{\text{Value of higher bidder}} \\ \text{[2nd, 3rd, 4th, etc.]}$$

C. FINAL BID EVALUATION



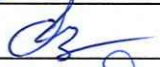


- i) Points obtained by bidders in technical and financial evaluation shall be prorated and finalized as follows.

Evaluation	Weightage
Technical	70%
Financial	30%
Total	100%

- ii) Bid of a bidder who is found technically responsive with highest accumulated points will be considered as the most advantageous bid.


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SECTION C

Supply & Installation of Medical Instruments & Devices, IT Equipment and Miscellaneous Items

S. No	Name of items	Qty	Fixed Bid Security																				
1.	<p>Split A/C (1.5 Ton) Specification</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 30%;">Spec / Feature</th> <th style="text-align: left;">Typical / Good-to-have Value</th> </tr> </thead> <tbody> <tr> <td>Cooling Capacity</td> <td>~ 18,000 BTU/hr (≈ 5.3 kW) — the standard for 1.5 Ton split AC.</td> </tr> <tr> <td>Refrigerant (gas)</td> <td>Modern units: R-32 or R-410A — better efficiency & lower environmental impact</td> </tr> <tr> <td>Coil / Condenser Material</td> <td>Copper tubes + hydrophilic (anti-corrosion) fins — for better durability & cooling.</td> </tr> <tr> <td>Power Supply</td> <td>Single phase, 220–240 V, 50 Hz — standard in many countries including Pakistan.</td> </tr> <tr> <td>Airflow (Indoor Unit)</td> <td>~ 10–19 m³/min depending on fan speed (or multi-speed settings) — ensures good circulation.</td> </tr> <tr> <td>Noise Level (Indoor)</td> <td>Typically ~ 30–45 dB(A) on lower speeds (quiet mode), more on high-speed.</td> </tr> <tr> <td>Moisture / Dehumidification Capacity</td> <td>Many units remove moisture (~1–2 liters/hour) while cooling — helpful in humid climates.</td> </tr> <tr> <td>Features (desirable / common)</td> <td>Remote control, Auto-swing (air direction), Timer, Multiple fan speeds, Filter (dust / anti-bacterial), maybe dehumidify / dry mode.</td> </tr> <tr> <td>Suitable Room Size</td> <td>Medium rooms / living rooms / bedrooms, depending on insulation, heat load, sun exposure.</td> </tr> </tbody> </table> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	Spec / Feature	Typical / Good-to-have Value	Cooling Capacity	~ 18,000 BTU/hr (≈ 5.3 kW) — the standard for 1.5 Ton split AC.	Refrigerant (gas)	Modern units: R-32 or R-410A — better efficiency & lower environmental impact	Coil / Condenser Material	Copper tubes + hydrophilic (anti-corrosion) fins — for better durability & cooling.	Power Supply	Single phase, 220–240 V, 50 Hz — standard in many countries including Pakistan.	Airflow (Indoor Unit)	~ 10–19 m ³ /min depending on fan speed (or multi-speed settings) — ensures good circulation.	Noise Level (Indoor)	Typically ~ 30–45 dB(A) on lower speeds (quiet mode), more on high-speed.	Moisture / Dehumidification Capacity	Many units remove moisture (~1–2 liters/hour) while cooling — helpful in humid climates.	Features (desirable / common)	Remote control, Auto-swing (air direction), Timer, Multiple fan speeds, Filter (dust / anti-bacterial), maybe dehumidify / dry mode.	Suitable Room Size	Medium rooms / living rooms / bedrooms, depending on insulation, heat load, sun exposure.	51	247860
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2.	<p>Split A/C (2 Ton) Specification</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 30%;">Spec / Feature</th> <th style="text-align: left;">Typical / Good-to-have Value</th> </tr> </thead> <tbody> <tr> <td>Cooling Capacity</td> <td>~ 18,000 BTU/hr (≈ 5.3 kW) — the standard for 2 Ton split AC.</td> </tr> <tr> <td>Refrigerant (gas)</td> <td>Modern units: R-32 or R-410A — better efficiency & lower environmental impact</td> </tr> <tr> <td>Coil / Condenser Material</td> <td>Copper tubes + hydrophilic (anti-corrosion) fins — for better durability & cooling.</td> </tr> <tr> <td>Power Supply</td> <td>Single phase, 220–240 V, 50 Hz — standard in many countries including Pakistan.</td> </tr> <tr> <td>Airflow (Indoor Unit)</td> <td>~ 10–19 m³/min depending on fan speed (or multi-speed settings) — ensures good circulation.</td> </tr> <tr> <td>Noise Level (Indoor)</td> <td>Typically ~ 30–45 dB(A) on lower speeds (quiet mode), more on high-speed.</td> </tr> <tr> <td>Moisture / Dehumidification Capacity</td> <td>Many unit remove moisture (~1–2 liters/hour) while cooling — helpful in humid climates.</td> </tr> </tbody> </table>	Spec / Feature	Typical / Good-to-have Value	Cooling Capacity	~ 18,000 BTU/hr (≈ 5.3 kW) — the standard for 2 Ton split AC.	Refrigerant (gas)	Modern units: R-32 or R-410A — better efficiency & lower environmental impact	Coil / Condenser Material	Copper tubes + hydrophilic (anti-corrosion) fins — for better durability & cooling.	Power Supply	Single phase, 220–240 V, 50 Hz — standard in many countries including Pakistan.	Airflow (Indoor Unit)	~ 10–19 m ³ /min depending on fan speed (or multi-speed settings) — ensures good circulation.	Noise Level (Indoor)	Typically ~ 30–45 dB(A) on lower speeds (quiet mode), more on high-speed.	Moisture / Dehumidification Capacity	Many unit remove moisture (~1–2 liters/hour) while cooling — helpful in humid climates.	24	180000				
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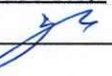

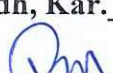
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3.	<p>Abrahm Punch Biospy Needles</p> <p>Specification</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	2	4200
4.	<p>Adjustable Justers</p> <p>Specification</p> <p>(0-50,50 to 100 & 100 to 1000 up</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	6	7200
5.	<p>Alphabetical/Numeric Wall chart.Electrical with wall mounting bracket</p> <p>Specification</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	3	1350
6.	<p>Ambu Bag</p> <p>Specification</p> <ul style="list-style-type: none"> • Made of high-quality silicone and special plastic • Autoclavable • Silicon size: 550ml (±10%) • O2 tube and reservoir valve attachable • Ventilation capacity: 600ml per one time • OR Equivalent Configuration • Resuscitator Body (1 ea) • Resuscitator Mask (1 ea) • Oxygen Reservoir (1 ea) <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	6	4500
7.	<p>Austin Moor Set</p> <p>Specification</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	2	6000
8.	<p>B.P. Apparatus</p> <p>Specification</p> <ul style="list-style-type: none"> • With fabric cuff with Velcro closure, reliable manometer with clip to be fixed on the cuff. • Scale 0-300 mmHg. Air release at closed tap max 4 mmHg/minute. Manual setting of deflation possible up to 2/3 mm Hg. 	4	180


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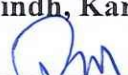
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	<p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
9.	<p>Baby Weighing Scale <u>Specification</u></p> <ul style="list-style-type: none"> • Electronic weighing scale for infants • High accurate sensor technology • Accuracy: 0.01kg or better. • Measure range: 30g ~ 30kg. <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	8	4200
10.	<p>Basic Instrument Set (Export Quality) <u>Specification</u> Basic Instrument Set for Screws and Plates CONSISTING OF: Aluminum Case Upper Tray Lower Tray Drill Bit, AO shaft, 150 / 120 mm, Ø 3,2 mm Drill Bit, AO shaft, 150 / 120 mm, Ø 4,5 mm Countersink for Malleolar Screws Tap Handle for AO shaft Taps, AO shaft, for screws Ø 4,5 mm, long thr. Taps, AO shaft, for screws Ø 6,5 mm Tap Sleeve Insert Drill Sleeve, Ø 4,5 / 3,2 mm Tap Sleeve Pointed Drill Guide Screw Driver for Hexagonal Head, 3,5 mm Screw Driver Shaft, 3,5 mm Depth Gauge for Large Screws Sharp Hook Drill Sleeve for Tension Device Drill Guide, 40 mm Compression Device, 8 mm screw-type Articulated Tension Device with Indicator Socket Wrench, width across flats 11 mm Combination Wrench, width across flats 11 mm Neutral and Load Drill Guide, 4,5 mm Bending Template, 5 holes Bending Template, 7 holes Bending Template, 9 holes Countersink for Large Screws Country of Origin: Imported/ Export Quality. Should be: ISO-13485 (Mandatory), CE Marked & FDA Approved. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end</p>	4	48000

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11. **Basic Instrument Set for LC/DC (Imported)**

Specification

Specification:

Tray for Small Fragment Instrument and Steel Implant Set
Drill Bit AO-Shaft, Ø 2.5 x Length 110mm/85mm
Twist Drill for Quick Coupling, diam. 3.5mm, 110/85mm
Countersink for screws Ø4.0/3.5/2.7mm quick coupling
Tap 3,5 mm dia. for Cortex sc.
Taps, diam. 4,0 mm x 1,75
Handle with Quick Coupling, phenolic
Drill Guide and Sleeve, for Drill Bit diam. 2.0mm
Double Drill Sleeve, diam. 3.5 / 2.5mm, Drill Bit diam. 3.5mm and 2.5mm
Insert Drill Sleeve, diam. 3.5 / 2.5mm
Small Screw Driver, hexagonal, a/f 2.5mm, for 2.7mm - 4.0mm with holding sleeve
Screw Driver Element, hexagonal, small, a/f 2.5mm, for Quick Coupling
Depth Gauge, for small Screws, Ø 2.7mm - 4.0mm
Neutral- and Load Drill Guide, 3,5mm, Thread 3.5mm, Drill Bit 2.5mm
Sharp Hook
Bending Iron, 150mm, 4.0 / 2.5mm, for Small Plates, to be used in pairs
Bending Iron, 150mm, 2.5 / 4.0mm, for Small Plates, to be used in pairs
Bending Template, 85mm, for small fragment plates with 7 holes
Bending Template, 100mm, for small fragment plates with 9 Holes
Bone Holding Forcep, self-centering, with Thread Lock, 150mm, Jaw 9mm
Reposition Forcep with Points and Ratchet, 135mm
Reposition Forcep, with Ratchet, 145mm
Bone Lever, 6mm, 16cm, short narrow tip
Bone Lever, 8mm, 16mm, short narrow tip
Bone Lever, with wide Blade, for small fragments, 16mm, 12cm
Raspatory, straight cutting, 6mm, curved, with Ferrozell-Handle, 18.5cm
Screw Forcep, self-holding

1 36000

LARGE FRAGMENT INSTRUMENTS SET






Basic Instrument Set for Screws and Plates

CONSISTING OF:

Aluminum Case
Upper Tray

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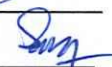

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	<p>Lower Tray Drill Bit, AO shaft, 150 / 120 mm, Ø 3,2 mm Drill Bit, AO shaft, 150 / 120 mm, Ø 4,5 mm Countersink for Malleolar Screws Tap Handle for AO shaft Taps, AO shaft, for screws Ø 4,5 mm, long thr. Taps, AO shaft, for screws Ø 6,5 mm Tap Sleeve Insert Drill Sleeve, Ø 4,5 / 3,2 mm Tap Sleeve Pointed Drill Guide Screw Driver for Hexagonal Head, 3,5 mm Screw Driver Shaft, 3,5 mm Depth Gauge for Large Screws Sharp Hook Drill Sleeve for Tension Device Drill Guide, 40 mm Compression Device, 8 mm screw-type Articulated Tension Device with Indicator Socket Wrench, width across flats 11 mm Combination Wrench, width across flats 11 mm Neutral and Load Drill Guide, 4,5 mm Bending Template, 5 holes Bending Template, 7 holes Bending Template, 9 holes Countersink for Large Screws Country of Origin: Imported/ Export Quality. Should be: ISO-13485 (Mandatory), CE Marked & FDA Approved. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end</p>		
12.	<p>Cap & Mask Dark Green Colour Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	250	1200
13.	<p>Craniotomy Set Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	12000
14.	<p>Cell Counter Manual Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	2	600
15.	<p>Chisel impical Set in Aluminum Case Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	3000

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16. Computer Intel Core i7 LCD Monitor 17"

Specification

1. Processor

- Intel® Core™ i7 Processor (10th / 11th / 12th Generation or higher)
- Minimum 6 Cores, 12 Threads
- Base Frequency: ≥ 2.9 GHz
- Turbo Boost: Up to 4.8 GHz or higher
- Cache: Minimum 12 MB Smart Cache

2. Chipset

- Intel compatible chipset (B460 / Q670 or higher)

3. Memory (RAM)

- Minimum 8 GB DDR4 RAM
- Expandable up to 32 GB or more
- Memory speed: 2666 / 3200 MHz or higher

4. Storage

- 1 TB SATA HDD 7200 RPM
- Optional: 256 GB SSD + 1 TB HDD

5. Graphics

- Integrated Intel UHD Graphics or better

6. Optical Drive

- DVD-RW (optional)

7. Network

- Integrated Gigabit Ethernet 10/100/1000 Mbps
- Wi-Fi 802.11 a/b/g/n/ac (optional)
- Bluetooth support (optional)

8. Ports & Interfaces

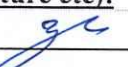



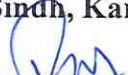
- Minimum 6 \times USB Ports (USB 2.0 / USB 3.0)
- 1 \times HDMI Port
- 1 \times VGA or DisplayPort
- 1 \times RJ-45 Ethernet Port
- 1 \times Audio in/out
- Headphone & Microphone combo jack


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Karachi Division

7

152250




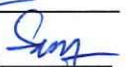
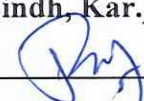
Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):

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- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

<p>9. Monitor</p> <ul style="list-style-type: none"> • LED / LCD Monitor • Screen Size: 17 Inches • Resolution: Minimum 1280 × 1024 or higher • Brightness: ≥ 200 cd/m² • Aspect Ratio: 4:3 or 16:9 • VGA / HDMI input support <p>10. Input Devices</p> <ul style="list-style-type: none"> • USB Keyboard (same brand) • USB Optical Mouse (same brand) <p>11. Operating System</p> <ul style="list-style-type: none"> • Windows 10 / Windows 11 Professional (64-bit) <p>12. Power Supply</p> <ul style="list-style-type: none"> • 250 – 300 Watt SMPS with power cable <p>13. Accessories</p> <ul style="list-style-type: none"> • VGA / HDMI cable • Power cables <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
<p>17. Computer intel Core i7 with Monitor 17" and all accessories, including laser Printer trolley & Chair</p> <p><i>1. Desktop Computer</i></p> <p>Processor</p> <ul style="list-style-type: none"> • Intel® Core™ i7 Processor (10th Generation or latest) • Minimum 2.6 GHz base frequency • Minimum 8 MB Smart Cache or higher <p>Chipset</p> <ul style="list-style-type: none"> • Intel compatible chipset <p>Memory (RAM)</p> <ul style="list-style-type: none"> • Minimum 8 GB DDR4 RAM • Expandable up to 32 GB or more 	15	135000


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	<ul style="list-style-type: none"> Interface: VGA / HDMI input support <p>3. Laser Printer</p> <ul style="list-style-type: none"> Type: Monochrome Laser Printer Print Speed: Up to 35–40 pages per minute Print Resolution: 1200 × 1200 dpi Duplex Printing: Automatic Memory: Minimum 256–512 MB Paper Capacity: Minimum 250–300 sheets Connectivity: USB and Ethernet / Network Monthly Duty Cycle: Up to 80,000 pages Compatible with Windows OS Supplied with toner cartridge and cables <p>4. Printer Trolley</p> <ul style="list-style-type: none"> Heavy duty metal or wooden trolley Two or three shelves for printer and paper storage Four caster wheels with lock Anti-rust powder coated frame Load capacity: Minimum 40–60 kg Size suitable for laser printer placement <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
18.	<p>Computerized Networking with Monitors, installation charges, Computer table/Trolley & Chair</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	15000
19.	<p>Counting Chamber</p> <p><u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	4	420
20.	<p>D&C Set (38 Pieces)</p> <p><u>Specification</u></p> <ul style="list-style-type: none"> Scalpel Handle # 3 x 1 Scalpel Handle # 7 x Scalpel Handle # 3L x 1 Crile Forceps Str 6 1/4" x 6 Crile Forceps Cvd 6 1/4" x 6 Dressing Forceps 8" x 1 Tissue Forceps 1 x 2 Teeth 8" x 1 TC Crile-Murray NH Serr 6" x 1 TC Mayo-Hegar NH Serr 7" x 1 Backhaus Towel Clamp 5 1/4" x 6 Bozeman Forceps Double Curved 10" x 1 Foerster Sponge Forceps CvdSerr 9 1/2" x 2 Jackson Retractor Small Blade 3" x 1 1/2" x 1 <p style="text-align: center;">DR SAQIB ALI SHAIKH Director Health Services Karachi Division</p>	6	10800

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	<ul style="list-style-type: none"> Jackson Retractor Medium Blade 3 1/2" x 1 1/2" x 1 Auward Weighted Speculum Medium 2 1/2 lbs. x 1 Graves Vaginal Speculum Medium 1 1/4" x 4" x 1 Graves Vaginal Speculum Large 1 3/8" x 4 1/2" x 1 Pederson Vaginal Speculum Small 1/2" x 3" x 1 Kogan Endospeculum w/ Gauge and Screws x 1 Goodell Dilator Large 13" x 1 Hegar Dilators (Set of 8) x 1 Sims Sound Plain 12 1/2" x 1 Sims Curette Sharp 11" #2 x 1 Sims Curette Sharp 11" #3 x 1 Sims Curette Sharp 11" #4 x 1 Sims Curette Sharp 11" #5 x 1 Kevorkian-Young Endocervical Curette w/ Basket 12" x 1 Schroeder Tenaculum Forceps 9 1/2" x 1 <p>Javerts Forceps Serr 9 1/2" x 1</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
21.	<p>De Ionizer Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	2	4800
22.	<p>Deduction Forceps set in sterilizing Tray Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	3000
23.	<p>Delivery Set Specification</p> <ul style="list-style-type: none"> Sterilizing box, stainless steel, 25 x 12 x 6cm. Mayo, dissecting scissors, 17cm, straight. Mayo, dissecting scissors, 17cm, curved Scissors, Standard 15 cm (For stitching; Spencer is for stitch removal) Backhaus, towel forceps, 13cm. Foerster, sponge forceps, straight, 24cm. Dissecting forceps, medium, 16cm. Tissue forceps, medium, 16cm, 1x2 teeth. Rochester-Ochsner, forceps, straight, 18cm, 1x2 teeth Doyen, retractor, 90x45mm, concave, 24cm. Mayo-Hegar, needle holder, 16cm. Allis, tissue forceps, 4x5 teeth, 15cm. Dish, Kidney stainless steel 30 cm Bowl, Sponge 17 cm Scissors, Episiotomy Barnes angled 13 cm Scissors, Cord umbilical 10 cm Made from imported stainless steel, Rust resistant and Satin finish <p>Imported/Export Quality Should be: ISO Approved or CE Certified</p>	12	14400


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	Warranty: Should be Standard 03 Years Warranty consignee end		
24.	Dental Instrument Sets <u>Specification</u> Specification: <ol style="list-style-type: none"> 1. Periosteal Elevator 2. Plugger 3. MouthMirror. 4. Tweezer. 5. Tissue Clamp 6. Dental probe. 7. CPITN probe. 8. Upper Third Molar Forcep 9. Upper Anterior incisor 10. Upper Anterior incisor Forceps 11. Upper Molar Forcep Rt 12. Upper Molar Forcep Lt 13. Upper posterior Root Forcep 14. Upper pre-Molar Forcep 15. Warwick James St Rt& Lt (Straight Elevators) 16. Apexo Elevator RT & LT 17. Cheek Retractor 18. Artery Forcep 19. Baby Forcep(set of 6) 20. Blade Handle 21. Bone Curette 22. Bone File 23. Bone Rongeurs 24. Cartridge Syringe 1.8 ml 25. Coupland Elevator 3 size 26. Cryer Elevator RT & LT 27. Lower Molar Forcep 28. Lower Molar Forcep 29. Lower Pre-Molar Forcep 30. Lower Root Forcep 31. Needle Holder 32. Chitel Forcep 33. Diamond Burs (Round, Taper, Fissure) 34. Mixing Spatula. 35. Spoon Excavator. 36. Condenser 37. Plastic Instrument 38. Burnisher 39. Carver 40. Tissue Forcep Or Equivalent Country of Origin: Imported/ Export Quality. CE Marked & FDA Approved. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end.	12	10800
25.	Diagnostic set with Trolley CONSISTING OF: with Brass chrome plated battery handle, otoscope, 3 Specula, Dental Mirror, Nasal specula and tongue blade, matt finish Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	4	7200


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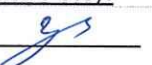
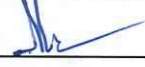


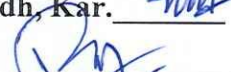
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26.	<p>Diesel Generating Set 200 KVA, provision Installation with four core cable Automated changeover including cost of cables other Standard accessories</p> <p>Diesel Generator – Key Specifications</p> <ul style="list-style-type: none"> • The Diesel Generator Set shall be from a reputed manufacturer with proven performance in similar applications and site conditions. • The generator shall deliver continuous rated power output under site conditions, after accounting for auxiliary power consumption. • The engine shall be directly coupled to the generator and operate at a rated speed of 1500 RPM. • The generator set shall be capable of withstanding up to 25% over speed without damage under abnormal conditions. • The system shall include all necessary auxiliaries and accessories, including control/instrument panel, Auto-Main Failure (AMF) panel, duty selection switch, fuel and oil system, batteries, exhaust system, cables, fittings, and hardware for complete installation. • Incoming and outgoing cables shall be installed as per manufacturer recommendations, and cable armor shall be properly grounded. • The generator control system shall support auto synchronizing and load sharing, with provision for manual synchronization via IPC screen and RS485 Modbus communication interface. • Voltage 400/230 volts, 3 phase, 4 wire, 50 Hz • Engine Speed 1500 rpm, direct-injection • Maximum ambient air temperature 50°C • Maximum daily average temperature 35°C • Minimum ambient air temperature 0°C • Maximum relative humidity 100 • Cooling Water-cooled, 500C tropical radiator • Silencer Residential silencer with flexible stainless steel bellows. • Fuel day tank Canopy Skid-base with vibration isolators suitable for 8-hour operation fuel day-tank, with 230V electric filling pump & required piping with schedule 40 seamless steel pipe. • ALTERNATOR • (To BS 5000/IEC-34-1) • Self Excited, brushless, self regulated <p>Accessories</p> <ul style="list-style-type: none"> • Maintenance toolkit. • Engine and alternator operation & maintenance manuals with parts catalogue. • Complete genset documentation, including data sheets, installation, operation & maintenance instructions, wiring diagrams, and troubleshooting guide. • Generator room wall charts for operation, maintenance, and troubleshooting. <p>Origin: UK/EUROPE/USA/JAPAN ISO/CE certified</p> <ul style="list-style-type: none"> • Warranty 03 years from the date of installation 	2	720000
27.	<p>Dissectomy Set Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	12000


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28.	Dry Heat Sterilizer <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	15000
29.	Electric Water Coolers <u>Specification:</u> Imported thermostat, 40 Liters capacity water tank made of stainless steel tested for leakage and safety, temperature adjustable, compressor and full SS body. IMPORTED/ EXPORT QUALITY. Should be: ISO/CE certified Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment to the consignee end.	20	42000
30.	Fax Machine <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	2100
31.	Flow Meter <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	50	22500
32.	Glucometer <u>Specification</u> <ul style="list-style-type: none"> • Construction: M.S. Powder Coated • Input Voltage: AC 1 10 "120V OR AC220- 240V (Optional) • Frequency: 50-60 Hz • Fuse 50-60 Hz • Power Consumption: 275W ±5% / 1.2A±5% • Light: White glare-free • Weight: 6 Kilograms (approx.) • Temp. Display: 37" C t 2" C (With Micro Processor indicator) • Dimensions: (Lx W x H) 19.5x7 75x7 inch approx.) • Packing: One unit Transport Worthy • Viewing Area: Length – 11.5 inch Width – 3.5 inch • Operating Ambient Temperature: 27°C ± 4 °C • Support: ABS Plastic / Aluminum knob for position adjustment & cradleholding the equipment. • Relative Humidity: 10-90%, not condensing <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	14	3360
33.	Height Scale and Weighing Scale <u>Specification</u> <ul style="list-style-type: none"> • Electronic weighing scale for infants • High accurate sensor technology • Accuracy: 0.01kg or better. <p>Measure range: 30g ~ 30kg.</p> <p>Imported/Export Quality</p> <p style="text-align: center;">DR SAQIB ALI SHAIKH Director Health Services Karachi Division</p>	6	5400

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	Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end		
34.	Hipa Filter <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	3	14400
35.	Humby's Knife <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	900
36.	Infant Ambu Bag <u>Specification</u> <ul style="list-style-type: none"> • Made of high-quality silicone and special plastic • Autoclavable • Silicon size: 550ml (±10%) • O2 tube and reservoir valve attachable • Ventilation capacity: 600ml per one time • OR Equivalent Configuration • Resuscitator Body (1 ea) • Resuscitator Mask (1 ea) • Oxygen Reservoir (1 ea) OR Equivalent Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	720
37.	Instrument Set for DHS/DCS (Imported) <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	24000
38.	Inter Locking Instrument set for Fenur and <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	18000
39.	Jenco PH/MV Meter <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	2100
40.	Kitchen utensils/Material/Equipment & Cold Store in/c Deepfreezes, Refrigerators crockery cabinets <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	150000
41.	Laminar Flow Hood 2/2ft <u>Specification</u>	1	10500

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- Viewing Angle: 170° (H) / 160° (V) or better
- Refresh Rate: 50–60 Hz

Audio

- Built-in Stereo Speakers
- Audio Output: 2 × 3W or higher
- Sound System: Stereo / Dolby compatible

Connectivity

- HDMI Port: 1
- USB Port: 1
- VGA Input: 1
- AV Input (RCA): Yes
- Headphone Output: Yes
- RF Antenna Input: Yes

TV System

- Analog TV System: PAL / SECAM / NTSC
- Automatic Channel Search
- On-screen display (OSD) menu

Power

- Power Supply: AC 100–240V, 50/60Hz
- Power Consumption: Approx. 30–40 W
- Standby Power: ≤ 1 W

Physical Features

- Slim design with table stand
- Wall mount support (VESA compatible)
- Weight: Approx. 2.5 – 3.5 kg

Accessories

- Remote Control with batteries
- Power Cable
- User Manual

Imported/Export Quality

Should be: ISO Approved or CE Certified

Warranty: Should be Standard 03 Years Warranty consignee end


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45. **Micro Pipette Adjustable**

Specification






Imported/Export Quality

Should be: ISO Approved or CE Certified

Warranty: Should be Standard 03 Years Warranty consignee end

4 1440




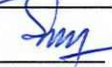

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<p>46. Mobile BP Set with Stand Specification</p> <ul style="list-style-type: none"> • The maximum number of cuff inflations for each SP in the mercury • Measurement is five, counting all MIL attempts and blood pressure attempts. • The rationale for this is two fold: to minimize the discomfort to the SP of frequent cuff inflations and to accomplish data collection for this measurement within the time allowed <p>ISO 13485 FDA/CE/JIS APPROVED USA/EUROPE/JAPAN OR EQUIVELENT</p>	40	24000
<p>47. Multi-Media with accessories Specificaion:</p> <ul style="list-style-type: none"> • Model: Instahibit Portable Folding Projector Screen • Size: 8x10 feet (96 x 120 inches) or better. • Type: Portable folding screen with tripod stand • Material: High-quality matte white fabric for enhanced image clarity • Setup: Quick and easy assembly, suitable for both indoor and outdoor use • This screen provides a large viewing area, making it suitable for the high brightness output of the Epson Pro L30000UNL projector. <p>Country of Origin: UK, USA, Europe, Japan or equivalent, Should be: ISO-13485 (Mandatory) & CE, JIS, FDA, MHLW (any One Certificate.) Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment</p>	1	13500
<p>48. Nebulizer. Specification</p> <p>Continuous high-pressure performance.</p> <ul style="list-style-type: none"> • Ultra-powerful compressor for both humidification and high flow • High-pressure nebulization of viscous medication. • Optimize medication delivery by aerosolizing to a particle size of < 2microns. • Lightweight, durable and easy-to-clean design. • Detachable door that protect componentry. • Maximum Compressor Pressure: up to 80 psi or better • Quiet Operation: with a 51 dBA or better noise level, the heavy-duty air compressor is one of the quietest continuous aerosol compressors on the market. Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment to the consignee end. <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	16	3840
<p>49. Oxygen Cylinder 240c Liter Specification</p> <ul style="list-style-type: none"> • Oxygen Cylinder 200-240 CFT. • BOC Tested. • Should be with flow meter. <p>Imported/Export Quality</p>	50	60000

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	<p>Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
50.	<p>Oxygen Cylinder 48/c Liter <u>Specification</u></p> <ul style="list-style-type: none"> • Oxygen Cylinder 48-55 CFT. • BOC Tested. • Should be with flow meter. <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	30	18000
51.	<p>Photocopy Machine <u>Specification:</u></p> <ul style="list-style-type: none"> • Latest & Branded Digital Photocopier International Recognized Brands (Mandatory) • Print, copy, scan, send and fax functionality B&W output. • 30 ppm Customizable 17.8 cm • Tillable color WVGA touch screen • Up to 2,800 sheet capacity and flexible media handling Powerful in -house publishing and finishing capabilities. • Smart document capturing and handling processes Advanced security options Easy device and fleet management Easy to change consumables Low energy consumption. • Color Digital Multifunction Imaging System 7" WVGA Full -Color TFT Screen. • Standard: 2 GB RAM • Hard Disk Drive Maximum: 215 GB • Wireless LAN • Copy/Print Speed (BW/Color) Letter: Up to 40/45 ppm • Copy/Print: 25/30 copies per minutes • Multiple copies: upto 99 • Legal 11" x 17": Up to 15 ppm • First Copy out time (letter) as fast as 5.9 seconds (BW), 8.2 seconds (Color) • Standard: Two 550 sheet paper cassettes Standard: 250 sheets (inner tray) Maximum: 2,100 sheets (w/stapler finisher or booklet finisher) • Memory: Standard: 16MB minimum or higher Standard automatic tray less duplexing. Warm -up time from power on: Approx. 34 seconds from Sleep: Approx. 10 seconds. Toner Black: 36,000 Images Color: 19,000 Images Scan Method: Duplex Automatic Document Feeder Environment compatible with energy saving options • Certifications: ISO 13485 (Mandatory), CE, ISO 9001. • Warranty: 1 Year Standard Local Warranty. <p>Canon/ Ricoh/ Pantum/ Brother or Equivalent. Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	2	30000
52.	<p>Plaster Cutter Electrical <u>Specification</u></p> <p>Feature: Reusable Maximum Swing Range: Higher or Equal to 5 Degree No-Load Speed: 12000r/Min or Better. Rise in Temperature: Lower Than 25 Centigrade Weight: 1.5 kg or better. Power Voltage: 220V/50Hz Type: Electric Plaster Cutting Saw.</p>	2	2160

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	Country of Origin: UK, USA, Europe, Japan or equivalent. or equivalent Should be: ISO-13485 (Mandatory) & CE MDD, JIS, FDA, MHLW (Any One). Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment to the consignee end		
53.	Play area articles. <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	6000
54.	Portable Blood Pressure Monitoring <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	1020
55.	RBC,WBC,HBC,Pipettes & Stand <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	60
56.	Refraction set complete with box. <u>Specification:</u> Made of stainless Steel (Item will be evaluated on best offered specification) Country of Origin: Imported/ Export Quality. Should be: ISO-13485 (Mandatory), CE Marked & FDA Approved. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end.	1	7500
57.	Refrigerator 12 cubic fts <u>Specification</u> 12CBU Unit Two Door. Imported/Export Quality Dawlance/ Haier/Pel Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	4200
58.	Refrigerator 10 cft. <u>Specification</u> 10 CBU Unit Two Door. Dawlance/ Haier/Pel Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	4200
59.	Refrigerator 16 cft <u>Specification</u> 16 CBU Unit Two Door. Dawlance/ Haier/Pel Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	4	9600
60.	Refrigerator for culture Media <u>Specification</u> Imported/Export Quality	1	24000

DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division





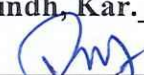
Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):


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- Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. 
- Rajeev Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. 

	<p>Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
61	<p>Refrigerators Specification</p> <p>General</p> <ul style="list-style-type: none"> • Brand: Dawlance • Model: Dawlance 9144 WB Refrigerator • Type: Top Mount / Double Door Refrigerator • Cooling System: Direct Cool <p>Capacity</p> <ul style="list-style-type: none"> • Total Capacity: 225 Liters (Approx. 8 Cubic Feet) • Refrigerator Compartment: Approx. 180–190 L • Freezer Compartment: Approx. 35–45 L <p>Cooling & Performance</p> <ul style="list-style-type: none"> • Refrigerant Gas: R600A (eco-friendly) • Compressor Type: Tropicalized compressor for high-temperature regions • Cooling Technology: Hybrid / Direct Cooling • Fast Cooling System <p>Energy & Power</p> <ul style="list-style-type: none"> • Energy Saving: Up to 35% electricity saving • Low Voltage Operation: Works on as low as 135 V (LVS technology) • Power Supply: 220–240 V, 50 Hz <p>Interior Features</p> <ul style="list-style-type: none"> • Shelf Type: Toughened wire shelves • Vegetable Crisper: Yes • Egg Tray: Yes • Ice Tray: Yes • Interior LED Light: Yes <p>Safety & Hygiene</p> <ul style="list-style-type: none"> • Anti-fungal removable door gasket • Door Lock: Yes • Health Light technology for improved hygiene (in some models) <p>Physical Features</p> <ul style="list-style-type: none"> • Dimensions: Approx. 52 × 59 × 130 cm • Weight: Approx. 44–47 kg • Body Design: Wide body with additional storage capacity 	10	21000






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	Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end		
62.	Screw Box 3.5 MM,4.5 MM <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	30000
63.	Small Fragment Set (imported) <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	12000
64.	Sphygmomanometer with pediatric Cuff, Mobile with Sland. <u>Specification</u> <ul style="list-style-type: none"> High quality stethoscope with stainless steel chestpiece, stainlesssteel double inner spring PVC tubing for unsurpassed acoustic performance. Foam lined box and 2 extra sets of soft ear tips. Chest-piece: Ø 45 mm (adult), Ø 35 mm (pediatric). Fabric cuff with Velcro closure, reliable manometer with clip to befixed on the cuff. Scale 0-300 mmHg. Air release at closed tap max 4 mm Hg/minute.Manual setting of deflation possible up to 2/3 mm Hg Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	6	5400
65.	Sphygmomanometer Mobile with Stand <u>Specification</u> <ul style="list-style-type: none"> High quality stethoscope with stainless steel chestpiece, stainlesssteel double inner spring PVC tubing for unsurpassed acoustic performance. Foam lined box and 2 extra sets of soft ear tips. Chest-piece: Ø 45 mm (adult), Ø 35 mm (pediatric). Fabric cuff with Velcro closure, reliable manometer with clip to befixed on the cuff. Scale 0-300 mmHg. Air release at closed tap max 4 mm Hg/minute.Manual setting of deflation possible up to 2/3 mm Hg Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	8	6000
66.	Staining tray <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	4	192
67.	Stethoscope <u>Specification</u> <ul style="list-style-type: none"> Dual Head Stethoscope for Adults Lightweight aluminum chest piece construction Non-chill bell and diaphragm rim for patient comfort Diaphragm diameter 1 3/4", bell diameter 3/4"  DR SAQIB ALI SHAIKH Director Health Services Karachi Division	10	600






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	<p>Proprietary diaphragm enhances acoustic response by 50% over traditional designs</p> <ul style="list-style-type: none"> Adjustable aluminum binaurals with PVC ear tips Flexible 21" PVC tubing <p>Included with spare pair of black mushroom ear tips</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>																																																																												
68	<p>Surgical Instrument Set General surgery(129 pieces) <u>Specification</u></p> <table border="0"> <tr><td>B.P Handle No 3 & 4</td><td>2</td></tr> <tr><td>B.P Handle No 7</td><td>1</td></tr> <tr><td>Dissecting forceps Plain / Tooth 6" 1+1</td><td>2</td></tr> <tr><td>Dissecting forceps Plain / Tooth 7" 1+1</td><td>2</td></tr> <tr><td>Dissecting forceps Plain / Tooth 8" 1+1</td><td>2</td></tr> <tr><td>Adson forceps Plain & Tooth 2+2</td><td>4</td></tr> <tr><td>McIndoe forceps 6"</td><td>1</td></tr> <tr><td>Sponge holding forceps</td><td>6</td></tr> <tr><td>Metzenbaum Scissor 6" Str & Cvd 1+1</td><td>2</td></tr> <tr><td>Metzenbaum Scissor 7" Str & Cvd 1+1</td><td>2</td></tr> <tr><td>Metzenbaum Scissor 8" Str & Cvd 1+1</td><td>2</td></tr> <tr><td>Mayo Scissor 6 3/4" Str & Cvd 1+1</td><td>2</td></tr> <tr><td>Crile artery forceps Str 5 1/2"</td><td>6</td></tr> <tr><td>Crile artery forceps Cvd 5 1/2"</td><td>12</td></tr> <tr><td>Mosquito artery forceps Str</td><td>12</td></tr> <tr><td>Mosquito artery forceps Cvd</td><td>24</td></tr> <tr><td>Artery forceps 8" Str & Cvd 4+4</td><td>8</td></tr> <tr><td>Artery forceps 9" Cvd fine</td><td>2</td></tr> <tr><td>Kocher Artery forceps 8" Str & Cvd 4+4</td><td>8</td></tr> <tr><td>Babcock intestinal forceps 6"</td><td>2</td></tr> <tr><td>Babcock intestinal forceps 7"</td><td>2</td></tr> <tr><td>Babcock intestinal forceps 8"</td><td>2</td></tr> <tr><td>Allis tissue forceps 6"</td><td>4</td></tr> <tr><td>Allis tissue forceps 7"</td><td>4</td></tr> <tr><td>Allis tissue forceps 8"</td><td>4</td></tr> <tr><td>Backhaus Towel Clip</td><td>6</td></tr> <tr><td>Moynihan Forceps 7"</td><td>1</td></tr> <tr><td>Moynihan Forceps 8"</td><td>1</td></tr> <tr><td>Langenback Retractor S - M - L</td><td>6</td></tr> <tr><td>Round Body Retractor</td><td>2</td></tr> <tr><td>Morris Retractor Medium</td><td>2</td></tr> <tr><td>Deaver Retractor Set of 5 pcs</td><td>1</td></tr> <tr><td>Balfour Selfretaining Retractor</td><td>1</td></tr> <tr><td>Sinus forceps</td><td>1</td></tr> <tr><td>Volkman Curette D/E</td><td>2</td></tr> <tr><td>Aneurysm Needle</td><td>1</td></tr> <tr><td>Watson Chyne Dissector</td><td>1</td></tr> </table>	B.P Handle No 3 & 4	2	B.P Handle No 7	1	Dissecting forceps Plain / Tooth 6" 1+1	2	Dissecting forceps Plain / Tooth 7" 1+1	2	Dissecting forceps Plain / Tooth 8" 1+1	2	Adson forceps Plain & Tooth 2+2	4	McIndoe forceps 6"	1	Sponge holding forceps	6	Metzenbaum Scissor 6" Str & Cvd 1+1	2	Metzenbaum Scissor 7" Str & Cvd 1+1	2	Metzenbaum Scissor 8" Str & Cvd 1+1	2	Mayo Scissor 6 3/4" Str & Cvd 1+1	2	Crile artery forceps Str 5 1/2"	6	Crile artery forceps Cvd 5 1/2"	12	Mosquito artery forceps Str	12	Mosquito artery forceps Cvd	24	Artery forceps 8" Str & Cvd 4+4	8	Artery forceps 9" Cvd fine	2	Kocher Artery forceps 8" Str & Cvd 4+4	8	Babcock intestinal forceps 6"	2	Babcock intestinal forceps 7"	2	Babcock intestinal forceps 8"	2	Allis tissue forceps 6"	4	Allis tissue forceps 7"	4	Allis tissue forceps 8"	4	Backhaus Towel Clip	6	Moynihan Forceps 7"	1	Moynihan Forceps 8"	1	Langenback Retractor S - M - L	6	Round Body Retractor	2	Morris Retractor Medium	2	Deaver Retractor Set of 5 pcs	1	Balfour Selfretaining Retractor	1	Sinus forceps	1	Volkman Curette D/E	2	Aneurysm Needle	1	Watson Chyne Dissector	1	6	27000
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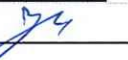




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Silver Probe	2		
Yaunker Suction Nozzle	1		
Poole Suction Nozzle	1		
Mayo Hegar Needle holder 6"	1		
Mayo Hegar Needle holder 7"	2		
Mayo Hegar Needle holder 8"	1		
Mayo Hegar Needle holder 9"	1		
Mayo Safety Pin	4		
Kidney Tray 10"	2		
Bowl 4"	2		
Instruments tray large without lid	1		
Country of Origin: Imported/ Export Quality.			
Should be: ISO-13485 (Mandatory), CE Marked & FDA Approved. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end			
69. Surgical Instrument Set Gynae surgery(48 pieces)			
Specification			
B.P Handle No 3 & 4	2		
B.P Handle No 7	1		
Dissecting forceps Plain / Tooth 6" 1+1	2		
Dissecting forceps Plain / Tooth 7" 1+1	2		
Dissecting forceps Plain / Tooth 8" 1+1	2		
Adson forceps Plain & Tooth 2+2	4		
McIndoe forceps 6"	1		
Sponge holding forceps	6		
Metzenbaum Scissor 6" Str & Cvd 1+1	2		
Metzenbaum Scissor 7" Str & Cvd 1+1	2		
Metzenbaum Scissor 8" Str & Cvd 1+1	2		
Mayo Scissor 6 3/4" Str & Cvd 1+1	2		
Crile artery forceps Str 5 1/2"	6		
Crile artery forceps Cvd 5 1/2"	12		
Mosquito artery forceps Str	12		
Mosquito artery forceps Cvd	24		
Artery forceps 8" Str & Cvd 4+4	8	6	18000
Artery forceps 9" Cvd fine	2		
Kocher Artery forceps 8" Str & Cvd 4+4	8		
Babcock intestinal forceps 6"	2		
Babcock intestinal forceps 7"	2		
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Allis tissue forceps 6"	4		
Allis tissue forceps 7"	4		
Allis tissue forceps 8"	4		
Backhaus Towel Clip	6		
Moynihan Forceps 7"	1		
Moynihan Forceps 8"	1		
Langenback Retractor S - M - L	6		
Round Body Retractor	2		
Morris Retractor Medium	2		
Deaver Retractor Set of 5 pcs	1		
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	Sinus forceps	1		
	Volkman Curette D/E	2		
	Aneurysm Needle	1		
	Watson Chyne Dissector	1		
	Silver Probe	2		
	Yaunker Suction Nozzle	1		
	Poole Suction Nozzle	1		
	Mayo Hegar Needle holder 6"	1		
	Mayo Hegar Needle holder 7"	2		
	Mayo Hegar Needle holder 8"	1		
	Mayo Hegar Needle holder 9"	1		
	Mayo Safety Pin	4		
	Kidney Tray 10"	2		
	Bowl 4"	2		
	Instruments tray large without lid	1		
	Country of Origin: Imported/ Export Quality. Should be: ISO-13485 (Mandatory), CE Marked & FDA Approved. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end			
70.	Surgical Set ENT (230 Pieces) <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end		2	18000
71.	Surgical Set EYE (130 Pieces) <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end		2	15000
72.	Telephone Exchange with PABX system inter com System with installation charges 50x500 <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end		1	150000
73.	Total Hip(imported) Specification: CONSISTING OF: Raspa #8 Raspa #9 Raspa #10 Raspa #11 Raspa #12 Raspa #13 Raspa #14 Raspa #15 Raspa #16 Raspa #17 Raspa #18 Estrattore colli modular		1	15000

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collo di prova STD – S
collo di prova STD – L
collo di prova STD - AVR / RVL – S
collo di prova STD - AVR / RVL – L
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collo di prova STD - AVL / RVR – L
collo di prova LAT – S
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collo di prova LAT - AVR / RVL – S
collo di prova LAT - AVR / RVL – L
collo di prova LAT - AVL / RVR – S
collo di prova LAT - AVL / RVR – L
collo di prova STD #8
collo di prova STD #9
collo di prova STD #10
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collo di prova LAT #14
collo di prova LAT #15
collo di prova LAT #16
collo di prova LAT #17
collo di prova LAT #18
testa prova Cono 12/14 ø28mm S
testa prova Cono 12/14 ø28mm M
testa prova Cono 12/14 ø28mm L
posizionatore steli
impattatore steli
Estrattore multiuso
Raspa curva
Box sterilizzabile

**STANDARD STRAIGHT HANDLES
INSTRUMENT SET
CONSISTING OF:**

Reamer
Straight Broach Handle F1 Connection
Neck Beater
Canal Chisel
Trial Head Taper 12/14 Ø28mm S
Trial Head Taper 12/14 Ø28mm M

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- Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. _____

Trial Head Taper 12/14 Ø28mm L
Transportation box

Delta TT / PF Instrument Set

CONSISTING OF:

Trial Liner, Large for Head Dia. 28mm
Trial Liner, Large for Head Dia. 32mm
Trial Liner, Large for Head Dia. 36mm
Trial Liner, Large for Head Dia. 40mm
Trial Liner, Medium for Head Dia. 28mm
Trial Liner, Medium for Head Dia. 32mm
Trial Liner, Medium for Head Dia. 36mm
Trial Liner, Small for Head Dia. 28mm
Trial Liner, Small for Head Dia. 32mm
Trial Liner, Small for Head Dia. 36mm
Trial Head Taper 12/14 Dia. 32mm S
Trial Head Taper 12/14 Dia. 32mm M
Trial Head Taper 12/14 Dia. 32mm L
Trial Head Taper 12/14 Dia. 36mm S
Trial Head Taper 12/14 Dia. 36mm M
Trial Head Taper 12/14 Dia. 36mm L
Trial Head Taper 12/14 Dia. 36mm XL
Trial Head Taper 12/14 Dia. 40mm S
Trial Head Taper 12/14 Dia. 40mm M
Trial Head Taper 12/14 Dia. 40mm L
Trial Head Taper 12/14 Dia. 40mm XL
Wrench for Cups DELTA-PF
Adapter Small for Cups DELTA-PF Wrench
Adapter Medium for Cups DELTA-PF Wrench
Adapter Large for Cups DELTA-PF Wrench
Sterilizable Box

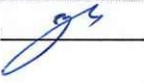




Dual Mobility Instrument Set - On Request

CONSISTING OF:

Trial Liner #M for double mobility Dia. 40mm
Trial Liner #L for Met and Double Mobility Dia.
42mm
Trial Short Adaptor
Trial Medium Adaptor
Trial Long Adaptor
Trial XLong Adaptor
Trial XXLong Adaptor
Pliers for Trial Adaptor
Trial Head Dia. 42mm
Trial Mobile Liner Dia. 40mm for Heads Dia.
28mm
Trial Mobile Liner Dia. 42mm for Heads Dia.
28mm
Implant reducer
Head-liner clamp
Holder for mobile liners Dia. 42-46
Trial head low taper 12/14 heads Dia. 28mm Small


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Director Health Services
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Trial head low taper 12/14 heads Dia. 28mm
Medium
Trial head low taper 12/14 heads Dia. 28mm Large
Sterilizable Box

**ACETABULAR CUP "HALF-CROSS" REAMER
SET ZIMMER-HALL**

CONSISTING OF:

Reamer Handle Zimmer-Hall Coupling (x2)

Half Cross Acetabular Reamer Dia 42

Half Cross Acetabular Reamer Dia 43

Half Cross Acetabular Reamer Dia 44

Half Cross Acetabular Reamer Dia 45

Half Cross Acetabular Reamer Dia 46

Half Cross Acetabular Reamer Dia 47

Half Cross Acetabular Reamer Dia 48

Half Cross Acetabular Reamer Dia 49

Half Cross Acetabular Reamer Dia 50

Half Cross Acetabular Reamer Dia 51

Half Cross Acetabular Reamer Dia 52

Half Cross Acetabular Reamer Dia 53

Half Cross Acetabular Reamer Dia 54

Half Cross Acetabular Reamer Dia 55

Half Cross Acetabular Reamer Dia 56

Half Cross Acetabular Reamer Dia 57

Half Cross Acetabular Reamer Dia 58

Half Cross Acetabular Reamer Dia 59

Half Cross Acetabular Reamer Dia 60

Half Cross Acetabular Reamer Dia 61

Half Cross Acetabular Reamer Dia 62

Half Cross Acetabular Reamer Dia 63

Half Cross Acetabular Reamer Dia 64

Half Cross Acetabular Reamer Dia 65

Half Cross Acetabular Reamer Dia 66

Multipurpose Handle

Impactor for Cemented Cups Dia.28mm

Impactor for Cemented Cups Dia.32mm

Liner Impactor for Dia=28mm Heads

Liner Impactor for Dia=32mm Heads

Liner Impactor for Dia=36mm Heads

Liner Impactor for Dia=40mm Heads

Trial Cup D.42 mm

Trial Cup D.44 mm

Trial Cup D.46 mm

Trial Cup D.48 mm

Trial Cup D.50 mm

Trial Cup D.52 mm

Trial Cup D.54 mm

Trial Cup D.56 mm

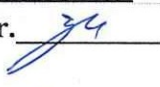



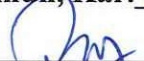
Trial Cup D.58 mm

Trial Cup D.60 mm

Trial Cup D.62 mm

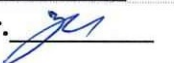



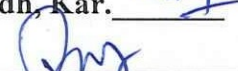

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	<p>Trial Cup D.64 mm Trial Cup D.66 mm Beater-Positioner-Aligner Ceramic Liner Positioner (x2) Joint for Ceramic Liner Positioner Liner Positioner SMALL Dia. 32 mm Liner Positioner MEDIUM-LARGE Dia. 36 mm Liner Positioner LARGE Dia. 40 mm Hexagonal Screwdriver Instrument tray</p> <p>Instrument Set OR Equivalent Country of Origin: Imported/ Export Quality. Should be: ISO-13485 (Mandatory), CE Marked & FDA Approved. Warranty: Warranty period shall be of three years starting from date of installation of equipment to the consignee end</p>		
74.	<p>Ultrasonic Nebulizer Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	4500
75.	<p>Ultrasonic Root Canal Apparatus Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	4	24000
76.	<p>Vacuum Extractor Specification GENERAL DESCRIPTION Vacuum extractor, Bird (anterior & posterior), manual, complete set. INTENDED USE An assembly of hand-operated devices designed to facilitate the delivery of a fetus during vaginal childbirth or Caesarean section by enabling traction to be applied to the fetal head by means of a suction cup that is attached to the scalp. It typically consists of a cup with a soft inner liner to prevent tissue damage, a hand-operated pump, and a handle used to apply traction. It is typically used for dystocia, uterine inertia, maternal exhaustion, maternal/fetal distress. This is a reusable device. TECHNICAL SPECIFICATIONS Vacuum extractor system to assist vaginal deliveries. Hand-operated suction pump supports the vacuum extraction. Vacuum range, adjustable: from 0 to -85kPa/-638mmHg or better Gauge dial, minimal graduation: 5kPa/40mmHg or better Accuracy vacuum gauge: ± 2.5kPa or better All parts of the vacuum extractor can be disassembled. All parts can be disassembled and are autoclavable at 121°C. The level of delivery room requires no other than routine maintenance, manageable at the level of delivery room. SYSTEM IS SUPPLIED AS A COMPLETE SET CONSISTING OF 1 x Vacuum pump 2 x Bird type anterior suction cup, stainless steel: diameter rounded edges 1 x Bird type posterior suction/ extraction cup rounded edges 2 x Soft vacuum extractor cups "silc-cup"</p>	1	9000

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	<p>2 x Extraction handle, stainless steel 1 x Cover plug for vacuum collection bottle, with 3 holes (2 connectors +1 vacuum gauge) 1 x Connector, angled, chrome plated 1 x Connector angled with screw valve, chrome plated screw, cap and gasket 1 x Vacuum gauge (0 to -100 kPa/- 800mmHg) with straight connector, chrome plated 1 x Vacuum collection bottle, plastic 500ml 1 x Basket, epoxy coated, supporting vacuum collection bottle and the vacuum pump, with large hook allowing to fit it to the delivery table. 2 x Tube, silicone transparent, inner/outer diameter approx.: 6/11mm, respective lengths: 50 and 150cm IMPORTED/ EXPORT QUALITY. Should be: ISO/CE certified Warranty: Warranty period shall be of three years starting from date of satisfactory installation of equipment to the consignee end. Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
77.	<p>Vertex Mixer Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	4	15000
78.	<p>VP Shunt passer Set Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	3000
79.	<p>Wall mounted Blood pressure Apparatus Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	212	130200
80.	<p>Weighing Scale Electronic Specification</p> <ul style="list-style-type: none"> • Electronic weighing scale for infants • High accurate sensor technology <p>Accuracy: 0.01kg or better. Measure range 30g ~ 30kg. Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	300
81.	<p>Wire Instrument Set in Aluminum Case Specification Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	6000
82.	<p>X-Ray Illuminator Specification LCD super thin X-RAY film Viewer is adopted with real color TFT. LCD back-light technology and the advanced optics transferring design. The color temperature is more than 8600K, while the frequency of light source is more than 50,000 times per second, ensuring even & soft light, it protects the user's vision from stress, even if viewed for longer durations.</p>	83	87150

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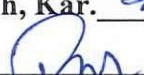
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	<p>Size: 1 connection: screen size: 360 X 440 mm or better.Outer size: 470 X 545 X 24 mm or better. 2 connection: screen size: 740 X 440 mm or better.Outer size: 850 X 545 mm or better. 3 connection: screen size: 1230 X 545 mm or better.Outer size: 1120 X 440 mm or better. 4 connection: screen size: 1610 X 545 X 24 mm or better.Outer size: 1500 X 440 mm or better. Optical specifications: Luminance in center :> 1000cd/ m2. No flash on screen. Optical scattering co-efficient :> 0.6. Even illumination, co-efficient uniformly :> 0.8. Continuously working :> 24h. The viewer id lit within 10 seconds. The stability of luminance :< 15 minutes. Voltage: DC12 1+- 5% V. Power consumption :< 150W.</p> <p>Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end</p>		
83.	<p>Banda Pajama free size for females only Dark Green Color Specification Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end</p>	250	9000
84.	<p>Banda Pajama free size for males only Dark Green Color Specification Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end</p>	250	9000
85.	<p>Bed Sheets 72"x40" Specification Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end</p>	1500	54000
86.	<p>Books, Journals Periodicals & Chronicles Specification Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	30000
87.	<p>Draw Sheet 72"x 40" Specification Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end</p>	1200	18000
88.	<p>Fire Fighting System in/c all accessories like sensors nozzles ,Pipe , alarm system etc complete package Specification Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end</p>	1	420000
89.	<p>Hospital Blankets Red(Wollen) Specification Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end</p>	500	37500
90.	<p>Lab. Coat Blue Color Specification Imported/Export Quality</p>	150	3600

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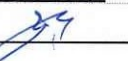
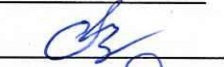

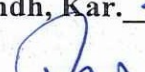
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	Warranty: Should be Standard 03 Years Warranty consignee end		
91.	O.H.P. with Screen Sets <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	2	8400
92.	O.T Gowns Dark Green color stitched <u>Specification</u> Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end	100	3600
93.	Patient Suit, white Color, Free Size for Female <u>Specification</u> Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end	500	22500
94.	Patient Suit, white Color, Free Size for Male <u>Specification</u> Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end	500	21750
95.	Pillows 24"x12 <u>Specification</u> Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end	500	15000
96.	Pillows Cover 24"x12" <u>Specification</u> Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end	1500	6750
97.	Railing bed side <u>Specification</u> Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end	20	7200
98.	Sound System (For Hospital Masjid) <u>Specification</u> Imported/Export Quality Should be: ISO Approved or CE Certified Warranty: Should be Standard 03 Years Warranty consignee end	1	30000
99.	White Coat for Doctors <u>Specification</u> Imported/Export Quality Warranty: Should be Standard 03 Years Warranty consignee end	250	6000


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HUMAN RESOURCE INCLUDING DETAIL OF TECHNICAL TEAM(FORM A)

S. #	Name	Designation	Posted Location	Date of Joining	Education	Trainings

Note: Supporting Documents must be provided for each employee.

CEO/Proprietor/Managing Director

Name: _____

Email Address: _____

Cell Phone: _____

Director/General Manager Services

Name: _____

Email Address: _____

Cell Phone: _____

Director/General Manager Sales

Name: _____

Email Address: _____

Cell Phone: _____

Technical Focal Person for this Project

Name: _____

Email Address: _____

Cell Phone: _____

Address: _____

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- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. [Signature]
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. [Signature]
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. [Signature]
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. [Signature]

FINANCIAL EVALUATION SHEET(FORM E)

Annual Turnover for the last 3 years Year (PKR)	
Year 2024	
Year 2023	
Year 2022	

Financial Information in PKR	Year 2024	Year 2023	Year 2022
Total Assets (TA)			
Total Liabilities (TL)			
Current Assets (CA)			
Current Liabilities (CL)			
Total / Gross Revenue (TR)			
Profits Before Taxes (PBT)			
Net Profit			
Current Ratio			

Supporting Document	Yes / No
Bank Statement	Year 2024
	Year 2023
	Year 2022
Audited Accounts	Year 2024
	Year 2023
	Year 2022
Bank Account Maintenance Certificate	


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PERFORMANCE CERTIFICATE(FORM H)

[on bidder's letter head]

This is to certify that the institute is satisfied by the performance of the firm and equipment as detailed below.

Purchase Order No: _____, dated _____
Make & Model no.: _____
Serial Number: _____
Quantity: _____
Name of the consignee: _____

The Firm has fulfilled his contractual obligation regarding the following services:
Satisfactory Installation, performance, and commissioning of equipment.
Furnishing detailed operation and maintenance manual for each equipment.
Training of the operators/users in operating the equipment to the satisfaction of the Institute.
Maintain up time of_%
Perform Preventative maintenance at _____ Interval during warranty/contract period
Provide Spare parts timely

Biomedical Engineering Department.

Name _____

Designation _____

Date _____

Signature with Stamp _____

Head of the Institute/Medical Director/Medical Superintendent

Name _____

Designation _____

Date _____

Signature with Stamp _____

Representative of the firm

Name _____

Designation _____

Date _____

Signature with Stamp _____

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BID LETTER FORM

From:

(Registered name and address of the bidder)To:

Director Health Services Karachi Division Dear Sir / Madam,

Having examined the bidding document and amendment thereon we the undersigned, offer to provide services to the works including in conformity with the terms and conditions of the bidding document and amendments there on, for the following project in response to your tender call dated ___

Tender Title:

We undertake to provide services/execute the above project or it part assigned to us in conformity with the said bidding documents for an estimated sum of Rs. _____ (Rupees - _____) (total bid amount in words and figures) which may vary in accordance with the schedule of prices attached herewith and coverage options made by Drug Testing Laboratory Sindh or its user organization.

If our bid is accepted, we undertake to;

- 1) Provide services/execute the work according to the time schedule specified in the bid document,
- 2) Obtain the performance guarantee of bank in accordance with bid requirements for the due performance of the contract, and
- 3) Agree to abide by the bid conditions, including pre-bid meeting minutes if any, which remain binding upon us during the entire bid validity period and bid may be accepted any time before the expiration of that period.
- 4) We understand that you are not bound to accept the lowest or any bid you may receive, nor to give any reason for the rejection of any bid and that you will not defray any expenses incurred by us in bidding.

Place:

Bidder's signature

Date:

and seal.

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CONTRACT FORM

THIS AGREEMENT made the Day of..... (year) Between the Procuring Agency (hereinafter "the _____") of one part and(Name of Vendor) of(City and country of Vendor) (Hereinafter "the Supplier") of the other part:

WHEREAS the _____ is desirous that certain Supplies, as described in the bid document and briefly outlined below, should be provided by the Vendor.

Date of tender call:

Title of the project:

Brief outline of the work:

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS;

In this agreement words and expression shall have the same meanings as are respectively assigned to them in the bid document referred to.

The following document shall be deemed to form and be read and construed as part of this Contract, viz..

- 1) Bid document(s)
- 2) Pre-bid conference minutes if any,
- 3) Clarification on bid document issued if any,
- 4) **Director Health Services Karachi Division** of award notification.

In case of conflict among documents mentioned above, the documents mentioned above in reverse order will prevail over other documents. In consideration of the payments to be made by the **Director Health Services Karachi Division** to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the **Director Health Services Karachi Division (Tender Title.)** and to remedy defects therein conformity, in all respects, with the provisions of the contract.

The **Director Health Services Karachi Division** hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the contract price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

Brief particulars of the services which shall be supplied/provided by the Supplier are as under:

Solutions, service or material	Quantity	Unit price	Amount	Remarks

IN WITNESS whereof the parties hereto have caused this Agreement executed the day and year above written.

Signed, sealed, delivered by _____ the (for the Procuring agency)

Signed, sealed, delivered by _____ the (for the Supplier)

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**FORM OF PERFORMANCE SECURITY
(Bank Guarantee)**

Guarantee No.: _____
Executed on: _____
Expiry date: _____

[Letter by the Guarantor to the Employer]

Name of Guarantor (Bank) with complete address (Scheduled Bank in Pakistan):

Name of Principal (Contractor, Manufacturer, Supplier or any bidder) with complete address:

Penal Sum of Security (express in words and figures):

Letter of Acceptance No. _____ Dated: _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the are e of the said Principal we, the Guarantor above named, are held and firmly bound unto the **Director Health Services Karachi Division** (hereinafter called the Employer) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Employer, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has accepted the Employer's above said Letter of Acceptance for _____ (Name of Contract) for the _____ (Name of Project).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents- during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Condition of Contract are fulfilled. Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us


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- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. _____

within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, _____ (the Guarantor), waiving all objections and defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contractor has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Witness:

Guarantor (Bank)

1. _____
(Name, Title, Signature & Seal)

Name: _____

Title: _____

Signature: _____

2. _____
(Name, Title, Signature & Seal)


DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division

Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):

- a. S. Zamir Hussain Shah, Bio Medical Engineer, Dr. Ruth K.M. Pfau Civil Hosp. Kar. _____
- b. Majid Ali, Senior Equipment Engineer, NICH, KARACHI. _____
- c. Qazi Muhammad Amir, Bio-medical Technician, Elector-medical Workshop. _____
- d. Sunny Mohiuddin, Dy. Director (Procurement), Directorate of Pharmacy, Sindh, Kar. _____
- e. Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. _____

INTEGRITY PACT

DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS

Contract Number: NO. _____ Dated: _____
Contract Value: Rs. _____
Contract Title: _____

M/s. _____ hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoS) through any corrupt business practice.

Without limiting the generality of the foregoing, M/s. _____ represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit, in whatsoever form, **Director Health Services Karachi Division** except that which has been expressly declared pursuant hereto.

M/s. _____ certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

M/s. _____ accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA. Notwithstanding any rights and remedies exercised by PA in this regard, M/s. _____ agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by M/s. _____ as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit, in whatsoever form, from PA.

M/s. _____

Director Health Services Karachi Division

DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division

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- Rajeevv Brahman, Pharmacist, Dr. Ruth K.M Pfau Civil Hospital Karachi. _____

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Port of Shipment and Country of origin of "MAJOR PART(S) OF THE EQUIPMENT" must be clearly reflected separately in the Technical and Financial bids. The "Origin" means the place where the "goods" are mined, grown, or

NOTE:

**(B) PRICE SCHEDULE IN FOREIGN CURRENCY
(CFR / CNF / C&F / CPT BASIS)
FOR GOODS OFFERED FROM OUTSIDE THE PROCURING AGENCY'S
COUNTRY**

S #	Detailed Specification of Goods	Model / Cat No	Name of Manufacturer	Country of Origin	Port of Shipment	Quantity of Stores	Unit	Currency	Rate Per Unit	Total Price
1	2	2	4	5	6	7	8	9	10	11
Total Amount in Foreign Currency										

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

DR SAQIB ALI SHAIKH
Director Health Services
Karachi Division

NOTE:

Port of Shipment and Country of origin of "MAJOR PART(S) OF THE EQUIPMENT" must be clearly reflected separately in the Technical and Financial bids. The "Origin" means the place where the "goods" are mined, grown, or

Prepared/Reviewed by following members of Technical Committee (Machinery Equipment / Furniture etc):

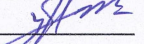
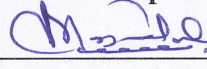
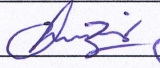

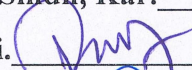
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Schedule of Requirements

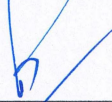

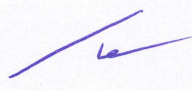
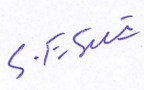
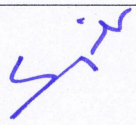
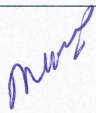
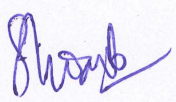
SCHEDULE OF REQUIREMENTS

The entire quantity of the ordered supplies shall be delivered in 16 weeks or earlier from the date of issuance of supply order / contract award without any penalty. Delay in the delivery shall result in penalties to be paid by the Supplier without any argument or question according to the prevailing SPPRA Rules.

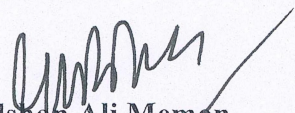
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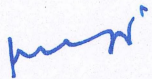
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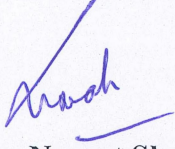
Checked & approved by Expert Committee for Machinery Equipment:

i.	Dr. Shahid Pervez, Histopathologist, Aga Khan University Hospital Kyc.	
ii.	Dr. Binish Arif Sultan, Associate Professor & Head of Pathology Lab, JSMU, Karachi.	
iii.	Prof. Dr. Tariq Mehmood, Professor Emeritus, Radiation Oncology, Member of PAF, JPMC, Karachi.	
iv.	Dr. Syed Farjad Sultan, Associate Professor, Anaesthesia Department, DUHS / Civil Hospital Karachi.	
v.	Prof. Dr. Sajida Qureshi, Professor of Surgery, DUHS / Dr. Ruth K.M. Pfau Civil Hospital Karachi.	
vi.	Prof. Dr. Syed Mahmood Hassan, Professor of Pathology, JSMU, Karachi.	
vii.	Dr. Shoaib Malik, Associate Professor, Anesthesia Department, JPMC Karachi.	

CONCURRED BY:


Professor Dr. Gulshan Ali Memon
Vice Chancellor, Peoples University of
Medical & Health Sciences for Women,
Nawabshah-Shaheed Benazirabad/
Member

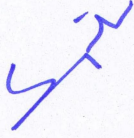

Professor Dr. Ikram Din Ujjan
Vice Chancellor, Liaquat University
Medical & Health Sciences, Jamshoro./
Member



Professor Dr. Nusrat Shah
Vice Chancellor, Shaheed Mohtarma
Benazir Bhutto Medical University
Larkana / Member

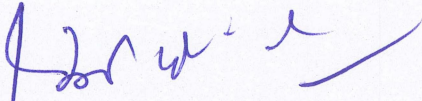


Dr. Ahson Qavi Siddiqi
CEO, Health Care Commission
Sindh/ Member



Prof. Dr. Sajida Qureshi
Professor of Surgery,
DUHS / Dr. Ruth K.M. Pfau
CHK./ Member

Special Secretary,
Chief Minister's Inspection, Enquiries &
Implementation Team Department,
Govt. of Sindh/ Member



Mr. Mohammed Ibrahim Memon
Additional Secretary (PM&I), Health
Department, Govt. of Sindh,
Member / Secretary

Additional Secretary (GA),
SGA&CD, Govt. of Sindh/
Member



Professor Dr. Amjad Siraj Memon
Vice Chancellor,
Jinnah Sindh Medical University/
Chairman