# SINDH INSTITUTE OF UROLOGY AND TRANSPLANTATION (SIUT) KARACHI, SINDH

# "SUPPLY OF MACHINES & EQUIPMENT FOR CARDIOLOGY SECTION OF MARIYAM BASHEER DAWOOD CHILDREN & CARDIAC HOSPITAL - SIUT"

TENDER No. 501

**DUE ON 26-2-2025 AT 02:00 PM** 

## **Single Stage - Two Envelope Bidding Procedure**

#### **IMPORTANT DATES**

<b>Issuance of Tender Documents</b>	06.02.2025 to 25.2.2025
<b>Submission of Tender</b>	26.02.2025 at 11:00 am
Opening of Tender	26.02.2025 at 11:30 am

# TENDER NOTICE (INVITATION FOR BIDS)

- 1) Sealed bids are invited from eligible bidders for "Supply of Machines & Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital -SIUT."
- 2) SIUT, Karachi, Sindh invites bids on DDP / C&F basis from Bidders registered with FB R for Income Tax, Sales Tax and with SRB for Provincial Sales Tax (if applicable) and active on FBR "Active Taxpayers List" as required by Sindh Public Procurement Rules, 2010 (SPP Rules, 2010).

Tender No.	501
Name of Bid	"Supply of Machines & Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital -SIUT."
Bidding Procedure	Single Stage Two Envelope (Technical & Financial)
Bid Security	1% of the total bid value
Bid Validity	90 days
Tender Fee	Rs 3,000/- (non-refundable)
Issuance of Tender Documents	06.02.2025 to 25.2.2025
Submission of Tender	26.02.2025 at 11:00 am
Opening of Tender	26.02.2025 at 11:30 am

- 3) Tender is open in front of the all Suppliers/Manufacturers/Authorized representative/Distributors.
- 4) Complete set of tender documents containing Schedule of Requirements, Technical Specification with Terms & Conditions can be purchased with a non-refundable fee of Rs. 3,000/- from the office of the Director SIUT, Ground Floor DFMC, Section CRS, Karachi during 2:00pm to 4:00 pm on working days from 06.02-2025 to 25.02.2025.
- 5) All required certificates / documents along with GST / NTN Certificate, Professional Tax Certificate etc. must be attached along with Technical information.
- 6) Bid shall include all applicable duties, taxes, levies and contribution imposed by Federal and Provincial Government or other body etc.
- 7) The bidder must enclose an affidavit on stamp paper of Rs. 100/- that the bidder has not been blacklisted from any Government Department. If at any stage bidder found blacklisted the bid shall be rejected.
- 8) Procurement agency may reject all or any Bid subject to the relevant provision of (SPP Rules, 2010) all terms & condition of SPP Rules, 2010 shall be applicable.
- 9) Deduction in the bills will be done as per government rules.
- 10) Bid Security @ 1% of the total bid value of quoted items must be paid by the bidder in shape of pay order / demand draft / Bank Guarantee in favor of Director of SIUT Karachi (original instrument should be attached with financial Bid).
- 11) In case of discrepancies between the Tender Notice and the Tender Documents, the Tender Documents shall take precedence.
- 12) Bids must be submitted at 5<sup>th</sup> Floor, DFMC at Pre-Function Area up to11:00 a.m. on February 26, 2025 (Wednesday). All bids must be accompanied by a bid security / earnest Money @ 1% of the total bid cost in shape of Pay Order/Demand Draft/ Bank Guarantee. Bids will be opened in the

- presence of the bidder's authorized representatives who choose to attend at the above address at11:30 am. late bids will be rejected.
- 13) In case of announcement of public holiday or any un-favorable circumstances, the bids shall be submitted and opened as per given schedule on the next working day.
- 14) Queries can be addressed at the following numbers or in person during office hours.

Tel: 021-99216977 Tel: 021-99215718/52

- sd OFFICE OF THE DIRECTOR
OF SIUT, KARACHI, SINDH

#### **INSTRUCTIONS TO BIDDERS (ITB)**

- 1) This Invitation for Bids is open to all Suppliers/Manufacturers/Authorized representative / Distributors and in case of imported goods, their Sole Agents / Importer in Pakistan, for "Supply of Machines & Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital -SIUT."
- The importers must possess a valid authorization from the Foreign Principal / Manufacturer and goods sale license issued by the competent authority in Pakistan and in case of manufacturer they should have a documentary proof of valid goods manufacturing license. All national firms duly registered with relevant tax and other authorities as required under the Federal and/or Sindh Government's laws, statutes, rules and relevant instructions (consistent with Sindh Public Procurement Rules (SPP Rules, 2010), and instructions contained in this document.)
- 3) Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued in accordance with Rule 2 (q) of Public Procurement Rules 2010 and or blacklisted by any other procuring agency in the country.
- 4) The list of goods required, bidding procedures, and contract terms are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents include:
  - a) Instructions to Bidders (ITB)
  - b) General Conditions of Contract (GCC)
  - c) Special Conditions of Contract (SCC)
  - d) Bid Data Sheet
  - e) Schedule of Requirements, Delivery & Price.
  - f) Specifications
  - g) Bid Form
  - h) Bid Security Form
  - i) Form of Bank Guarantee
  - j) Contract Form
  - k) Performance Security Form
  - I) Undertaking and Certificate
  - m) All Documents in "Documents' Checklist"
  - n) Bid Evaluation Criteria
  - o) Any other document deemed necessary by procuring agency
- 5) Price should be quoted in figures & words both.
- The bid prepared by the Bidder must comprise all the required documents mentioned in "Documents' Check-list [Form K]" and "Bid Evaluation Criteria [Form J]". The Bid must also include soft copies as mentioned in "Documents' Checklist" [Form K]; otherwise Bid will be ignored.
- 7) The prices quoted by the Bidders shall be fixed during the performance of the contract and shall not be subject to variation on any account. A bid submitted with an adjustable price or conditional will be treated as non-responsive and rejected.
- 8) The Bidder shall prepare bid comprising one single envelope containing two separate envelopes for financial proposal and technical proposal in original. The envelope shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion. The financial and technical bids, each shall be consisting of the specified documents.

In Technical Proposal, the bidder must provide the original data sheet and Technical brochure, Income Tax NTN Certificate, Sales Tax Certificate, Agency certificate and other documents wherever applicable as mentioned in this tender in "Documents' checklist" and "Bid Evaluation Criteria"; otherwise the bid will be ignored. Soft copy of Technical Bid/Proposal is mandatory and must be given in separate USB mandatorily on the format given.

In Financial Proposal, the bidder should provide all financial information along with bid security/earnest money at the rate of 1% of the quoted value. A photocopy of the same should be attached with Technical Proposal but its value must not be disclosed and this can be achieved by placing a piece of paper on the place where amount is mentioned. Soft copy of Financial Bid/Proposal is mandatory and must be given in separate USB mandatorily on the format given.

- 9) Bidders shall quote rates on Delivered Duty Paid, and/or CFR/C&F.
- 10) In case Purchase order is issued for imports, the supplier / beneficiary will be entitled / eligible to claim payment of the purchase order amount upon submission of shipping documents.
- 11) In case of imports, following charges will be borne by the beneficiary (Supplier).
  - All charges outside Pakistan.
  - Confirmation Charges.
  - Amendment charges after establishing L/C.
  - Demurrage charges if shipment documents submitted late by supplier.
- 12) In case of Purchase order issued on DDP basis, the suppliers will be entitled / eligible to claim payment of the purchase order amount after delivery of goods by submission of original delivery challan, other related documents and inspection note.
- 13) All the applicable Federal and Provincial Government taxes on the value of the contract amount will be deducted from the bills of the Suppliers.
- 14) Successful Bidders shall have to pay Stamp duty @ 25 paisa per hundred rupees on items & 0.35% on services of the contract and affix the same on the Purchase Order/Contract Agreement. The Stamp (Sindh Amendment) Ordinance No: XVIII of 2002 refers). Fee for award of contracts: The service charges at the rate of 0.25% will be paid by the contractor on the amount of contract awarded as required under rule 83-A (1) of the Sindh Purchase Manual 1991.
- 15) The Procuring Agency will initially open only the envelopes marked "Technical Proposal" in the presence of Bidders or their representatives who chose to be present at the time of bid opening date, time and place specified in the tender documents. The Bidder or their representative who are present shall sign the attendance sheet. The envelope marked with "Financial Proposal" shall be retained in the custody of Procuring Agency without being opened till the completion of the Technical Evaluation.
- 16) A photocopy of Bid Security not specifying amount must be attached in technical proposal.
- 17) Bid evaluation will be performed by Technical Committee on the basis of Technical information submitted by the Bidder and verified from samples provided with the Bid. Product that comply with the advertised specifications and fulfill the requirement as per labelling will be considered for evaluation. Financial bids of technical qualified firms will be opened afterwards.
- An interested bidder, who has obtained bidding documents, may request for clarification of contents of the bidding document in writing, and procuring agency shall respond to such queries in writing within three calendar days, provided they are received at least five calendar

- days prior to the date of opening of bid; Provided further that any clarification in response to a query by any bidder shall be communicated to all parties who have obtained bidding documents without disclosing the name of bidder who has raised the query.
- 19) At any time prior to the deadline for submission of bids, the Procuring Agency, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, may modify the bidding documents by amendment. All prospective bidders that have received the bidding documents shall be notified of the amendment in writing or by phone, and shall be binding on them. In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring Agency, at its discretion, may extend the deadline for the submission of bids.
- The bidder is required to offer competitive price. All prices must not include the General Sales Tax (GST) as Procuring Agency is exempt for Sales Tax under Sales Tax Act, 1990 whereas other taxes and duties should be included where applicable. If there is no mention of taxes, the offered / quoted price shall be considered as inclusive of all prevailing taxes/duties. The benefit of exemption from or reduction in the GST or other taxes shall be passed on to the Procuring Agency.
- 21) Prices offered should be for the entire quantity demanded; partial quantity offers shall straightaway be rejected. Conditional offer shall also be considered as non-responsive bid.
- While tendering your quotation, the present trend / inflation in the rate of goods and services in the market should be kept in mind. No request for increase in price due to market fluctuation in the cost of goods and services or any other reason whatsoever, shall be entertained.
- Pursuant to Rule 89 of (SPP Rules, 2010), the bidder shall sign an Integrity Pact in accordance with prescribed format attached hereto.
- 24) All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 25) The bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the bid.
- 26) Incomplete, inaccurate, conditional and late bids shall not be accepted.
- 27) Bids shall be submitted either by the manufacturer or its sole agent, if submitted by the manufacturer itself then bid of authorized sole agent will be rejected. No sublet will be allowed.
- Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of errors, its bid will be rejected.
- 29) The Procuring Agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract under the relevant provisions of SPP Rules, 2010, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Procuring Agency's action.
- 30) The Procuring Agency reserves the right to increase/decrease or delete the quantities of goods etc. at the time of award of contract and also reserves the right to increase/ decrease the quantity of goods and services originally specified in the contract without any change in

- unit price or other terms and conditions of goods at any time during the contract period as per SPP Rules, 2010
- 31) Prior to the expiration of the period of bid validity, the Procuring Agency will notify the successful Bidder through Advance acceptance. This will constitute the formation of the contract. Within seven (07) days after receipt of the Advance acceptance, the successful Bidder shall furnish the performance security @ 5% of the contracted amount in the form of Demand Draft/Pay Order/ Bank Guarantee and sign the contract agreement. In case of any full/partial breach of the successful bidder the security will be utilized as per SPP Rules, 2010
- 32) Bid validity can be extended as per SPP Rules, 2010.
- 33) No bidder shall be allowed to alter or modify his bid after the bids have been opened. However the procuring agency may seek and accept clarifications to the bid that do not change the substance of the bid.
- 34) Distributor once nominated by the manufacturer will be for the whole contract period and manufacturer cannot change its distributor during the year in any case. In exceptional cases the tendering authority may approve changes.
- 35) The manufacturer should provide an undertaking that if his authorized / distributor / agent fails to carry out any assignment in total or in part, manufacturer will be responsible to carry out the same.
- The Procuring Agency, without prejudice to any other remedy for breach of contract by written notice of default sent to the supplier, may terminate the contract in whole or in part and can take action under rule 35 of (SPP Rules, 2010)
  - (a) If the supplier fails to deliver any or all of the contracted items within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency.
  - (b) If the Supplier fails to perform any other obligation(s) under the Contract.
  - (c) If the supplier, in the judgment of the Procuring Agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- Any queries regarding this tender should be sent to the <u>purchase@siut.org</u>. Please mention "Supply of Machines & Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital -SIUT."

#### GENERAL CONDITIONS OF CONTRACT

#### 1. Definitions

- 1.1 In this Contract, the following terms shall be interpreted as indicated:
  - (a) "The Contract" means the agreement entered into between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
  - (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
  - (c) "The Goods" means all of the Goods, equipment, machinery, and/or other materials, which the Supplier is required to supply to the Procuring agency under the Contract.
  - (d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
  - (e) "GCC" means the General Conditions of Contract contained in this section.
  - (f) "SCC" means the Special Conditions of Contract.
  - (g) "The Procuring Agency" means
    - i. Any department or office of Government; or
    - ii. District Government; or
    - iii. Any authority, corporation, body or organization established by law or which is owned or controlled by the Government
  - (h) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
  - (i) **"SPP Rules, 2010"** means the Sindh Public Procurement Rules, 2010 (Amended 2019).
  - (j) "Day" means calendar day.

#### 2. Standards

The Goods & Equipment supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.

#### 3. Patent Rights

The Supplier shall indemnify the Procuring Agency against all third- party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods & Equipment or any part thereof in the Islamic Republic of Pakistan.

## 4. Performance Security

- 4.1 Within seven (07) days, or any other duration as specified in SCC, of receipt of the notification of Contract Award, the successful Bidder shall furnish to the Procuring Agency the Performance Security in the amount specified in SCC.
- 4.2 The proceeds of the Performance Security shall be payable to the Procuring Agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 4.3 The performance security shall be denominated in the Pak Rupees and shall be an unconditional Bank Guarantee, Pay Order, Call Deposit as, provided in the bidding

documents or another form acceptable to the Procuring Agency;

4.4 The performance security will be discharged by the Procuring Agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

## 5 Inspections and Tests

- 5.1 The Procuring Agency or its representative shall have the right to inspect and/or to test the Equipment to confirm their conformity to the Contract specifications at no extra cost to the Procuring Agency. The Procuring Agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 5.2 Should any inspected or tested Equipment fail to conform to the Specifications, the Procuring Agency may reject the Equipment, and the Supplier shall either replace the rejected Equipment or make alterations necessary to meet specification requirements free of cost to the Procuring Agency.
- 5.4 The Procuring Agency's right to inspect, test and, where necessary, reject the Equipment after the Equipment' arrival shall in no way be limited or waived by reason of the Equipment having previously been inspected, tested, and passed by the Manufacturer.
- 5.5 Nothing in GCC Clause 5 shall in any way release the Supplier from any warranty or other obligations under this Contract.

#### 6. Packing

The Supplier shall provide such packing of the Equipment as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage.

# 7. Delivery and Documents

Delivery of the Equipment shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping / transportation and/or other documents to be furnished by the Supplier are specified in SCC.

#### 8. Insurance

The Equipment supplied under the Contract shall be delivered consignee's end under which risk is transferred to the Procuring Agency after having been delivered; hence insurance coverage is Supplier's responsibility.

#### 9 Transportation

The Supplier is required under the Contact to transport the Equipment to a specified place of destination and shall be arranged by the Supplier, and related costs shall be deemed to have been included in the Contract Price.

#### 10 Incidental Services

- 10.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
  - (a) performance or supervision of on-site assembly and/or start-up of the supplied Equipment;
  - (b) Furnishing of tools required for assembly and/or maintenance of the supplied Equipment.
  - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Equipment;
  - (d) Performance or supervision or maintenance and/or repair of the supplied Equipment, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract.

#### 11. Spare Parts

- 11.1 The Supplier should provide any or all of the notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
  - (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
  - (b) in the event of termination of production of the spare parts:
  - (i) advance notification to the Procuring Agency of the pending termination, in sufficient time to permit the Procuring Agency to procure needed requirements; and
  - (ii) Following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.

#### 12. Warranty

- 12.1 The Supplier warrants that the Equipment supplied under the Contract are new, unused, of desired models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Equipment supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring Agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Equipment in the conditions prevailing in the country of final destination.
- 12.2 This warranty shall remain valid as per BOQ (03 Years with parts and service wherever applicable) after the Equipment, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract.
- 12.3 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Procuring Agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring Agency may have against the Supplier under the Contract.

#### 13. Payment

- 13.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 13.2 The Supplier's request(s) for payment shall be made to the Procuring Agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and upon fulfillment of other obligations stipulated in the Contract.
- 13.3 Payments shall be made promptly by the Procuring Agency, but in no case later than forty five (45) days after submission of an invoice or claim by the Supplier.
- 13.4 The currency of payment is Pak. Rupees or on basis of F.O.R/CFR.

#### 14. Prices

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

#### 15. Contract Amendments

No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

# 16. Delays in the Supplier's Performance

- 16.1 Delivery of the Equipment and Performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring Agency in the Schedule of Requirements.
- 16.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Equipment and performance of Services, the Supplier shall promptly notify the Procuring Agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring Agency shall evaluate the situation

and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

16.3 Except as provided under GCC Clause 17 a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages unless an extension of time is agreed upon pursuant to GCC Clause 16.2 without the application of liquidated damages.

# 17. Liquidated Damages

Subject to GCC Clause 20, if the Supplier fails to deliver any or all of the Equipment or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Equipment or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to GCC Clause 18.

## 18. Termination for Default

- 18.1 The Procuring agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:
- (a) if the Supplier fails to deliver any or all of the equipment within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC Clause 16; or
- (b) if the Supplier fails to perform any other obligation(s) under the Contract.
- (c) if the Supplier, in the judgment of the Procuring Agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

#### 19. Force Majeure 19.1

- 19.1 Notwithstanding the provisions of GCC Clauses 16, 17 and 18, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 19.2 For purposes of this clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring Agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 19.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring Agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

## 20. Resolution of Disputes

Resolution of dispute shall be through Mechanism for Redressal of Grievances as provided in the rules or through Arbitration Act, 1940.

21. Governing Language

The Contract shall be written in English language all correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

22. Applicable Law

The Contract shall be interpreted in accordance with the applicable laws of Pakistan and SPP Rules, 2010, (Amended 2019).

23. Taxes and Duties

Supplier shall be entirely responsible for all taxes, duties (including stamp duty), license fees, etc., incurred until delivery of the contracted Equipment to the Procuring agency.

24. Overriding effect of Sindh Public Procurement Rules, 2010 (Amended 2019)

In case of conflict or primacy of interpretation the provisions of SPP Rules, 2010 (Amended 2019) shall have an overriding effect notwithstanding anything to the contrary contained in these bidding documents.

#### **SPECIAL CONDITIONS OF CONTRACT (SCC)**

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

#### 1. Definitions (GCC – Clause 1)

The Procuring Agency is: Director, Sindh Institute of Urology & Transplantation (SIUT), Karachi.

#### 2. Consignee (GCC – Clause 1)

The consignee is: Sindh Institute of Urology & Transplantation (SIUT), Karachi.

#### 3. Goods (GCC - Clause 1)

"Supply of Machines & Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital - SIUT."

#### 4. Performance Security (GCC Clause 8)

The amount of performance security, as a percentage of the Contract Price, shall be: 5% in the form of Pay order / Demand Draft / Bank Guarantee from any scheduled Bank of Pakistan.

#### 5. Inspections and Tests (GCC – Clause 11)

Representative of Procuring Agency or his nominee shall inspect the procured good and ensure that it meets the tender specifications before its acceptance

#### 6. Packing (GCC – Clause 13)

In addition to the General Condition of the Contract, items supply shall be made with a stamp "For SIUT only" on the packing of the Disposable items.

#### 7. Delivery and Documents (GCC Clause 14)

Supplier shall supply the good within 7-15 days of Purchase Order and shall submit the following.

- a) Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- b) Packing List identifying the contents of Supply;
- c) Delivery note & Shipping Documents.
- d) Warranty and guarantee certificate;
- e) Undertaking & GD (if applicable)

#### 8. Warranty (GCC – Clause 18)

The equipment shall bear 5 years comprehensive warranty with parts and services. Procuring Agency at its option may enter into a Service Level Maintenance Agreement upon expiry of the warranty period.

#### 9. Payment (GCC – 19)

Payment for the supply of items will be made after deductions of all applicable taxes, duties, Levies & charges within 30 days from the submission of complete documents for delivery of items.

#### 10. Liquidated Damages (GCC-25)

If the Supplier fails to deliver the goods or perform the services within the time period(s) specified in the contract, the Procuring Agency shall, without prejudice to its other remedies under the contract deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.07 percent of the Contract Price for each day of delay until actual delivery or performance, up to a maximum deduction of 10% of the Contract Price. Once the maximum is reached, the Procuring Agency may consider termination of the contract.

#### 11. Resolution of Disputes (GCC – 30)

In the case of a dispute between the Procuring agency and the Supplier, the dispute shall be referred to the dispute resolution mechanism as defined in rule 31, 32 and 34 of the (SPP Rules, 2010 Amended 2019)

#### 12. Applicable Law (GCC – 32)

Contract shall be interpreted in accordance with the Sindh Public Procurement law of Sindh.

#### 13. Taxes & Duties (GCC – 34)

Prices should include all taxes and duties of federal and provincial government except sales tax on goods items as SIUT in exempt as per clause 52A of Sixth schedule to Sales Tax Act, 1990.

#### **BID DATA SHEET**

The following specific data for "Supply of Machines & Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital -SIUT." to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) Part One. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

here	ein shall prevail over those in ITB.				
	Introduction				
1	<b>Name of Procuring Agency:</b> Director Sindh Institute of Urology and Transplantation, Karachi. Telephone No 99216967 & 99216977				
2	Name of Contract. "Supply of Machines & Equipment for Cardiology Section of Mariyam				
	Basheer Dawood Children & Cardiac Hospital -SIUT."				
	Bid Price and Currency				
3	• For the Goods offered within the Procuring Agency's Country: the price quoted shall be on delivered duty paid (DDP) Basis at Consignee's End.				
	For the Goods offered from Outside the Procuring Agency's Country: the price quoted shall be on CFR / C&F Karachi Basis.				
	• For the Goods offered within the Procuring Agency's Country: the price quoted shall be in Pak Rupees.				
	• For the Goods offered from Outside the Procuring Agency's Country: the price quoted shall be in Foreign Currency.				
	Preparation and Submission of Bids				
4	Selection Criteria / Responsiveness Criteria:				
	1. The Bidder should not have been barred by any of Provincial or Federal Govt. Deptt., Agency, Organization or autonomous body or Private sector organization anywhere in Pakistan. (Submission of undertaking on 100/- legal stamp paper).				
	2. Income Tax Certificate (NTN), valid GST Registration Certificate and the firm must be active tax payer.				
	3. FDA/CE or any other Quality Certificate must be attached with profile.				
	4. The Equipment should be brand new and un-used and Proposed Equipment must have manufacturer's warranty.				
	<ul> <li>5. The Financial bid will be opened of those Bidders who will be qualified in Technical evaluation.</li> <li>6. The Bidder must have local presence in Karachi in order to provide timely support services.</li> <li>7. Tender Document duly signed and stamped each page by the Bidder along with complete company</li> </ul>				
	profile must be attached with Technical Bid.				
	<ul><li>8. The SIUT reserve the right to reject any Bid if any one of the above-mentioned Criteria is not fulfilled.</li><li>9. Bidder must comply with the requirement of Bid Evaluation Criteria Form [J] and Documents' checklist Form [K] for submission of Bid.</li></ul>				
	Notes: Bidder must provide necessary supporting documents as proof in respect of the selection criteria mentioned above.				
	Please refer "Instructions to Bidders" Section for further details.				
5	Amount of bid security. 1% of Bid amount in shape of Pay Order / Bank Guarantee / Call Deposit.				
6	<b>Bid validity period</b> . The period of bid validity shall be 90 days after the deadline of submission of Bids.				
7	Clarification may be requested not later than <u>05 days</u> before the submission date for <u>Clarification of bid</u> <u>purposes</u> only, the Procuring Agency's address is:				
0	The (Procurement Officer) Procurement Department SIUT, Karachi.				
8	Number of copies. One Original plus Soft Copy is Mandatory.				
9	<b>Amount of Performance Security</b> will be @ 5% of the Bidding amount for the whole agreement period (till expiry of warranty) in the form of Demand Draft/Pay Order/Bank Guarantee from AAA rated scheduled Bank.				
10	Stamp Duty shall be affixed on contract @ 0.25% on items & 0.35% on services or as applicable of value of supply as per Stamp Duty Act 1899.				
11	Bid Evaluation: Lowest Evaluated Bid				

# **FORMS**

## [FORM: A]

#### **BID**

Tender No. 501		Date:	
To Office of the Director SIUT, Karachi, Sindh			
undersigned, offer to supply and	deliver the Equipment, go ount in words and figure	t of which is hereby duly acknowledged, we, goods and / or specified in the said bidding documeures] or such other sums as may be ascertained thand made part of this Bid.	ents
We undertake, if our Bid is acceand purchase order.	epted, to deliver the good	ds in accordance with the requirements of this ter	nder
		Draft / Call Deposit or obtain the guarantee of a bue performance of the Contract, in the form prescri	
	Notice, and it shall remain	or such extended period as agreed from the date find in binding upon us and may be accepted at any t	
Until a formal Contract is prepar your notification of award, shall		Bid, together with your written acceptance thereof intract between us.	and
We understand that you are not	bound to accept the lowes	est or any bid you may receive.	
Dated this o	lay of	20	
[Signature]	[in the capacity of	of]	
Duly authorized to sign Bid fo	or and on behalf of		

**Note:** This document should be on the letterhead of the Bidder and should be signed by a person competent and having the power of attorney to bind the Bidder. It should be enclosed inside the **Financial Proposal** by the Bidder.

## [FORM: B1]

#### **BID SECURITY / EARNEST MONEY**

Please attach a copy of earnest money Pay Order / Bank Draft / Call Deposit on below space.

). Bid Amount	
In Figures	
In Words	
). Earnest Money / Bid Secu	urity 1%
/· _ · · · · · · · · · · · · · · · · · ·	
In Figures In Words	

Detailed working must be submitted in price schedule.

#### [FORM: B2]

# BID SECURITY (In case of Bank Guarantee)

			Guarantee No
			Amount (PKR)
			Date of Issue
			Date of Expiry
Name	e of Gua	rantor (S	Scheduled Bank in Pakistan) with address:
			idder) with address:
			Date of Bid
required in the ourse these th	est of the last of the last of the sum selves, or expresent a COND accompaniculars of the EREAS,	e said Protection of United Allert Stated allert series.  ITION (In the ITION of Bid) the Protection of United Allert States and ITION of Bid) the Protection of United Allert States and ITION of Bid) the Protection of United Allert States and ITION of Bid) the Protection of United Allert States and ITION of	BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the rincipal, we the Guarantor above-named are held and firmly bound into the Drology and Transplantation, (hereinafter called The Procuring Agency) bove, for the payment of which sum well and truly to be made, we bind executors, administrators and successors, jointly and severally, firmly by DF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted id numbered and dated as above for the said Procuring Agency; and securing Agency has required as a condition for considering the said Bid that es a Bid Security in the above said sum to the Procuring Agency, conditioned
as ur	_		a Bia security in the accord said sain to the Frocuring rigency, conditioned
(1)			Security shall remain valid for a period of twenty-eight (28) days beyond the idity of the bid;
(2)	that i	n the ev	ent of;
	(a)	the Pi	rincipal withdraws his Bid during the period of validity of Bid, or
	(b)		rincipal does not accept the contract of his Bid Price, pursuant to e 24 of Instructions to Bidders, or
	(c)	failur	e of the successful bidder to
		(i)	furnish the required Performance Security, in accordance with Clause 24 of Instructions to Bidders, or

successful bidder's failure to perform.

(ii)

Sign the proposed Contract Agreement, in accordance with Clause 24 of

Instructions to Bidders, the entire sum be paid immediately to the said Procuring Agency for delayed completion and not as penalty for the

NOW THEREFORE, if the successful bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract Agreement with the said Procuring Agency in accordance with his Bid as accepted and furnish within seven (07) days of receipt of Letter of Acceptance, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Procuring Agency for the faithful performance and proper fulfilment of the said Contract or in the event of non- withdrawal of the said Bid within the time specified then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Guarantor shall forthwith pay to the Procuring Agency the said sum stated above upon first written demand of the Procuring Agency without cavil or argument and without requiring the Procuring Agency to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Procuring Agency by registered post duly addressed to the Guarantor at its address given above.

PROVIDED ALSO THAT the Procuring Agency shall be the sole and final judge for deciding whether the Principal has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Guarantor shall pay without objection the sum stated above upon first written demand from the Procuring Agency forthwith and without any reference to the Principal or any other person.

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

	Guarantor (Bank)
Witness:	1. Signature
1	2. Name
	3. Title
Corporate Secretary (Seal)	
2.	
(Name, Title & Address)	Corporate Guarantor (Seal)

[FORM: C]

**Undertaking** 

WHEREAS [Bidder Name] hereby undertake against the Tender No. 388 to abide by the following clauses.

- a) Whether our tender accepted for total, partial or enhanced quantity for all or any single item. I/We also agree to supply and accept the said item(s) at the rates for the supply of contracted quantity within the stipulated period shown in the contract.
- b) We understand and confirm the refund of cost difference if the same equipment is/was supplied at lower rates to any other Govt./Semi Govt. or other institution in the province in the same fiscal year.
- c) If any of the information submitted in this tender is found incorrect, our contract may be cancelled at any stage on our cost and risk.

[Signature for and on behalf of Bidder]	[Date]

**Note:** This undertaking should be on a stamp paper of Rs. 100/- arranged by the Bidder. It should be enclosed inside the Technical Proposal by the Bidder.

[FORM: D]

#### Certificate

To
Office of the Director
SIUT, Karachi,
Sindh

WHEREAS [Bidder Name] hereby certify against the Tender No. 388 to abide by the following clauses.

- a) We guarantee to supply the equipment, stores and / or services in accordance with the requirement specified in the tender documents.
- b) We guarantee that the supplied medical equipment/machinery is the original and brand new product.
- c) Our firm is not black listed by any organization / Government Department.

Authorized Sign & Stamp

[Bidder Name]

**Note:** This certificate should be on the stamp paper of Rs. 100 and should be signed by a person competent and having the power of attorney to bind the Bidder. It should be enclosed inside the Technical Proposal by the Bidder.

#### **ON STAMP PAPER**

[FORM: E]

Applicable Stamp Duty should be paid either by Stamp Paper or through adhesive Stamps.

#### **CONTRACT**

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ between [name of Procuring Agency] of [city and country of Procuring Agency] (hereinafter called "the Procuring Agency") of the one part and [name of Supplier] of [city and country of Supplier] (hereinafter called "the Supplier") of the other part:

WHEREAS the Procuring Agency invited bids for certain equipment and ancillary services, viz., [brief description of equipment and services] and has accepted a bid by the Supplier for the supply of those equipment and services in the sum of [contract price in words and figures] (hereinafter called "the Contract Price").

#### NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
- 2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - (a) the Bid Form and the Price Schedule submitted by the Bidder;
  - (b) the Schedule of Requirements;
  - (c) the Technical Specifications;
  - (d) the General Conditions of Contract;
  - (e) the Special Conditions of Contract; and
  - (f) the Procuring Agency's Notification of Award and
  - (g) The Bidding Documents.
- 3. In consideration of the payments to be made by the Procuring Agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring Agency to provide the equipment and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 4. The Procuring Agency hereby covenants to pay the Supplier in consideration of the provision of the equipment 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.
- 5. This agreement may be intended as will be mutually agreed by the parties hereto.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Procuring Agency	Supplier		
Authorized Signature & Official Stamp	Authorized Signature & Official Stamp		
Procuring Agency Name	Bidder Name		
Address	Address		
Contact No.	Contact No		

#### PERFORMANCE SECURITY

Option 1 = Pay Order /Bank Draft / Call Deposit Option 2 = Bank Guarantee

[FORM: F]

## **BANK GAURANTEE**

To: Office of the Director	Guarantee No
SIUT, Karachi, Sindh	Amount (PKR)
	Date of Issue
	Date of Expiry
Whereas [Name of Bidder] (hereinafter called "The S [Number] dated [date] to supply [description of Equ	upplier") has undertaken, in pursuance of Contract No. <b>ipment</b> ] (hereinafter called "the Contract").
	that the Supplier shall furnish to the Procuring Agency Contract amount as Security for compliance with the the Contract.
And whereas we have agreed to provide a Guarantee:	for the said Supplier.
[Amount of the Guarantee in Words and Figures] demand declaring the Supplier to be in default under the to initiate action against the Bidder and without cave	y guarantee, on behalf of the Supplier, up to a total of and we undertake to pay you, upon your first written the Contract and without requiring the Procuring Agency il or argument any sum or sums within the limits of atted in the demand made under this guarantee shall be tor under this guarantee.
	the shall be valid for <b>[Period]</b> after the completion of agency of the full quantity of the goods for which this ions and sums due have been paid in full.
	Guarantor (Bank)
Witness:	1. Signature
1	2. Name
	3. Title
Corporate Secretary (Seal)	
2. —	
(Name, Title & Address)	Corporate Guarantor (Seal)

## [FORM: I]

# SINDH INSTITUTE OF UROLOGY AND TRANSPLANTATION (SIUT) Vendor Information Form

<b>Company Name:</b>		-		
N.T.N #				
Contact Person Name		Tel No.	Cell #	
Designation		Email		
		Entity Typ	e	
1. Private □	2. Public □	3. NGO □	4. Sole Proprietor □	5. Partnership □
		Type of Busin	ness	
1. International	Manufacturer □ 2. Dor	nestic Manufacturer	3. Importer□ 4. Distr	ributor □ 5. Supplier □
	Deta	ils of Owners / M	lanagement	
Name	Designation	Dir Tel No.	Email	CNIC No.
	3			
	Priı	nciple Product an	d Services	
1)	3		5)	
2)	4		6)	
	·	Registered Of	fice	
Address:		2108100100100		
State / Province		District		
City		Country		
Tel (Office)		Cell No		
Fax		Email		
Website (URL)		Zip Coo	de	
		Work Offic	ee	
Address:				
State / Province		District		
City		Country	ý	
Tel (Office)		Cell No	).	
Fax		Email		
Website (URL)		Zip Coo	de	
	names & designations of t	he employees of SIU	Γ to whom Owner/CEO/M	lanagement of your firm
as relationship. S. No	Name	Des	ignation	Relationship
1	1 (61110	200	18.11.11	
2				
3				
				-
	action, SIUT may termina		ontrary to above facts will at the cost of Supplier.	come in notice of SIUT
Authorized Person			Sta	mp of the Company
opies to be attached: -				

a) CNIC of Owners/Top Managementb) CNIC of Company Representative

# [FORM: J] BID EVALUATION CRITERIA

Please fill out the "Mandatory Section" here and submit the "Marking Section" in the "Technical Schedule (Form-G").

S. No	Info Required	MANDATORY SECTION	Page No.
1	Technical	Registration with Income Tax – NTN ( Attach Certificate)	
2	Technical	FBR – Active Tax Payer Status: (a) Income Tax (b) Sales Tax & (c) SRB status, wherever services are applicable.	
3	Technical	<ul><li>a) General Sales Tax Registration for goods</li><li>b) Sindh Sales Tax (if applicable) registration with Sindh Revenue Board (Attached Certificate)</li></ul>	
4	Technical	Professional Tax Certificate – Attach evidence	
5	Technical	Copy of the Pay order / Bank Draft of Bid security / Earnest money should be attached without showing the amount along with technical bid documents  (Original bid security should be attached with financial proposal)	
6	Technical	Compliance of Terms & Conditions / Instructions in the Bidding Documents (Must submit the entire BIDDING DOCUMENTS, duly signed & stamped on each page with Technical Proposal)	
7	Technical	Submission of undertaking on legal valid and attested stamp paper that the firm is not blacklisted by any institute of Federal, Provincial Government or any Organization anywhere in Pakistan (Certificate should be attached as sample FORM 'D')	
8	Technical	Company's detailed profile.	

S. No	Info Required	PRODUCT BIDDER / MANUFACTURER SECTION	Max Points	
1	Technical	Conformity to the Technical Specifications  a) Offered item / sample fully compliant with the required Specifications Points = 40  b) Offered item / Sample compliant with minor deviation ≤ 10% from the required specifications and quality Points = 25  c) Major deviation(s) from Tender Specification or substandard Sample Points = 0	40	
4	Technical	Original Brochure or Catalogue (Attach evidence)	3	
5	Technical	Accredited by WHO, US-FDA, EMA, MHRA, TGA, PMDA, Swiss Medic or Health Canada or by the SRA's (Attach relevant documents duly attested by senior executive)		
6	Technical	Bidder's Website (Attach evidence)		
9	Technical	Valid Agency/Distribution certificate from the Manufacturer – Attached evidence (Where applicable).		
10	Technical	Current Good Manufacturing Practice (CGMP) certificate.		
11	Technical	Past Performance of the Bidder. The firm will attach purchase orders along with relevant delivery challan of any Government/Semi Government/Teaching Hospitals (Attach evidence)  No of Hospitals Government/Semi Government/Teaching Hospitals:  (i) 1 = points 3, (ii) 2-4 = points 7, (iii) 5 or more = points 10.		
	Market Business Experience No of Years: (i) 1 year = Points 3, (ii) 2-4 years = Points 7 (iii) 5 or more years = points 10.			
12	Technical	SECP Incorporation Certificate (Attach evidence)		
13	Technical	ISO certificate 9001 (Attach evidence)		
14	Technical	Bank Certificate (Attach evidence)		
15	Technical	Bank statement of Last year (Attach evidence)		
16	Technical	Financial soundness: Turnover (Sales) 2020-21	5	

		Above 400 Million	05 Marks	
		100 Million up to 400 Million	03 Marks	
		Upto 100 million	02 Marks	
		(Attach evidence)		
17	Technical	Income Tax Return – Attach eviden	ce copy.	3
18	Technical	Audited Financial Statement for last two years- Attach evidence/copy.		3

Total	100

**Qualifying Marks: 70 %.** 

Financial bids of only "Technically Responsive Bidders" will be opened.

#### Note:

- i) If no evidence is attached for any technical specification mentioned above then the response will be considered as negative even if "Yes" is given in the Technical Schedule.
- ii) The technical evaluation carried out by the Procurement Committee SIUT, Karachi will be final which will be assessed on technical aspect and clinical experience basis of the Consultant (s) in the relevant specialty. In case no firm fulfills the scoring criteria, the procurement committee remarks will be considered as final.
- iii) Hardcopy & Softcopy of this Form-J is mandatory

#### **Delivery Schedule:**

Items are to be supplied within 7 to 15 days from the date of Purchase Order, in case of imports by SIUT, items should be supplied within 45 days.

# [FORM K] DOCUMENTS' CHECKLIST

Plea	Please fill out the last 2 columns of this sheet and submit the hard copy along with soft copy.				
S. No	Info Required	Documents	Yes/ No	Page No	
1	Technical	Bid Letter [Form A]			
2	Technical	Tender Purchase Receipt (Original)			
3	Technical & Financial	Bid Security [Pay Order/Bank Draft on Form B1] [Bank Guarantee as per Form: B2]			
4	Technical	Undertaking as per [Form C]			
5	Technical	Certificate as per [Form D]			
6	After Award	Contract Agreement as per sample [Form E] [applicable after Award Letter]			
7	After Award	Performance Security / Pay order / Bank Draft / Bank Guarantee as per sample [Form F] [applicable after Award Letter]			
8	Technical	Technical Schedule [Form G] (Soft copy is also compulsory)			
9	Technical	Delivery Schedule (Included in Form-H,)			
10	Financial	Price schedule [Form H] (Soft copy is also compulsory)			
11	Technical	Vendor Information [Form I] (Soft copy is also compulsory)			
12	Technical	Bid Evaluation Criteria [Form J] (Soft copy is also compulsory)			
13	Technical	Documents' Check List [Form K] (Soft copy is also compulsory)			
14	Technical	Technical Integrity Pact [Form L]			

Documents are to be filled in the Bid in above sequence.

**BIDDER'S DETAILS:** 

Bidder Name:			
Fax No:		 	
Contact Person:	 	 	
Mobile No:	 	 	

**Notes:** All the participants are hereby requested to read the instruction, General, Special Condition and Evaluation Criteria of Bid carefully because no additional documents will be entertained Considered after opening of the bids. Bid evaluation and technical evaluation would be Carried out only on the basis of documents provided in the bid.

#### **SOFT COPIES:**

Email Address: \_

- 1. Soft copy of Technical bid/Schedule of items quoted by Bidder is also mandatory according to our given format. [Form G]
- 2. Soft copy of Financial Bid/Price schedule is mandatory according to our given format. [Form H]
- 3. Soft copy of Vendor Information is also mandatory according to our given format with attachments. [Form I]
- 4. Soft copy of "Bid Evaluation Criteria" duly filled must be enclosed. [Form J]
- 5. Soft copy of "Documents' checklist" is mandatory according to our format above. [Form K]
- 6. Scanned copy of all Technical & Financial Document must be provided on USB or CD separately.

# [FORM: L] INTEGRITY PACT

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

Contract Number:	Dated:
Contract Value:	
Contract Title:	
	hereby declares that it has not obtained or induced the st, privilege or other obligation or benefit from Government bdivision or agency thereof or any other entity owned on the business practice.
represents and warrants that it has fully de to anyone and not given or agreed to give outside Pakistan either directly or indirect affiliate, agent, associate, broker, consultation, gratification, bribe, find or otherwise, with the object of obtaining	the foregoing,
	certifies that it has made and will make full disclosure of persons in respect of or related to the transaction with PA ot take any action to circumvent the above declaration accepts full responsibility and strict liability for making
defeat the purpose of this declaration, rep interest, privilege or other obligation or	closure, misrepresenting facts or taking any action likely to resentation and warranty. It agrees that any contract, right, benefit obtained or procured as aforesaid shall, without available to PA under any law, contract or other instrument.
corrupt business practices and further pay	A for any loss or damage incurred by it on account of its y compensation to PA in an amount equivalent to ten time fication, bribe, finder's fee or kickback given by
inducing the procurement of any contract whatsoever form, from PA.	as aforesaid for the purpose of obtaining on the tright, interest, privilege or other obligation or benefit, in
[Procuring Agency]	[Supplier /Contractor/Consultant]

## SIUT MARIYAM BASHIR DAWOOD CHILDREN AND CARDIAC HOSPITAL (SIUT-

#### MBDCCH)

# DIVISION OF CARDIOTHORACIC SCIENCES MEDICAL EQUIPEMENT REQUIREMENTS PHASE ONE

S. No.	EQUIPMENT	SPECIFICATIONS	REQUIRED QUANTITY
1	BLOOD GAS ANALYZER		4
		Fully automated analyzer intended for in vitro testing of samples of whole blood, serum, plasma, acetate and bicarbonate containing dialysis solutions and pleural fluid for the quantitative measurement of: pH Blood Gas (BG): PO2, PCO2 Electrolyte (ISE): Na+, K+, Cl-, iCa2+ Hematocrit (Hct) Metabolites (MSS): Glucose, Lactate, Urea/BUN Total Hemoglobin (tHb) Oxygen saturation (SO2) Hemoglobin derivative COOX (O2Hb, HHb, COHb, MetHb) Bilirubin (neonatal)  In addition, the system should calculate derived parameters.  The following parameters can be measured in whole blood, serum or plasma: pH Blood Gas (BG): PO2, PCO2 Electrolyte (ISE): Na+, K+, Cl-, iCa2+ Hematocrit (Hct) Metabolites (MSS): Glu, Lac, Urea/BUN Total hemoglobin (tHb) Oxygen saturation (SO2) Hemoglobin derivative COOX (O2Hb, HHb, COHb, MetHb) Bilirubin (neonatal)  In addition, the system should calculates derived parameters.  The following parameters can be measured in whole blood, serum or plasma: pH Blood Gas (BG): PO 2, PCO 2 Electrolyte (ISE): Na+, K+, Cl-, iCa2+ •Hematocrit (Hct) Metabolites (MSS): Glu, Lac, Urea/BUN	

	T		<del>                                     </del>
		Total Hemoglobin (tHb) Oxygen saturation (SO2) Hemoglobin derivative COOX (O2Hb, HHb, COHb, MetHb) Bilirubin (neonatal)  Specifications  Through put up to 50 samples/hour Time to result less than 2 minutes with whole-blood sampling Module Optional module for automatic quality control Parameter combinations Three different parameter combinations including glucose, lactate, urea and bilirubin Maintenance Durable, low-maintenance sensors Touchscreen Easy-to-use touchscreen and intuitive user interface Trending acid-base maps Trending acid-base maps to support clinical decisions Reagent tracking Control reagents consumption Customizable Customizable features include a user-	
		definable display and two types of sample application Connectable Connectable to hospital network for remote control and for comprehensive data management	
		Should be able to provide raw data without any additional cost.	
		Ability to intergrade with EHR and must have a barcode reader to read patient information	
		EUROPE/UK/USA/JAPAN ORIGIN OR EQUIVALENT.	
2.	DEFIBRILLATORS Defibrillator/Monitor with AED, ECG, Pacing & SPO2 and additional capability of internal paddles including all accessories		6
		<ul> <li>Modes: AED, Manual,         Synchronized Cardioversion,         Pacing</li> <li>Energy Levels: 1–360J with         biphasic technology</li> <li>Monitoring: 3/5/12-lead ECG,         SpO2, NIBP, EtCO2</li> </ul>	

	T		
		• <b>Battery</b> : Rechargeable with 4–6 hours of monitoring time	
		• <b>Display</b> : High-resolution color	
		LCD	
		<ul> <li>Accessories: Adult and pediatric pads, paddles, and ECG cables</li> </ul>	
3.	TEMPORARY EXTERNAL		
	PACEMAKER (DUAL CHAMBER ) WITH CABLE		8
	CHAMBER) WITH CABLE	Latest Dual Chamber External/Temperary	
		Latest Dual Chamber External/Temporary Pacemakers of international quality and CE/FDA	
		approved, meeting atleast following	
		standards/specifications:	
		Modes DDD, DOO, DDI, AAI, AOO, VVI, VOO	
		Basic Pacing Rates 30 – 200 ppm	
		Upper Rate 80 – 230 ppm	
		Rapid Atrial Pacing Rates 80 – 800 ppm Output Amplitude Atrial: 0.1 – 20 mA	
		Ventricular: 0.1 – 25 mA	
		Pulse Width Atrial: 1.0 ms Ventricular: 1.5 ms	
		Sensitivity Atrial: 0.4 – 10 mV Ventricular: 0.8 – 20 mV	
		A-V Interval Paced A-V (PAV): 50 – 250 Auto	
		20 – 300 Manual Sensed A-V (SAV): 50 – 250	
		Refractory Period Atrial: 150 – 500 ms (PVARP)	
		Atrial Refractory after an Atrial event is equal to the AV interval Ventricular: NA	
		Ventricular Blanking Pace: 200 ms Sense: 120 ms	
		Height: Not more than 8.5 in	
		Width Not more than 4 in Depth Not more than 2 in	
		Weight Not more than 750 gm	
		Battery Type Two IEC type LR6-sized (AA-sized)	
		1.5 V alkaline batteries (Duracell MN1500,	
		Eveready E91 or equivalent) Battery Life 8-10 days typical, 6-7 days minimum	
		Include necessary accessories and warranties	
		·	
		Cable Specifications:	
		• Connector Type: Universal 2 mm pin	
		compatibility (IS-1 Standard).	
		• Cable Length: Minimum 2 meters (reusable) or 3.7 meters (disposable).	
		Material: Medical-grade, latex-free	
		insulation.	
		Sterilization: Reusable cables compatible with	
		ETO or steam autoclave.	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
L		,	

4.	VENTILATORS (CONVENTIONAL = 8 AND HFO = 2)		8 + 2 =10
	HFO = 2)	Should be latest in industry, CE/FDA approved and suitable for neonatal/paediatric and adult patients and atleast meeting/fulfilling following parameters/specifications: Patient Age Group Paediatric, Adult and Infant and neonatal Tidal Volume Adult/Pediatric: 20 to 2000 ml, Neonatal: 2 to 300 ml Ventilation Mode (S)CMV, SIMV, APVcmv / (S)CMV+, APVsimv / SIMV+, PCV+, PSIMV+, DuoPAP, APRV, SPONT, ASV, NIV, NIV-ST, nCPAP-PS, HiFlowO2 Performance Data Maximum Inspiratory Flow 240 L/min (150 L/min with 100% O2) Parameter PEEP/CPAP Adult/Ped: 0 to 35 cm H2O, Neonatal: 0 to 25 cm H2O Control Flow Trigger Adult/Ped: 1 to 20 L/min, Neonatal: 0.1 to 5 L/min Flow Pattern Square, 50% decelerating, Sine, 100% decelerating Standards and Approvals Classification Class Ilb, continuously operating according to EC directive 93/42/EEC Certification/Declaration The ventilator should be developed in accordance with pertinent international standards and FDA guidelines. Electromagnetic Compatibility Industry standard (latest). Safety Class Class II, Type B applied part (ventilator breathing system, VBS), type BF applied parts CO2 sensor including CO2 module connector, humidifier, nebulizer, and SpO2 sensor including SpO2 adapter. Pneumatic Performance Oxygen Pressure 2.8 to 6 bar / 41 to 87 psi Oxygen Connector DISS (CGA 1240) or NIST Air Supply Integrated ultra-quiet turbine	
		Inspiratory Outlet (To Patient Port)	

Connector: ISO 15 mm ID/22 mm OD conical

Expiratory Outlet (From Patient Port)

Connector (on expiratory valve): ISO 15 mm

ID/22 mm OD conical

**Graphical Patient Data** 

**Intelligent Panel** 

Dynamic Lung2, Vent Status, ASV Graph3

Waveform

Pressure, Flow, Volume, PCO21, FCO21,

Plethysmogram1, Ptrachea

Trend

1, 6, 12, 24, or 72-h trend data for a selected

parameter or combination of parameters

Loops

Pressure/Volume, Pressure/Flow,

Volume/Flow, Volume/PCO21, Volume/FCO21

**Additional Details** 

Power Supply

100 to 240 V AC, 50/60 Hz or 12 to 24 V DC

Display Size

Should not be less than 12 inch - diagonal

Display Type

Color TFT

**Battery Backup** 

3-4 hours with one battery  $/ \ge 6-8$  hours with two

batteries

Weight

Ventilation unit: Less than 10 Kg; with

trolley: Less than 40 kg (optimal)

Alarms

High: Apnea time (s), Exp ManVel high/low (l/min), Oxygen high/low (%), Pressure high/low (cmH2O), Flow sensor calibration needed, Exhalation obstructed, Disconnection, Oxygen supply failed, Medium: Total high/low (b/min), PetCO2 high/low (mmHg), Pressure limitation (cmH2O), Vt high/low (ml), SpO2 high/low, SpOC high/low,%leak, High PEEP, Loss of PEEP, Pulse high/low, Check flow sensor for water, Low: High SpO2, Loss of external power,

Cuff leak I:E Ratio

Adult/Ped: 1:9 to 4:1, Neonatal: 1:9 to 4:1

Automatic Expiratory Base Flow

Fixed at 6 L/min

Means of Inspiratory Triggering

Flow trigger or pressure trigger control

Means of Expiratory Triggering

Flow cycle (ETS)

Minimum expiratory time

20% of cycle time; 0.2 to 0.8 s

Oxygen Mixer Accuracy

 $\pm$  (Volume fraction of 2.5% + 2.5% of actual reading)

		Preoperational Checks Tightness test, Flow sensor/O2 sensor/CO2 sensor calibration Features HIgh Flow Oxygen Therapy High Performance Non Invasive Ventilation P/V Tool Pro for lung assessment and recruitment Trans pulmonary pressure measurement Integrated High Performance Turbine Automated ventilation Applications ICU, Critical Care and Transport  Non invasive modes for neonates, paeds & adult. Appropriate size circuit for NIV for neo, paeds & adult.  Sp02 n& ETCO2 monitors  Nebulizers during ventilation option	
		Neounzers during ventulation option	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
5.	HI-FLOW NON-INVASIVE VENTILATION SYSTEM WITH CIRCUITS AND VARIOUS TYPES OF NASAL CANNULAE		10
		Standalone delivery of nasal high flow therapy.  Device designed to facilitate the treatment of a broad patient group across hospital areas, including neonatal/paediatric/adult patients modes  Battery backup(optimal)	
		• • • • • • • • • • • • • • • • • • • •	
		Humidifier	
		Neonate Paeds& adults circuits & nasal interface	
		Accurate Fi02 control	
		Builtincompressor (optimal)	
		Include all necessary accessories.	
		CE/FDA approved. Warranty and efficient after sales.	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
6.	BIPAP NON-INVASIVE VENTILATION SYSTEM		4
	VENTE TO TOTAL	Standalone delivery of BIPAP.	

		Device designed to facilitate the treatment of a broad patient group across hospital areas, including paediatric/adult patients. Include all necessary accessories. CE/FDA approved. Warranty and efficient after sales.  Must include reusable masks 2 sets per bipap starting from smallest to adult size (all sizes) & circuits.  EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
7.	HEART LUNG MACHINE		1
		Compact with 5 roller pumps Touch screen central control monitor Flexibility of mounting of screen and additional pumps Intuitive user interface Displays alerts and alarms (bubble detector, level sensor, pressure sensors) Self-adjustable tube clamps according to perfusion needs Electronic gas blender Centrifugal pump Facility to run ECMO for 100 hours Continuous data information (CDI) which will be utilized for research and quality control. Internal battery and power back up of 100 hours Data storage and analysis facility and ability to integrate with hospital server User friendly Efficient after sales services  EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
8.	HEATER-COOLER SYSTEM	DONOTE CIVESTI ORIGIN OR EQUIVILENT.	1
		Dual Channel Sanitizing Ultraviolet light (reduce bacterial count by 99.999%) Prevents contaminated water to aerosolize Sealed air-flow channels Sterile water capacity 40 liters Independent channels for temperatures from 15-41C Three outlets Oxygenator Blanket Cardioplegia Easy to use touch screen Remote control option User friendly	

		Efficient often color	
		Efficient after sales services	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
9.	CEREBRAL OXIMETER	Lengt Erent content on Equity Edition	2
		Regional oximetry and pulse oximetry simultaneously 5th wavelength Near Infra-Red Spectroscopy (NIRS)  Effectively isolates targeted tissues Sensitive to skin color Penetration to 2.5 cms  Algorithmic calibration  Cerebral oximetry (SctO2)  Systemic Venous oximetry (SjvO2)  Somatic Oximetry (SmtO2)  Part of hemodynamic profile  Individualized (Skin tone, age, acuity, skin to cortex distance)  User friendly  Efficient after sales services	
10.	BIOMEDICAL	EUROPE/UK/USA ORIGIN OR EQUIVALENT.	4
	REFRIGIRATOR		
		TWO SMALL SIZE BIOMEDICAL REFRIGERATORS  Medical grade Small size approximately 100 TO 120 L capacity. Glass door. Visible temperature sensor +2/+8 CENTIGRADE TEMPERATUER  TWO MEDIUM SIZE BIOMEDICAL REFRIGERATOR Medical grade Medium size approximately 300-400 L capacity. Glass door. Visible temperature sensor +2/+8 CENTIGRADE TEMPERATURE	
11.	PATIENT MONITORS (22) INCLUDING CENTRAL CONTROL SYSTEM/STATION (4)		22+4
		HIGH END PATIENT BED SIDE MONITORS	10
		1. General Overview:	
		<ul> <li>Suggested Models: Nihon Kohden BSM-3000 or Spacelab C50</li> <li>Type: Multi-parameter patient monitor(7 parameters or more)</li> </ul>	

- Intended Use: Designed for continuous monitoring of adult, pediatric, and neonatal patients in clinical settings, such as the ICU, OR, recovery room, and emergency care.
- Compliant with International Standards: Meets IEC 60601-1, IEC 60601-2-27, ISO 13485, and CE marking.

## 2. Display and User Interface:

- **Display Type**: 15-inch or larger color TFT LCD display with a high resolution for clear visual monitoring.
- **User Interface**: User-friendly interface with touch-screen controls for easy navigation and adjustment of settings.
- **Screen Layout**: Configurable display for up to 8 different waveforms, trends, and parameters on the same screen.
- Waveform Display: Real-time display of physiological waveforms such as ECG, SpO2, blood pressure, etc.
- **Trend Display**: Continuous trend monitoring with historical data for up to 72 hours for easy review of patient progress.

## 3. Monitoring Parameters:

- Electrocardiography (ECG):
  - o 3/5 lead ECG monitoring (user-selectable).
  - Real-time waveform display and heart rate calculation.
  - High-resolution ECG analysis for arrhythmia detection.
  - Pacing detection, ST segment analysis, and arrhythmia alarms.
  - Heart rate (HR) range: 30 to 300 bpm.

## Blood Pressure (BP):

- Non-invasive (NIBP) blood pressure monitoring.
- Measurement modes: Manual, automatic, or continuous.
- Systolic, diastolic, and mean arterial pressure (MAP).
- BP Measurement range: 20–300 mmHg.

## • Pulse Oximetry (SpO2):

 Real-time monitoring of oxygen saturation (SpO2) and pulse rate.
 Non disposable probes from neonates to adults.

- High/low alarm limits for SpO2 and pulse rate.
- o SpO2 range: 0% to 100%, with a resolution of 1%.

## • Respiration Rate (RR):

- Monitoring of respiratory rate via impedance pneumography or capnography.
- Respiratory rate range: 0-120 breaths per minute.

## • Temperature:

- Dual-channel temperature monitoring (oral/rectal/skin) with options of disposable as well as non-disposable probes
- o Temperature range: 15°C to 45°C.
- High and low-temperature alarms.

## • End-tidal CO2 (EtCO2):

- Capnography monitoring to track the level of CO2 during exhalation.
- Monitoring via mainstream or sidestream CO2 sensors.
- EtCO2 range: 0-100 mmHg.

## • Invasive Blood Pressure (IBP):

- Optional invasive blood pressure monitoring with up to 2 channels.
- Pressure transducers support for arterial, venous, Pulmonary and intracranial pressure monitoring.
- o IBP range: 0–300 mmHg.

## • Other Parameters:

 Other parameters like invasive oxygen saturation (SvO2), cardiac output (estimated and calculated using hemodilution), and hemoglobin must be integrated.

## 4. Alarm and Notification System:

- Audible and Visual Alarms: Should provide both visual and audible alerts for various conditions such as high/low heart rate, blood pressure, oxygen saturation, and temperature.
- **Alarm Settings**: Customizable alarm limits for individual parameters.
- **Priority Levels**: Different levels of alarm priority, allowing medical personnel to quickly identify critical conditions.

• Smart Alarm System: Minimizes false alarms with advanced threshold settings and adaptive monitoring.

## 5. Data and Connectivity:

- **Data Storage**: Built-in memory for storing patient data, waveform history, and trends. Should store up to 72 hours of trend data.
- Waveform and Trend Review: Should allow users to review the past 72 hours of waveform and trend data in real-time.
- Connectivity Options: Must support data communication with central monitoring stations, allowing for integration into hospital-wide monitoring systems . HL7 compatibility should ensure connectivity with AI platforms such as Etiometry.
- **Network Compatibility**: Ethernet and Wi-Fi connectivity for remote monitoring and data sharing.

## 6. Advanced Features and Technologies:

- **Arrhythmia Detection**: Should detect and classify arrhythmias in real-time using advanced algorithms.
- **ST Segment Monitoring**: Automatic analysis of the ST segment for ischemia detection.
- **Dysrhythmia Detection**: Real-time detection of arrhythmic events with high sensitivity.
- Oxygen Therapy Monitoring: Should monitor and ensure proper oxygen levels, providing real-time feedback and alarms for SpO2 readings.
- Capnography: EtCO2 monitoring with both mainstream and sidestream options, ensuring accurate monitoring of the patient's ventilation status.

## 7. Power and Battery:

- **Power Supply**: AC power (100–240V, 50/60Hz), with power consumption ranging from 30W to 60W depending on connected modules.
- **Battery Backup**: Must be equipped with an internal rechargeable battery to ensure continuous operation during power interruptions.

- **Battery Life**: Should provide up to 4 hours of continuous monitoring on battery power (depending on monitoring configuration).
- Low Battery Alert: Audible and visual warnings when the battery is low.

## 8. Physical Specifications:

- **Dimensions**: Approximately 330mm (H) x 350mm (W) x 130mm (D).
- **Weight**: Approximately 5.5 kg (monitor only).
- **Mounting Options**: Wall-mounted, mobile trolley, or bedside configurations available for flexible use in various settings. Should be able to mount on to the anesthesia machine.
- **Design**: Ergonomically designed with a compact footprint for space efficiency in busy environments.

## 9. Safety Features:

- **Electromagnetic Compatibility**: Fully compliant with IEC 60601-1-2 standards for EMC.
- Patient Safety Features: Must include patient cable disconnection alarms, input error detection, and leakage current protection.
- Electrostatic Discharge (ESD)
  Protection: Must be designed to ensure safe operation in environments with electrical noise or static charges.
- **Power Failure Alarm**: Monitors for power loss and issues an alert to medical staff if there's any interruption in the power supply.

## 10. Service and Maintenance:

- **Self-Diagnostics**: Built-in self-diagnostic system to detect and report any malfunctions or issues, ensuring consistent performance.
- Easy Maintenance: Modular design for easy replacement of components (e.g., batteries, ECG leads, etc.).
- Calibration and Calibration Alerts: Must ensure that all parameters remain within a highly accurate range. Calibration should be performed via software for ease of use.

		11. Additional Features and Options:	
		<ul> <li>Multi-Language Support: Must offer multiple language options for global usage.</li> <li>Remote Monitoring: Should be able to access remotely via a central monitoring station for hospital-wide surveillance.</li> <li>Customizable Display Layout: The monitor's screen layout must be flexible and can be customized based on clinical requirements.</li> <li>Data Export: Should allow for exporting patient data to external systems via USB or network connection.</li> </ul>	
		12. Warranty and Support:	
		<ul> <li>Warranty: 5 years warranty depending on manufacturer policies.</li> <li>After-Sales Service: Should provide comprehensive after-sales support, including training, technical support, and service contracts.</li> <li>On-site Service: Available in many regions for maintenance and repairs.</li> </ul> All origin EUROPE/USA/UK or equivalent.	
		· ·	
12.	MEDIUM END PATIENT BEDSIDE MONITORS	3, 5, or Diagnostic 12 lead ECG, Resp, SpO2, NIBP, Temp Up to 8 invasive blood pressures and Cardiac Output Up to 8 waveforms, 18 parameters Optional 19" (48.3 cm) interactive touchscreen display Standard 8 hour battery using 2 hot swappable batteries 24 hour Patient Data Shuttle One button, quick release Docking Station Wireless connectivity Internal strip recorder Must have Capnography	10
13	SMALLER TRANSPORT MONITORS	Large color touchscreen Integrated quick-mounting clamp Pole for clamp Side stream Capnography (EtCO2) on battery and Wi-Fi 12-lead ECG User adjustable alarm lights Battery/data hours: 5/96 Ergonomic Handle Large display numbers: 4	

		Parameter capacity: 18 Invasive pressures: 4 Hardwire and wireless capability Display size: 8" (20.3 cm) Weight: 6-7 lbs (2.5-3.5 kg) Weight with Command Module 8-10 lbs (3.5-4.5 kg) Dimensions: 7.9"x10.2"x7.5" (20 cm x 26 cm x 19 cm)	
14.	CENTRAL CONTRAL SYSTEM/STATION	Central Control System/Station  All origin EUROPE/USA/UK or equivalent.	4
15.	AMBULATORY BLOOD PRESSURE MONITORS		5
		Latest top of the line devices. Compact design, light weight, and quiet operation. For use in paediatric and adults patients. One Analyzer software and one desk top computer included. Cuff sizes for both paediatric and adult patients. HL7 and DICOM interface compatible. CE/FDA approved. 10 sets (X 4) cuff sizes included. Origin EUROPE/USA/UK or equivalent.	
16.	AMBULATORY HOLTER MONITORS		5
16.		Latest top of the line devices. Compact design, light weight, and quiet operation. For use in paediatric and adults patients. One Analyzer software and one desk top computer included. Cuff sizes for both paediatric and adult patients. HL7 and DICOM interface compatible. Origin EUROPE/USA/UK or equivalent. CE/FDA approved.	5
16.		Compact design, light weight, and quiet operation. For use in paediatric and adults patients. One Analyzer software and one desk top computer included. Cuff sizes for both paediatric and adult patients. HL7 and DICOM interface compatible. Origin EUROPE/USA/UK or equivalent.	10

	1		
18.	PATIENT		5
	COOLING/WARMING		
	MACHINE/SYSTEM WITH		
	FULL BODY		
	BLANKETS/COOLING		
	PADS AND KITS		
	(FOR COOLING AND		
	WARMING PATIENTS)		
	WARWING FATIENTS)	Lotost ton of the line devices	
		Latest top of the line devices.	
		Patient warmer system hypo hyper thermia blanket	
		with machine and one extra blanket with each	
		system	
		Compact design, light weight, and quiet operation.	
		Provide safe, quiet and effective warming to	
		patients	
		For use in paediatric and adults patients.	
		Origin EUROPE/USA/UK or equivalent.	
		CE/FDA approved.	
19.	PORTABLE OPERATING		2
	ROOM/SURGICAL LIGHT		
		Movable.	
		Industry latest.	
		LUX 130,000 LUX focusable stand mount extra	
İ		bulb.	
i		For bed side and operating room procedures.	
		Antibacterial coating.	
İ		Quick look system.	
		Origin EUROPE/USA/UK or equivalent.	
20	SVRINGE PIIMP		50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent.	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor®	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat Type: Syringe infusion pump Intended Use: Must be designed for	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition.	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical environments requiring precision infusion	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical environments requiring precision infusion for drugs such as anesthetics, vasopressors,	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical environments requiring precision infusion	50
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20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical environments requiring precision infusion for drugs such as anesthetics, vasopressors, antibiotics, and pain management.  2. Display and User Interface: • Display: 3.5-inch color TFT touchscreen	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical environments requiring precision infusion for drugs such as anesthetics, vasopressors, antibiotics, and pain management.  2. Display and User Interface: • Display: 3.5-inch color TFT touchscreen display with clear, easy-to-read settings	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical environments requiring precision infusion for drugs such as anesthetics, vasopressors, antibiotics, and pain management.  2. Display and User Interface:  • Display: 3.5-inch color TFT touchscreen display with clear, easy-to-read settings and status indicators.	50
20.	SYRINGE PUMP	Origin EUROPE/USA/UK or equivalent. CE/FDA approved.  1. General Overview:  • Suggested Model: B. Braun Perfusor® Space/Zeron Syrin 4000/B Braun Spaceplus Infusomat • Type: Syringe infusion pump • Intended Use: Must be designed for continuous, controlled infusion of intravenous fluids, medication, and parenteral nutrition. • Primary Application: Suitable for use in critical care, ICU, OR, and other medical environments requiring precision infusion for drugs such as anesthetics, vasopressors, antibiotics, and pain management.  2. Display and User Interface: • Display: 3.5-inch color TFT touchscreen display with clear, easy-to-read settings	50

- programming, configuration, and real-time adjustments during infusion.
- Infusion Parameters Display: Display of infusion rate, volume infused, remaining volume, time elapsed, and total volume to be infused.
- **Graphical Display**: Real-time graphical representation of infusion flow for quick visual assessment.
- **Customizable Interface**: Should allow for setting up to 10 user profiles, each with specific infusion settings and preferred parameter configurations.

## 3. Infusion Modes and Features:

- Infusion Modes:
  - Continuous Infusion: Continuous delivery of fluids or medication at a constant rate.
  - Bolus Mode: Should allow for rapid infusion of a preset volume of fluid or medication.
  - PCA (Patient-Controlled Analgesia): Must enable patients to control their own pain relief with predefined safety limits.
  - Tapering and Ramp: Gradual increase or decrease in infusion rate for smooth transitions in treatment.
  - Target Controlled Infusion(TCI): Must have atleast 2 different modes for TCI delivery
  - Drug library: Must have a list of most common medicines with infusion profiles in the library

## • Infusion Rate:

- Wide range of flow rates for precise control over medication and fluid delivery.
- Rate range: 0.1 to 1,200 mL/h (depending on the syringe size used).
- Volume Infused and Remaining: Realtime tracking of the volume delivered and the remaining volume to ensure accurate infusion management.
- **Syringe Size Compatibility**: Compatible with a wide range of syringe sizes, from 5 mL to 60 mL syringes.

## 4. Safety Features:

- Occlusion Detection: The pump must be able to detect occlusions or blockages in the infusion line and provides an alarm to alert the operator.
- **Air-in-Line Detection**: Should identify air bubbles in the infusion line and should trigger alarms to prevent air embolism.
- **Infusion Pressure Monitoring**: Should monitor the pressure within the syringe to ensure safe and effective infusion under optimal conditions.
- **Pre-Configured Safety Limits**: Pre-set upper and lower limits for infusion rates, volume, and pressure, with automatic notifications for out-of-range conditions.
- **Infusion Monitoring and Alerts**: Audible and visual alarms for:
  - Syringe completion
  - o Blockage or occlusion
  - Low battery
  - End of infusion
  - o Air in line
  - Low volume
- **Infusion End Alarm**: When the syringe is empty or infusion is complete, the pump should generate an alarm and stops infusion automatically.

## 5. Battery and Power Supply:

- **Power Supply**: Operating voltage: AC mains (100–240V, 50/60Hz) with an internal rechargeable battery.
- Battery Life:
  - Up to 8 hours of operation on a fully charged battery (depending on usage and infusion settings).
- **Battery Charging**: Should charge the battery while connected to AC power.
- Low Battery Indicator: Should alert the user when battery power is running low, with sufficient time to replace or recharge.

## 6. Connectivity and Integration:

- Connectivity:
  - Available for integration with hospital data management systems, electronic health records (EHR), and patient monitoring systems via wireless or wired connections. Should be able to connect to AI tools such as Etiometry via HL7 connectivity

- Infusion Management System: Should be able to connect to a central infusion management system for real-time data transmission and centralized control in high-demand environments such as ICU or operating rooms.
- Infusion Data Logging: Logs infusion data including time, rate, volume, and any interruptions. This data can be accessed and exported for patient record documentation.

## 7. Infusion Accuracy and Precision:

- Infusion Accuracy:
  - Must ensure highly accurate infusion with a precision of ±2% or better, ensuring that prescribed medication doses are delivered accurately.
- **Flow Accuracy**: Should provide highly consistent flow rates for safe and effective medication administration.
- **Syringe Detection**: Automatic adjustment of infusion rate based on the syringe size used, ensuring accurate infusion for a wide variety of syringe types and volumes.

## **8.Dimensions and Physical Specifications:**

- **Dimensions**: Approximately 200mm (W) x 160mm (H) x 100mm (D).
- **Weight**: Approximately 1.5 kg (pump unit).
- **Mounting**: Compatible with various mounts, including pole mounts and stands, for easy positioning during clinical use.
- Compact Design: Lightweight and compact for ease of use in space-constrained environments like operating rooms and intensive care units.

## 9. User and Maintenance Features:

- **Modular Design**: The system is designed for easy maintenance, with replaceable components such as the battery and internal parts.
- **Self-Diagnostics**: Equipped with an automatic diagnostic system to check for malfunctions and issues during operation, providing alerts for required maintenance.

		·	
		<ul> <li>Calibration: Built-in calibration checks ensure that the device maintains optimal performance over time.</li> <li>Firmware Updates: The Perfusor® Space pump is capable of receiving software updates via a USB port or network connection, ensuring up-to-date functionality and features.</li> <li>10.Additional Features and Customization:</li> </ul>	
		<ul> <li>Infusion Rate Logging: Provides historical logs for each infusion, allowing users to track the volume and duration of infusions over time for reporting and documentation.</li> <li>Multilingual Support: The device supports multiple languages for use in different regions and healthcare settings worldwide.</li> <li>Customizable Alarm Limits: The pump allows for user-customized alarm limits for each parameter, providing flexibility based on patient needs and clinical settings.</li> <li>Wireless Communication: Optional wireless communication features, enabling integration with hospital networks and centralized monitoring systems.</li> <li>Warranty and Support:</li> <li>Warranty: 5 years</li> <li>Service and Maintenance: Regular maintenance and calibration services should be available.</li> <li>Training and Support: On -site and online training for healthcare professionals on how to properly use the infusion pump, along with technical support.</li> </ul>	
21.	INFUSION PUMPS		50
		Infusion range 0.1 to 1200 mls per hour.  Minimum increment 0.1 mls per hour.  Battery more than six hours.  Accumulated volume 0 to 99999.99 mls.  Drug reservoir.  Pumping tubing and connectors 9built in or external to the unit).  A user interface consisting of the programming unit, display unit, audio and tactile notification units.  Power supply.	

		Pump battery and circuitry to charge and monitor	
		the battery.	
		CE/FDA approved.	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
22.	SUCTION MACHINE		2
		- <b>Type</b> : Electric, portable, and wall-mounted	
		options	
		- Capacity: Dual jars, each 2–3 liters with	
		autoclavable canisters	
		- Vacuum Range: Adjustable 0–700 mmHg	
		- Flow Rate: ≥ 40 L/min	
		- Noise Level: ≤ 60 dB	
		- <b>Safety</b> : Bacterial filter, overflow protection	
23.	LARYNGOSCOPE SETS		4
		Macintosh laryngoscope blade size 00, 0, 1, 2, 3	
		and 4.	
		Miller laryngoscope blade size 00, 0, 1, 2, 3 and 4.	
		Mc Coy laryngoscope blade size 3 and 4.	
		CE/FDA approved.	
		**	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
24.	BLOOD		10
	WARMERS/INFUSERS		
		Temperature range 36 to 44 degree centigrade.	
		Battery backup.	
		Diameter 4 mm.	
		CE/FDA approved.	
		11	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
25.	NEONALTE/INFANT		4
	RADIENT WARMER		
		Storage Drawer, X ray tray Mattress foam,	
		Accessory rails, vertical height adjustment,	
		adjustable observation light, UPS in build, Cylinder	
		holder, Acrylic x-ray tray, Monitor shelf, IV pole,	
		Acrylic sheet, Temperature probe, Reflector cover,	
		CE/FDA Approved	
		(Resusctair)	
		Neo puff (PIP & PEEP	
		Oxygen part	
		Creation nowt	
		Suction part	
		-	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
26.	NEONATE/INFANT INCUBATOR	-	4

		·	
		A neonatal incubator should be spacious with easy access to baby and offer precise temperature control 32°C–38°C, with probes humidity 40%–80%, and oxygen regulation 21%–95%, with noise levels ≤60 dB. It must support up to 10 kg, have sealed access ports, alarms for critical parameters, AC power with 1-2 hr battery backup, lockable wheels, and comply with ISO, CE, and FDA standards. Optional options include medical air port, suction port, phototherapy unit and touch or manual control  Double door on both side  Double wall  Built in weight scale	
		Built in weight scale	
		Option of head elevation (automatic control)	
		EUROPE/UK/USA ORIGIN OR EQUIVALENT.	
27.	DIATHERMY WITH COMPLETE ACCESSORIES		2
	THE CLOSE OF THE CONTROL OF THE CONT	Modes: Monopolar & Bipolar (Cutting &	
		Coagulation)	
		<b>Power:</b> Up to 400W (cutting), 120W (coagulation) <b>Safety</b> : Return electrode monitoring, isolated	
		circuits, alarms	
		<b>Display</b> : Digital touchscreen	
		<b>Accessories</b> : Footswitch, reusable hand pieces, disposable electrodes	
28.	ECG MACHINES	disposable electrodes	4
29.	WEIGHT MACHINE WITH	Real 12-lead ECG with built-in rechargeable battery to allow for portability.  Pacemaker detection that meets the requirements of ANSI/AAMI EC11.  12.1" foldable high resolution color touchscreen to allow for ease of use and interpretation.  Automatic measurement and interpretation tested with authoritative CSE database along with advanced features such as real-time waveform freeze and automatic arrhythmia detection.  Complete digital filters, minimizing baseline drift, AC and EMG interference.  CE/FDA approved.  USA/EUROPE/UK OR EQUIVALENT ORIGIN.	6
<b>4</b> /•	HEIGHT ROD		
30.	INFANT WEIGHT SCALES	For use in pediatric and adult patients.	4
30.	INFANT WEIGHT SCALES	For use in infant patients.	4
31.	BLOOD PRESSURE WITH SPO2 MACHINES		6
	(DYNAMAP)		

22		For use in paediatric plus adult patients. Cuff sizes from neonatal to adult thigh cuffs (full range) – two sets with each. SPO2 sensors neonatal/pediatric and adults – three sets with each. CE/FDA APPROVED. USA/UK/EUROPE or equivalent in origin.	4
32.	ELECTRIC SHAVER WITH CHARGER (SURGICAL CLIPPERS)		4
		<ul> <li>Blade Type: Single-use, skin-friendly surgical blades</li> <li>Battery: Lithium-ion with ≥ 60 minutes runtime</li> <li>Charging Time: ≤ 2 hours</li> <li>Design: Ergonomic, waterproof</li> </ul>	
		<b>Accessories</b> : Charging station, multiple blade option USA/EUROPE/UK or equivalent in origin.	
33.	ICE SLUSH MACHINE (SURGICAL ICE MAKER)	<ul> <li>Production Rate: ≥ 5 kg/hr of soft, surgical-grade ice</li> <li>Storage Capacity: ≥ 15 kg</li> <li>Operation: Automatic with pushbutton interface</li> <li>Sanitation: Easy-to-clean surfaces, antimicrobial treatment</li> <li>Material: Stainless steel body</li> </ul>	2
34.	ANESTHESIA MACHINE	1. User Interface and Design:	5

		<ul> <li>Safe and precise agent delivery through an advanced electronic vaporizer.</li> <li>Automatic adjustment of fresh gas and vaporizer output to achieve target end-tidal agent and oxygen concentration levels.</li> <li>System Safety and Monitoring:         <ul> <li>Automatic system safety check that completes in 3.5 minutes.</li> <li>Integrated monitoring of FiO2, EtO2, CO2, N2O, and autodetection of five anesthetic agents, along with BIS &amp; NMT monitoring capabilities.</li> </ul> </li> <li>Ventilation Modes:         <ul> <li>Adaptive Minute Ventilation Mode (AMV) facilitates easy switching between controlled and spontaneous ventilation without additional adjustments.</li> <li>Optimizer and AA Prediction tools provide real-time guidance for lower fresh gas flow to reduce anesthetic agent consumption.</li> </ul> </li> <li>Modular and Expandable System:         <ul> <li>Configurable up to 10 different user profiles, allowing quick changes between users.</li> <li>Compatibility with various modules and peripherals, such as the E-AGSS system for scavenging flow rate monitoring and real-time feedback on system status.</li> </ul> </li> </ul>	
35.	AIR MATTERS	For patient preventing from bed sores and pressures sores Size should be atlease larger then the bed	30
36.	Air purifier	For preventing from fungal infection.  Mainly role in neonatal services	5
37.	TCP machine	To check for the jaundice	2
38.	<b>OET Cuff Manometer</b>	To check the cuff pressures of ETT Tube	5
39.	Phototherapy Penta light	To Reduce the jaundice in neonate	5
40.	TWICH MONITOR	To check the patient Conscious level mainly in deep paresis	2
41.	Transluminator	To check for pneumothorax	2
42.	Bottle sterilizer	To delivered the sterilized feed	2
43.	Steam inhalation machine	For ARDS Treatment	3
L			

44.	Nebulizer machine Compressor	For Cyanotic patients	5
45.	Percussor Neonate/Pediatric	For lung Rehabilitation	2
46.	Percussor Adult	For lung Rehabilitation	2
40.	Tercussor Addit	For rung Kenaomtation	<i>L</i>
47.	Blood Product Weight machine	To check the exact amount of blood products	2
48.	IO/Intra ocius Gunn with all accessories	For emergency cannulation during CPR	2
49.	Aerogen Nebulizer Machine	For Extra efficiency in nebulization	2
50.	Sillicon Jell pads (Head and Heals)	For preventing Bed sores for long stay patients	10 each
51.	Danger box	For Disposing the sharps	40
52.	Intraortic balloon pump with all necessary accessories	1. General Requirements  Portable IABP system for adult and pediatric use. CE/FDA-approved device.  2. Technical Specifications  Operating Modes: Automatic, Semi-automatic, and Manual. Triggering Modes: ECG, pressure, and internal/external triggers. Deflation Timing: Auto-calibration with manual override.  3. Balloon Inflation and Control Rapid inflation/deflation for optimal diastolic augmentation. Helium-based inflation for fast response. Auto-fill helium reservoir with low-level alarm.  4. Patient Monitoring & Display Display Parameters: Real-time ECG and aortic pressure waveforms. Balloon inflation timing, heart rate, MAP, augmented pressure.	2
		waveforms.  o Balloon inflation timing, heart rate,	
		• Alarms:	

53.	Extracorporeal Membrane	<ul> <li>10. Accessories</li> <li>Complete balloon catheter set (adult &amp; pediatric).</li> <li>2 spare helium tanks.</li> <li>Patient cables and pressure tubing sets.</li> </ul> 1. General Requirements	
		<ul> <li>Gas-leak detection with automatic system shutdown.</li> <li>Automatic helium purge during catheter exchange.</li> <li>User-lockout feature to prevent accidental changes.</li> </ul>	
		<ul> <li>USB/network connectivity for data export.</li> <li>Integrated 24-hour data storage.</li> <li>Optional connection to hospital information systems (HIS).</li> </ul>	
		<ul> <li>Lightweight, compact design with mobile trolley/cart.</li> <li>Locking wheels for transport stability.</li> </ul> 8. Connectivity & Data Storage	
		7. Portability	
		<ul> <li>6. Battery Backup &amp; Power</li> <li>Minimum 60-minute battery backup.</li> <li>220–240V AC, 50–60 Hz power input.</li> <li>Automatic battery switching on power failure.</li> </ul>	
		<ul> <li>Multiple sizes (25, 34, 40, 50 ml) and pediatric options (10–15 ml).</li> <li>Radiopaque marker for positioning.</li> <li>Dual-lumen design with kink-resistant tubing.</li> </ul>	
		5. Balloon Catheter Compatibility	
		<ul> <li>Low/no augmentation, arrhythmias, gas leaks, system failure, helium depletion.</li> </ul>	

• Portable, with modular components for easy transport and maintenance.

## 2. Technical Specifications

## Modes of Operation:

- Veno-Arterial (VA) and Veno-Venous (VV) ECMO support.
- Capable of transitioning between modes without system shutdown.

## • Flow Rate:

- o Minimum flow rate: 0.5 L/min.
- Maximum flow rate: 7 L/min or higher for adult patients.

## • Pump System:

- Centrifugal pump with magnetic or levitating rotor for reduced hemolysis.
- Flow accuracy of  $\pm 10\%$  or better.
- o Silent operation and low vibration.

## 3. Oxygenator

- Membrane oxygenator with high-efficiency gas exchange.
- Low priming volume (pediatric: ≤100 ml, adult: ≤400 ml).
- Integrated heat exchanger for temperature control (range: 15°C to 42°C).

## 4. Patient Monitoring & Display

- Continuous display of:
  - Blood flow rate, venous saturation (SvO2), arterial saturation (SaO2).
  - Inlet/outlet pressures, temperature, and hemoglobin level.

## • Alarm System:

 Visual and auditory alarms for flow rate changes, oxygenation failure, high/low pressures, temperature deviation, and system errors.

## 5. Power Supply & Battery Backup

- 220–240V AC, 50–60 Hz input.
- Minimum 60-minute battery backup for power outages.
- Automatic switch to battery upon power failure.

## 6. Portability & Design

• Compact and lightweight with mobile cart.

		<ul> <li>Lockable wheels for stability during transport.</li> <li>Quick-connect tubing system for easy setup and exchange.</li> <li>7. Cannulae Compatibility</li> <li>Full set of ECMO cannulae (adult, pediatric, neonatal sizes).</li> <li>Biocompatible and radiopaque for easy positioning.</li> <li>Dual-lumen options for Veno-Venous ECMO.</li> <li>8. Data Storage &amp; Connectivity</li> <li>24-hour or more data storage capacity.</li> <li>USB/network connectivity for data export and integration with hospital information systems (HIS).</li> <li>9. Safety Features</li> <li>Integrated bubble detector and air purge system.</li> <li>Overpressure safety mechanism.</li> <li>Oxygen and CO2 monitoring with gas supply alarms.</li> <li>Bypass capability for system failure.</li> <li>10. Accessories</li> </ul>	
		<ul> <li>Complete tubing sets and connectors.</li> <li>Oxygenators and cannula sets for all patient sizes.</li> <li>Heater/cooler unit compatible with the system.</li> <li>Air and oxygen blander.</li> </ul>	
54. Echo	ocardiography Machines	1. Product Description:  A complete dedicated Echocardiography System for wide range of premium performance application of Cardiovascular Imaging in Peadiatric and Adult with 4D TTE & TEE imaging with built-in workstation / data management system for digital acquisition and should be quote latest model and recently release	4
		2. Console Design:	

## System must weigh 75KG or less

Built in Battery for transport and proper shutdown in case of power failure

## 22" or more HD Folding and Swivel LCD Screen with minimum resolution of 1920 x 1080 pixels

Ergonomically designed with a Floating Keyboard that is adjustable in three dimensions (height, rotation, and Extension

## User Interface Touch Screen 12" HiRes LCD screen with ability to review and play stored loops on it

PC based system using windows 10 platform

Power Requirement: 220-240 V / 60 Hz

## 3. IMAGE PROCESSING and OPTIMIZATION

System Must have programmable and flexible "Completely Software based" beamforming technology providing exceptional image quality and power compared to conventional hardware-based beamforming technology

System must have unlimited number of effective channels if software based

High frame rates for 2D with a system capability of 2900 fps or more

System capability for **real time 3D/4D** imaging with High Frame Rate for both **TTE & TEE** 

High frame rates for Color Doppler with a System frame rate Capability of 600 fps or more

**True confocal imaging** – (**No Focal Zones**) pixel based focusing throughout the field of view Ultra-narrow focused two-way beam profile throughout the field-of-view, maintaining frame rate, no zone stitching, no multi-line acquisition artifacts

and enhanced dynamic contrast resolution throughout field-of-view compared to conventional focal imaging

Tissue Harmonic Imaging with up to 6 different 3<sup>rd</sup> generation Harmonic frequencies for each Probe

Harmonic Frequency Compounding – realtime simultaneous acquisition at dual frequencies compounded to help reduce speckle and noise while enhancing resolution and contrast

Elevation Compounding capability on both 2D & 3D Probes for narrower image slice throughout the field of view

**Automatic Tissue Optimization** 

Continues Tissue Optimization for Gain, TGC and LGC with one button

Automatic Spectral Doppler Optimization One Button automatic optimization for spectral Doppler's Scale, Baseline, Sweep Speed, and Compression

## **Modes of operation:**

B-Mode, M-Mode, Color M-Mode, Anatomical M Mode, Color Doppler, Color Anatomical M Mode, PW Doppler, HPRF Doppler, CW Doppler, Steerable Doppler, PW Tissue Doppler Imaging, Tissue Velocity Imaging (TVI), Tissue Tracking (TT), Tissue Synchronization Imaging (TSI), Strain Imaging (SI), Strain Rate Imaging (SRI), Bi-Plane and Multi-plane 2D imaging with Matrix 4D Probes, 4D imaging

Coded Phase Inversion technology for (LVO) applications

Advanced 2D Probe Technology combining both Active Matrix Array and Single Crystal Phased Array

Adjustable image width of 2D probes with a maximum field of View of 120°

## 3 x Active switchable transducer ports having Pinless Technology

## 1 x Port for Pencil Probe

## Port for ECG with ECG Leads

**Virtual Apex** ability on Sector probes allowing the image to start from the entire width of the probe enabling a wide field of view in the near field

## 4. Advanced Cardiac Measurements Tools with using One Button Artificial Intelligence

**PW Tissue Doppler Imaging** 

Tissue Velocity Imaging with Color window display of tissue velocity

**Tissue Tracking** with color coded presentation of Myocardial systolic displacement or equivalent technology

Tissue Synchronization Imaging which gives Color Coded information about synchronicity of myocardial motion, should be Available in live scanning as well as an offline calculation derived from TVI Raw data including velocity trace visualization

Strain & Strain Rate Imaging and complete parametric ROI curves and data tables

Parametric Imaging with up to 6 ROIs for digital representation graphs of mean velocities of Tissue Doppler and with event timing

## Auto EF,

Auto EF feature should have the ability to recognize standard 4Ch and 2Ch view with Artificial Intelligence as well as the ability to be used for DICOM imported Views from Other Vendors with **One Touch** AI based Simultaneous Simpson Bi-plane Ejection Fraction Calculation

**Automated Function Imaging AFI** an Automated software using Speckle tracking to enable automatic tracking of endocardial to Epicardial border for the three apical views to construct a Bulls Eye calculation model and

data of the segmental longitudinal strain - LV function

Should use Artificial Intelligence to enable automatic view recognition... (4Ch, 2Ch, 3Ch) and find relative loops with similar (geometry, frame rate, and heart rate) in order to automatically complete AFI Bulls Eye with minimal user intervention AFI LV Strain with AI based One Touch Simultaneous 3 Apical Views ROI placement, Segmentation, Longitudinal strain calculation, and Bulls Eye Creation

should have the ability to be used for DICOM imported Views from Other Vendors

**AFI RV 2D Strain,** an Automated software using Speckle tracking to enable automatic tracking of endocardial to Epicardial border of the Right Ventricle from four chamber view to calculate Global and Segmental longitudinal strain as well as Free Wall Strain in addition to TAPSE

**AFI LA 2D Strain,** A Parametric tool giving quantitative data for left atrial longitudinal global strain as well as LA volumes and Emptying Fraction derived from the apical 4-chamber and 2-chamber views

A Stress Echo Package with preset and user defined templates/Protocols should have the ability to recall all imaging parameters for each view from baseline stage to streamline process so that user never has to change Depth, width, Tilt, Frequency, Gain, Focal zones, compression, or Zoom for any view in later stages

**2D Auto measure** to automatically measure LV diameters In Diastole and systole from PLAX view with One button using **Artificial Intelligence** 

## Cardiac Auto Doppler with AI Spectral recognition,

AI based Spectrum Recognition feature to enable automated recognition of the most common Doppler spectra and automatically start the Auto Doppler tracing and measurement results for most common measurements including and not limited to the following; Aortic Valve: (AV Vmax, AV Trace, LVOT Vmax, and LVOT Trace, AR) Mitral Valve: (E/E, E', and MV Trace, MR) Tricuspid Valve: (TR Vmax) and Pulmonic Valve: (PV Vmax, PV Trace, RVOT Vmax, and RVOT Trace, PR) Pulmonary Vein (PV PW)

## 5. TEE 4D Imaging

Easy to use 4D articulation with the ability to automatically switch between different 4D cropping views common to 2D views such as 4Ch, 2Ch, Mid Esophageal long access, Mitral, and Aortic Valve Views with a single command knob

6/9 & 12 slice view with the ability to view 9 slices in short access and three apical views simultaneously

3D Enhancement options for improving depth display and perception such as Stereo Vision, Depth Illumination with a Torch effect, HD Live imaging as well as Polar Vision to be used with external medical grade 3D monitors

Flexi zoon; Ability to select zoom boxes from reference 2D views prior to 4D acquisition to enable 4D activation of 4D views already cropped to the area of interest without the need to do any further cropping or manipulation

System capability for **4D** imaging volume rate should be **more than 150 volumes per second** 

3D Enhancement options for improving depth display and perception such as Stereo Vision, Depth Illumination with a Torch effect,

**HD Color 4D** with the ability to see velocity components inside the flow volume make lower velocity Jets more transparent allowing better visualization of significant Jets

Ability to interface with Cath system by showing X-ray image on the image screen of the echo scanner (Must not be a closed system to one vendor)

## 6. 4D Quantification

Automated 4D Left Ventricular Quantification with the ability to measure instantaneous LV Volume and EF from Semiautomatic Endocardial detection of the Entire LV

## **4D Right Ventricle Quantification tool**

Semi-automated 4D Right Ventricle (RV) volume tool providing volumes, ejection fraction, TAPSE and RV strain values from volumetric data sets providing the ability to include results (both alpha-numeric values and screen captures) into the patient exam

## **4D Auto Aortic Valve Quantification tool**

Automated alignment, segmentation and measurement of aortic annulus from volumetric data sets that is Fully integrated in M&A system with results in worksheet

## **4D Mitral Valve Quantification tool**

semi-automated MV assessment tool providing the ability to include quantitative results for the mitral valve apparatus, into the patient exam

## 7. Archiving

Digital Acquisition and retrieval of the original image quality

Archiving database management system allows the storing and reviewing of images and loops in their raw format, i.e. <u>offline</u> resolution and frame rate are the same as online and life scanning

Ability to display images from different studies side by side

Offline analysis and processing allowing the user to change the following settings: 2D gain, Grey scale maps, Zooming, 2D image processing, ATO, Color gain, color maps, Color Baseline, M mode gain, M mode map, Anatomical M-Mode, Doppler gain, Doppler maps, Doppler baseline, rejection, Doppler Compression, All measurements

**Offline** Manipulation and Cropping of 4D Volumes with Virtual Acquisition of different 4D Views for storage space management

Online and offline Complete Cardiac measurements and Analysis package

Online Final Report generator with preset text templates and diagnostic statements for all pathologies, diseases, and prognosis

Ability to Export Report in PDF format

CD/DVD R/W Drive, USB Ports, and an integrated 1 TB HD drives

Ability to export Images and Loops to all of the following formats: DICOM, Jpg, Bmp. Mpeg, AVI

Print Reports and images directly to Desk Jet Printer

DICOM Store – Ability to send DICOM study to a DICOM PACS

DICOM Retrieve – Ability to retrieve studies from a DICOM PACS network to review old studies and compare with current exam

DICOM Worklist – Ability to import patient information from the DICOM PACS list of scheduled patients to enable smooth study transfer with no patient information discrepancies

DICOM SR – Ability to send all applicable measurements and calculations to DICOM PACS network labeled in DICOM SR standard

DICOM MPPS – Ability to update PACS system once procedure is finalized for Billing and scheduling purposes

DICOM Print – Ability to send images to a DICOM Printer

DICOM Media – Ability to read and write DICOM studies on DVD/USB media

DICOM Viewer – Ability to copy a DICOM reader on media every time the user copies a DICOM study onto the same media

The system must have provision to attach External Monitor via USB or VGA / HDMI DVI

## 8. Workstation:

External PC workstation (for image review, analysis, quantification, and reporting, with same software and user interface as the Echo machine, Quantifications should be from original manufacturing and not from 3<sup>rd</sup> Party).

## Workstation Details: Specifications:

- Core i-series CPU (latest processor should be 12<sup>th</sup> generation Core i5 on all system)
- 512 GB NVMe
- SSD is recommended on all system
- 16GB RAM
- 1TB HDD
- USB Ports
- LAN Card
- DVD-RW
- Keyboard & Mouse
- **Graphics Card:** Graphic Card must be capable to run 4D graphics minimum 4GB/128-bit card.
- **Monitors:** 24" LCD (Dual Monitor)
- Operating System: Original Licensed Windows 10/11 CD

## 9. Required Probes:

2D Adult Cardiac Sector Probe (1.5-5 MHz or better) with both Matrix Array and Single Crystal Technologies

Pediatric Cardiac Sector Probe (2 - 8 MHz or better)

4D Adult TEE Matrix Probe (3 – 8 MHz or better)

4D Adult TTE Probe (1.5 - 5 MHz or better) with both Matrix Array and Single Crystal Technologies along with Bi-Plane(X-Plane) and

55.	Gel warmer	14. Country of Origin: USA / Europe / Japan  High quality	8
55.	Gel warmer		8
		<ul> <li>10. Optional Probes (Mandatory to Quote):</li> <li>2D TEE Probe for Peadiatric (3 – 10 MHz or better)</li> <li>2D Micro TEE Neonatal Cardiac Sector Probe (4 – 12 MHz Approx.) with Pinless connector Probe linen 11L, Hockey stick probe.</li> <li>Blind Panel Prok.</li> <li>11. Certification:</li></ul>	
		Tri-Plane Capabilities as well as Full Volume real time 3D/4D acquisition	

- 8) Image Processing: Fully Digital
   Transmission and reception processing,

   High Spatial & Temporal Resolution, Speckle
   Reduction, High Frame Rate, large Cine
   Memory and capacity, etc.
- 9) Probe (Multi-Frequency/Broadband)
  - i) Convex Probe (3-6 MHz), nominal
  - ii) Linear Probe, Wide, (8-18 MH nominal iii) Linear Probe, Hockey-Stick (8-MHz nominal
  - iv) Sector Array Adult (3-6 MHz), nominal
  - v) Sector Array Pediatric (4-8 MHz), nominal
- 10) Active Probe Connector Four
- 11) Application Cardiac, Vascular, Peripheral Vascular, General Abdominal, Renal, Urology, Liver, Thyroid, Musculoskeletal, etc.
- 12) Measurements Cardiac, Vascular, All general abdominal (Distance, Area, Angle, Mass, etc.), Volume, Circumference, Doppler, Flow, Renal, Urology, Liver, etc.
- 13) Image Presets Factory Default + Multiuser
- 14) Image Storage: Hard Disk (500 GB or more), CD, DVD, USB, etc.
- 15) DICOM compatibility With Permanent License for Full DICOM connectivity with PACS /HIS and Print, Store, Send, Retrieve, Query, Work List functions, etc.
- 16) Connectivity: LAN, Ethernet
- 17) B/W Video Printer, Sony: Required with each machine
- 18) Internal Battery: 120-Minute scanning Time, nominal
- 19) Power Supply: 220VAC, 50Hz

Miscellaneous Service Terms and Conditions.

- 1) The supplied equipment should be FDA approved
- 2) 5 years' warranty backed by principal with 95% uptime from the date of Handing over for complete system and its associated components/ accessories including Ultrasound Probes must be confirmed.

  Replacement must be with original brand new parts.
- 3) The quoted equipment must have minimum useful life 10 years with service and spare parts support.
- 4) Vendor will perform Installation, testing, commissioning and user's training of the supplied equipment.
- 5) Onsite transportation/rigging for installation will be vendor's responsibility.
- 6) Post warranty Per Year maintenance contract price of equipment in USD (From 6<sup>th</sup> to 10<sup>th</sup> year) with labor and spare parts of all system components including ultrasound probes should be mentioned in the offer. The price of Ultrasound Probes (in USD) with a validity of 10 years should also be mentioned separately.
- 7) All documentation (hard & soft version) including user manuals, Comprehensive service manuals including Description, Circuit Diagram, Block Diagram, Installation, Calibration, Trouble-shooting, Error Code List, Parts List, quality control devices, etc. should be supplied alongwith the equipment.
- 8) Vendor shall arrange onsite technical training for Biomedical Engineers of SIUT.
- 9) All system and application software must have permanent valid licenses.
- 10) Vendor shall be responsible to provide all user & Service Keys and Passwords to Biomedical Engineering for the life of the equipment.
- 11) All backup software (CD/DVDs) set must be supplied with the equipment.

		<ul> <li>12) In case of distributors, vendor shall submit a certificate of distribution rights from their respective principals along with an undertaking from Principal that in case of change in distribution rights, Principal will be liable to fulfill all the commitments pertaining to this project.</li> <li>13) Vendor shall supply a list of installed volumes of similar equipment and the details of technical service setup in Karachi.</li> <li>14) Detailed list of engineering staff, qualified and trained on the similar equipment along with the training certificates is to be attached with the offer.</li> <li>15) The relevant documents showing FDA/CE compliance for quoted equipment should be attached.</li> <li>16) Annex- A is an integral part of this tender, vendor must fill all the fields of Annex-A and submit the same along with the offer on their official letter head.</li> </ul>
(1	Cell Saver (Intraoperative Auto cransfusion System)	1. General Requirements  Suitable for adult, pediatric, and neonatal patients.  CE/FDA-approved device.  2. Technical Specifications  Flow Rate: Capable of processing blood above 500 ml/min-at ≥ 800 ml/min.  Collection Reservoir: ≥ 1-liter capacity with integrated filter.  Hematocrit: Final hematocrit level ≥ 50%.  3. Pump System  Peristaltic pump with adjustable flow rates.  Kink-resistant tubing system.  Filtration & Washing  High-efficiency filtration to remove micro-aggregates and debris.  Saline wash cycle with adjustable volume settings.  Patient Monitoring  Continuous display of collection volume, wash cycle status, and hematocrit.

			o Real-time alarms for low blood	
			flow filter blockages, or system	
			failure.	
		6.	Portability	
			<ul> <li>Lightweight design with mobile</li> </ul>	
			trolley/cart and lockable wheels.	
		7.	Power Supply & Backup	
			<ul> <li>220–240V AC, 50–60 Hz input.</li> </ul>	
			<ul> <li>Minimum 30-minute battery</li> </ul>	
			backup.	
		8.	Safety Features	
			<ul> <li>Automatic air detection and</li> </ul>	
			removal.	
			<ul> <li>Overflow protection and emergency</li> </ul>	
		_	stop function.	
		9.	Data Storage & Connectivity	
			<ul> <li>USB or network connectivity for</li> </ul>	
			data export.	
			<ul> <li>Integrated memory for 24-hour data</li> </ul>	
			storage.	
		10	. Accessories	
			<ul> <li>Complete tubing set, collection</li> </ul>	
			reservoirs, and saline bags.	
			<ul> <li>Disposable filters and sterile kits.</li> </ul>	
60.	<b>Activated Clotting</b>			2
	Time (ACT) Machine			
		1.	General Requirements	
			<ul> <li>Portable, user-friendly ACT</li> </ul>	
			machine for point-of-care use.	
			<ul> <li>CE/FDA-approved.</li> </ul>	
		2.	<b>Technical Specifications</b>	
			o Measurement range: 60–1000+	
			seconds.	
			o Sample volume: ≤ 1 ml.	
			∘ Results available in $\leq$ 90 seconds.	
			D. 1 0 15 1.	
		3.	Display & Monitoring	
		3.	<ul> <li>Digital display with real-time</li> </ul>	
		3.	<ul> <li>Digital display with real-time countdown.</li> </ul>	
		3.	<ul><li>Digital display with real-time countdown.</li><li>Visual and audible alerts for</li></ul>	
			<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> </ul>	
			<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> </ul> Power Supply	
			<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–</li> </ul>	
			<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> </ul> Power Supply	
			<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–</li> </ul>	
		4.	<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–240V AC).</li> </ul>	
		4.	<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–240V AC).</li> <li>Minimum 8-hour battery backup.</li> </ul>	
		4.	<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–240V AC).</li> <li>Minimum 8-hour battery backup.</li> <li>Data Management</li> </ul>	
		4.	<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–240V AC).</li> <li>Minimum 8-hour battery backup.</li> <li>Data Management</li> <li>USB/network connectivity for data</li> </ul>	
		4.	<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–240V AC).</li> <li>Minimum 8-hour battery backup.</li> <li>Data Management</li> <li>USB/network connectivity for data transfer.</li> </ul>	
		<ul><li>4.</li><li>5.</li></ul>	<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply         <ul> <li>Battery and mains operation (220–240V AC).</li> <li>Minimum 8-hour battery backup.</li> </ul> </li> <li>Data Management         <ul> <li>USB/network connectivity for data transfer.</li> <li>Integrated memory for storing ≥</li> </ul> </li> </ul>	
		<ul><li>4.</li><li>5.</li></ul>	<ul> <li>Digital display with real-time countdown.</li> <li>Visual and audible alerts for high/low ACT values.</li> <li>Power Supply</li> <li>Battery and mains operation (220–240V AC).</li> <li>Minimum 8-hour battery backup.</li> <li>Data Management</li> <li>USB/network connectivity for data transfer.</li> <li>Integrated memory for storing ≥ 200 test results.</li> </ul>	

			<ul> <li>Single-use, pre-filled test</li> </ul>	
			cartridges.	
		7.	Portability	
			<ul> <li>Compact, lightweight, and durable.</li> </ul>	
		8	Accessories	
		0.	Starter kit with test cartridges,	
			control solutions, and user manual.	
			control solutions, and user manual.	
(1		1	Constant	1
61.	<b>Thromboelastography</b>	1.	General Requirements	1
	(TEG) System		<ul> <li>Fully automated, user-friendly TEG</li> </ul>	
			system for real-time coagulation	
			monitoring.	
			<ul> <li>CE/FDA-approved device.</li> </ul>	
		2.	<b>Technical Specifications</b>	
			<ul> <li>Testing Capability: Assesss</li> </ul>	
			coagulation from clot formation to	
			fibrinolysis.	
			<ul><li>Parameters Measured:</li></ul>	
			<ul> <li>R-time (reaction time), K-</li> </ul>	
			time (clot formation), Alpha	
			angle (clot strength),	
			Maximum Amplitude (MA),	
			and LY30 (fibrinolysis).	
			o <b>Sample Volume:</b> ≤ 1 ml of whole	
			blood.	
			TP' 4 - D 14 - < 10 - ' - 4	
			o <b>Time to Result:</b> ≤ 10 minutes per test.	
		2		
		3.	Display & Monitoring	
			o Real-time results: Graphical	
			display with easy-to-read	
			coagulation curves.	
			o Alarms/Alerts: Visual and audible	
			alarms for critical values.	
		4.	Power Supply	
			o AC power (220–240V, 50–60Hz)	
			and battery-operated for portability.	
			<ul> <li>Minimum 4-hour battery backup for</li> </ul>	
			emergency use.	
		5.	Data Management & Connectivity	
			<ul> <li>USB or network connection for</li> </ul>	
			data export to hospital information	
			systems (HIS).	
			<ul> <li>Data storage for up to 500 test</li> </ul>	
			results.	
		6	Sample Processing	
		υ.	<ul> <li>Single-use, disposable test cups for</li> </ul>	
			ease of use and hygiene.	
			• •	
			Automated sample mixing and	
		7	analysis.	
		7.	Portability	
			o Compact, mobile design with an	
			integrated cart and locking wheels	
			for ease of transport.	

			ı
		<ul> <li>8. Safety &amp; Calibration <ul> <li>Automatic calibration and self-checks for reliable results.</li> <li>Built-in quality control and internal validation systems.</li> </ul> </li> <li>9. Accessories <ul> <li>Complete test kits with cups, reagents, and calibrators.</li> <li>User manual, calibration solutions, and training materials.</li> </ul> </li> </ul>	
62.	Intra-Aortic Balloon	1. General Requirements	2
	Pump (IABP)		
		<ul> <li>Portable IABP system for adult and pediatric use.</li> </ul>	
		<ul> <li>CE/FDA-approved device.</li> </ul>	
		2. Technical Specifications	
		<ul> <li>Operating Modes:         <ul> <li>Automatic, Semi-automatic, and Manual.</li> </ul> </li> <li>Triggering Modes:         <ul> <li>ECG, pressure, and internal/external triggers.</li> </ul> </li> <li>Deflation Timing:         <ul> <li>Auto-calibration with manual override.</li> </ul> </li> <li>Balloon Inflation and Control</li> </ul>	
		Rapid inflation/deflation for optimal	
		diastolic augmentation.	
		Helium-based inflation for fast response.	
		<ul> <li>Auto-fill helium reservoir with low-level alarm.</li> </ul>	
		4. Patient Monitoring & Display	
		Display Parameters:	
		<ul> <li>Display Farameters:</li> <li>Real-time ECG and aortic pressure</li> </ul>	
		waveforms.	
		<ul> <li>Balloon inflation timing, heart rate,</li> <li>MAP, augmented pressure.</li> </ul>	
		• Alarms:	
		o Low/no augmentation, arrhythmias,	
		gas leaks, system failure, helium depletion.	
		5. Balloon Catheter Compatibility	
		• Multiple sizes (25, 34, 40, 50 ml) and	
		pediatric options (10–15 ml).	

		<ul> <li>Radiopaque marker for positioning.</li> <li>Dual-lumen design with kink-resistant tubing.</li> <li>6. Battery Backup &amp; Power</li> <li>Minimum 60-minute battery backup.</li> <li>220-240V AC, 50-60 Hz power input.</li> <li>Automatic battery switching on power failure.</li> <li>7. Portability</li> <li>Lightweight, compact design with mobile trolley/cart.</li> <li>Locking wheels for transport stability.</li> <li>8. Connectivity &amp; Data Storage</li> <li>USB/network connectivity for data export.</li> <li>Integrated 24-hour data storage.</li> <li>Optional connection to hospital information systems (HIS).</li> <li>9. Safety Features</li> <li>Gas-leak detection with automatic system shutdown.</li> <li>Automatic helium purge during catheter exchange.</li> <li>User-lockout feature to prevent accidental changes.</li> <li>10. Accessories</li> <li>Complete balloon catheter set (adult &amp; pediatric).</li> <li>2 spare helium tanks.</li> <li>Patient cables and pressure tubing sets.</li> </ul>	
		- managed and product and managed and mana	
63.	IV FLUID OR IRRIGATION WARMER MACHINE	<ul> <li>Temperature Range: 37°C to 42°C</li> <li>Heating Capacity: 2-4 liters per hour</li> <li>Display: Digital temperature display</li> <li>Safety Features: Overheating protection, alarms for temperature deviations</li> <li>Compatibility: IV bags and irrigation solutions</li> </ul>	8

Tender No. 501

Supply of Medical Equipment for Division of Cardiothoracic Sciences - SIUT Mariyam Basheer Dawood Children & Cardiac Hospital

[FORM: G] TECHNICAL SCHEDULE

Total Marks Income Tax Return - Attach evidence copy. Pl mention sales in million and Page No. of Attached evidence To be filled by Finance Bank statement of Last year (Attach evidence) ntion Yes/No and Page No. of Attached evidence Bank Certificate (Attach evidence) ol Yes/No and Page No of Attached evidence ISO certificate 9001 (Attach evidence) ention Web Address & page andence so of attached evidence Bidder's Website Total Marks Past Performance of the Bidder. The firm will attach purchase orders with relevant delivery challand claw Gowenment/Semil Gowermment Semiles Semiles of Semiles Semiles A- No of Hospitals (Attach evidence) A- No of Hospitals (No of Index (No of Index 10) Pl mention No of Hospitals for Supply of quoted item and Page No of Attached evidence To be filled by Technical Committee oN agad bno oN\es\noinnen Ic oN Attached evidence ufacturing Practice (CGMP) certificate.(Ati ibution certificate from the Ma evidence (where applicable). tion Yes/No and Page No. Attached evidence Accredited by WHO, US-FDA, EMA, MHRA, TGA, PMDA, Swiss Medic or Health Canada or by the SRA's (Attach relevant documents duly attested senior executive) ention Yes/No and Page No. of Attached evidence mple fully compliant with the requ Points sample compliant with minor devis required or 3 Ex - Villiaup bne stroirse or stoor stroirse Points Pl do not fill this column Pack Size Required Quantity PRODUCT GENERAL INFORMATION Brand Name Tender Item Code oN.2

	r S	Medical Equipment for Division of Cardiothoracic vvy vyz xyz Sciences	1	Nos	1	Blank	Yes, P # 24	Yes, P # 25	Yes, P # 26	Yes P # 28	3 years P#18	2 Hospitals P # 10	 www.x yz.com P # 13	Yes, P#4	Yes, Y P#5 P	Yes, Rs. P#2	Rs.400 Million P # 16	Yes, Y	Yes, P#5	
MEC-01 For de	3LOO 'or de	BLOOD GAS ANALYZER For detail specification Please see Page # 30-31	4	Nos																
MEC-02 For c	DEF Por c	DEFIBRILLATORS For detail specification Please see Page # 321-32	9	Nos																
MEC-03 (DU	<u> </u>	TEMPORARY EXTERNAL PACEMAKER (DUAL CHAMBER) For detail specification Phase see Page # 32	<b>∞</b>	Nos																
MEC-04 HF	5. # €	VENTILATORS (CONVENTIONAL = 8 AND HFO = 2) For deal specification Please see Page # 33.35	10	Nos																
MEC-05 SY Fo		HI-FLOW NON-INVASIVE VENTILATION SYSTEM WITH CIRCUITS AND VARIOUS SYSTEM WASH. CANVULAE For detail specification Please see Page #35	10	Nos																
MEC-06 B		BIPAP NON-INVASIVE VENTILATION SYSTEM For detail specification Please see Page #35-36	4	Nos																
MEC-07 F	H (E-	HEART LUNG MACHINE For detail specification Please see Page # 36	1	Nos																
MEC-08 H		HEATER-COOLER SYSTEM For detail specification Please see Page # 36	1	Nos																
MEC-09 F		CEREBRAL OXIMETER For detail specification Please see Page # 37	2	Nos																
MEC-10 1		BIOMEDICAL REFRIGIRATOR For detail specification Please see Page # 37	4	Nos																
MEC-11 C		PATIENT MONITORS (22) INCLUDING CENTRAL CONTROL SYSTEMSIAT HOW (4) For detail specification Presse see Page #37-42.	26	Nos																
MEC-12 F		MEDIUM END PATIENT BEDSIDE MONITORS For detail specification Please see Page #42	10	Nos																
MEC-13 SI	F	SMALLER TRANSPORT MONITORS For detail specification Please see Page # 42-43	7	Nos					5											
		-			Ť		٠	Page /3	73											Ī

		PRODUCT GENERAL INFORMATION		To be filled by Technical Committee To be filled by Finance	ance	
14	MEC-14	CENTRAL CONTRAL SYSTEMSTATION For detail specification Please see Page #43	4 Nos			
15	MEC-15	AMBULATORY BLOOD PRESSURE MONITORS For detail specification Please see Page #43	S			
16	MEC-16	AMBULATORY HOLTER MONITORS  For detail specification Please see Page #43	S Nos			
17	MEC-17	PATIENT WARNING MACHINE WITH FULL  BODY BLANKET (PATIENTS WARMERS)  For detail specification Please see Page #43	10 Nos			
18	MEC-18		S			
61	MEC-19	PORTABLE OPERATING ROOM/SURGICAL I LIGHT For deal specification Please see Page # 44	2 Nos			
20	MEC-20		50 Nos			
21	MEC-21	INFUSION PUMPS For detail specification Please see Page # 48-49	50 Nos			
22	MEC-22	SUCTION MACHINE For detail specification Please see Page # 49	2 Nos			
23	MEC-23		4 Nos			
24	MEC-24	BLOOD WARMERS/INFUSERS For detail specification Please see Page #49	10 Nos			
25	MEC-25	INEONATE/NFANT RADIENT WARMER  For detail specification Please see Page # 49	4 Nos			
26	MEC-26	NEONATE/INFANT INCUBATOR For detail specification Please see Page # 49-50	4 Nos			
27	MEC-27	DIATHERMY WITH COMPLETE 7 ACCESSORIES For detail specification Please see Page #50	2 Nos			
78	MEC-28	ECG MACHINES For detail specification Please see Page # 50	4 Nos			
29	MEC-29	WEIGHT MACHINE WITH HEIGHT ROD For detail specification Please see Page #50	soN 9			
30	MEC-30		4 Nos			
31	MEC-31		soN 9			
32	MEC-32		1 No			
33	MEC-33	ICESLUSH MACHINE (SURGICAL ICE MAKER) For detail specification Please see Page #51	No No			
34	MEC-34		5 Nos			
35	MEC-35	AIR MATTERS For detail specification Please see Page #52	30 Nos			
36	MEC-36	Air purifier For detail specification Please see Page #52	S Nos			
37	MEC-37		2 No			
38	MEC-38	OET Cuff Manometer For detail specification Please see Page #52	S Nos			
39	MEC-39	Phototherapy Penta light For detail specification Please see Page #52	5 Nos			

		PRODUCT GENERAL INFORMATION	To be filled by Technical Committee	ee To be filled by Finance
40	MEC-40	TWICH MONITOR For detail specification Please see Page #52	Nos	
41	MEC-41	Transluminator For detail specification Please see Page #52	Nos	
42	MEC-42	Bottle sterilizer For detail specification Please see Page #52	Nos	
43	MEC-43	Steam inhalation machine For detail specification Please see Page # 52	Nos	
4	MEC-44	Nebulizer machine Compressor For detail specification Please see Page #52	Nos	
45	MEC-45	Percussor Neonate/Pediatric For detail specification Please see Page #52	Nos	
46	MEC-46	Percussor Adult For detail specification Please see Page # 52	Nos	
47	MEC-47	Blood Product Weight machine For detail specification Please see Page #52	Nos	
84	MEC-48	10/Intra ocius Gunn with all asecories For detail specification Please see Page #52	Nos	
49	MEC-49	Aerogen Nebulizer Machine For detail specification Pleuse see Page #52	Nos	
50	MEC-50	Sillicon Jell pads (Head and Heaks) For defail specification Please see Page #52	each	
51	MEC-51	Danger box For detail specification Please see Page # 52	Nos	
52	MEC-52	Intraortic balloon pump with all necessary accessoria perification Please see Page # 52.54 For detail specification Please see Page # 52.54	Nos	
53	MEC-53	Extra corporeal Membrane Oxygenation (ECMO) Machine For detail specification Please see Page # 54-56	Nos	
54	MEC-54	Echocardiography machines For detail specification Please see Page # 56-65	Nos	
55	MEC-55	Get warmer For detail specification Please see Page #65	Nos	
99	MEC-56	Pulse eximeter For detail specification Please see Page # 65	Nos	
57	MEC-57	BP apparatus For detail specification Please see Page # 65	Nos	
58	MEC-58	Diagnostic Utrassound Trolley Mount, Colour Doppler for ICUI For detail specification Please see Page # 65-68	Nos	
59	MEC-59	Cell Saver (Intrasperative Auto transfusion System) For detail specification Please see Page #68-69	Q Z	
09	MEC-60	Activated Clotting Time (ACT) Machine For defail specification Please see Page # 69-70	Nos	
19	MEC-61	Thromboelastography (TEG) System For detail specification Please see Page #70-71	ON	
62	MEC-62	Intra-Aortic Balboon Pump (IABP) For detail specification Please see Page #71.72	Nos	
63	MEC-63	IV Fluid or Irrigation Warmer Machine For detail specification Please see Page # 72	Nos	
<u></u>	QUALIFYIN	QUALIFYING MARKS: 70%		
- '	Financial bids	Financial bids of only "Technically Responsive Bidders" will be opened.		
-	Note:			

If no evidance is attached for any technical specification mentioned above then the response will be considered as negative even if Yes' is given in the Bid Technical Schedule.

ii) The technical evaluation carried out by the Procurement Committee SUIT, Karachi will be final which will be assessed on technical appear and clinical expirience basis of the Consultant (s) in the relevant speciality. In case no firm fulfills the scoring criteria, as final

iii) Hardcopy & softcopy of this Form-G is Mandatory.
iv) Items are to be supplied within 7 to 15 days from the date of Purchase Order, in case of imports by SIUT, items should be supplied within 45 days

[FORM: H] Tender No. 501 Price Schedule

# Supply of Medical Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital - SIUT Submission of Financial Bid

7. V V V V V V	B   B   MEC-01   MEC-02   MEC-03   MEC-03   MEC-04   ME	a a	Company Name	Brand Name	Manufacturer Required U.O.M Pack Siz Quantity 1.O.M Pack Siz 6 H 1 1 6 Nos 6 Nos 8 Nos 10 Nos 10 Nos	Required Quantity 6 6 6 6	Moso Nos Nos Nos Nos Nos Nos Nos Nos Nos	Pack Size	Rate in PKR / Per Unit Total Amount in (	Total Amount in (PKR)  K	C&F Rate	Currency M	Conversion fate must be entered	C&F C&F  O O .	Earnest Money © 1% of Bid Amount P 0	Delivery Schedule	Remarks (if any)
~   ~   ~   ~   ~	MEC-05   MEC-06   MEC-07   MEC-08   MEC-09   MEC	HI-FLOW NON-INVASIVE VENTILATION SYSTEM WITH CIRCUITS AND VARIOUS TYPES OF NASAL CANNULAE BIPAP NON-INVASIVE VENTILATION SYSTEM HEART LUNG MACHINE HEATER-COOLER SYSTEM CEREBRAL OXIMETER				10 4 4 1 1 2 2 2	Nos Nos Nos								0 0 0		
~   ~   ~   ~	MEC-10 11 MEC-11 11 MEC-12 11 MEC-13 12 MEC-13 MEC-13 12 MEC-13 12 MEC-13 12 MEC-13 12 MEC-13 12 MEC-13 MEC-	BIOMEDICAL REFRIGIRATOR PATIENT MONITORS INCLUDING CENTRAL CONTROL SYSTEM/STATION MEDIUM END PATIENT BEDSIDE MONITORS SMALLER TRANSPORT MONITORS				100 100 2	Nos Nos Nos										
"   "   "   "	MEC-15 // MEC-15 // MEC-16 // MEC-17	CENTRAL CONTRAL SYSTEM/STATION  AMBULATORY BLOOD PRESSURE MONITORS  AMBULATORY HOLTER MONITORS  PATIENT WARMING MACHINE WITH FULL BODY  BLANKET (PATIENTS WARMERS)				4 8 8 01	NOS NOS NOS										
-	MEC-18	PATIENT COOLING/WARMING MACHINE/SYSTEM WITH FULL BODY BLANKETS/COOLING PADS AND KITS (FOR COOLING AND WARMING PATIENTS)				w	Nos Pag	s Page 76		1					0		

# [FORM: H] Tender No. 501 Price Schedule Supply of Medical Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital - SIUT Submission of Financial Bid

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S. No	Item Code	Item Description	Company Name	Brand Name	Manufacturer	Required Quantity	U.O.M	Pack Size F	Rate in PKR / Per Unit	Total Amount in (PKR)	C&F Rate	Foreign Currency	Conversion Rate must be entered	Total Amount C&F	Earnest Money @ 1% of Bid Amount	Delivery Schedule	Remarks (if any)
A	В	C	Q	Е	н	g	н	-	J	¥	Т	Σ	Z	0	Ь	٥	Я
19	MEC-19	PORTABLE OPERATING ROOM/SURGICAL LIGHT				2	Nos			1				1	0		
20	MEC-20	SYRINGE PUMP				50	Nos			1					0		
21	MEC-21	INFUSION PUMPS				50	Nos			1				1	0		
22	MEC-22	SUCTION MACHINE				2	Nos			1				1	0		
23	MEC-23	LARYNGOSCOPE SETS				4	Nos			1					0		
42	MEC-24	BLOOD WARMERS/INFUSERS				10	Nos			ı					0		
25	MEC-25	INEONATE/NFANT RADIENT WARMER				4	Nos			ı					0		
26	MEC-26	NEONATE/INFANT INCUBATOR				4	Nos			i					0		
27	MEC-27	DIATHERMY WITH COMPLETE ACCESSORIES				2	Nos			i					0		
28	MEC-28	ECG MACHINES				4	Nos			1					0		
29	MEC-29	WEIGHT MACHINE WITH HEIGHT ROD				9	Nos			1					0		
30	MEC-30	INFANT WEIGHT SCALES				4	Nos			1					0		
31	MEC-31	BLOOD PRESSURE WITH SPO2 MACHINES (DYNAMAP)				9	Nos			1					0		
32	MEC-32	ELECTRIC SHAVER WITH CHARGER (SURGICAL CLIPPERS)				1	ON			í					0		
33	MEC-33	ICE SLUSH MACHINE (SURGICAL ICE MAKER)				2	ON			í				•	0		
34	MEC-34	ANESTHESIA MACHINE				S	Nos			ı					0		
35	MEC-35	AIR MATTERS				30	Nos			í					0		
36	MEC-36	Air purifier				ĸ	Nos			1					0		
							2	77 05									

[FORM: H]

# Tender No. 501 Price Schedule Supply of Medical Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital - SIUT Submission of Financial Bid

	ļ		-	-	Note : Please rea	d instruction	at the end c	f this shee	Note: Please read instruction at the end of this sheet before filling out this Schedule.	this Schedule.	•	-		ŀ			
S. No	Item Code	Item Description Company Name	lame Brand Name	Name	Manufacturer	Required Quantity	M.O.U	Pack Size R	Rate in PKR / Per Unit Total Amount in (PKR)	Total Amount in (PKR)	C&F Rate	Foreign Currency	Conversion Rate must be entered	Total Amount C&F	Earnest Money Delivery Schedule Remarks (if any)	Delivery Schedule	Remarks (if any)
A	В	C		В	F	g	н	-	ſ	¥	1	Σ	Z	0	Ь	Q	ч
37	MEC-37	TCP machine				2	No			1				•	0		
38	MEC-38	OET Cuff Manometer				ß	Nos								0		
39	MEC-39	Phototherapy Penta light				w	Nos			1					0		
40	MEC-40	TWICH MONITOR				2	Nos			1				-	0		
41	MEC-41	Transluminator				2	Nos			1					0		
42	MEC-42	Bottle sterilizer				2	Nos			1				-	0		
43	MEC-43	Steam inhalation machine				3	Nos			•				•	0		
4	MEC-44	Nebulizer machine Compressor				S	Nos			•				•	0		
45	MEC-45	Percussor Neonate/Pediatric				7	Nos			1				,	0		
46	MEC-46	Percussor Adult				7	Nos			1					0		
47	MEC-47	Blood Product Weight machine				2	Nos			-				•	0		
48	MEC-48	IO/Intra ocius Gunn with all asecories				2	Nos			1				•	0		
49	MEC-49	Aerogen Nebulizer Machine				7	Nos			1				,	0		
20	MEC-50	Sillicon Gell pads (Head and Heals)				10	each			,					0		
51	MEC-51	Danger box				40	Nos			,				,	0		
22	MEC-52	Intraortic balloon pump with all necessary accessories				7	Nos			,				,	0		
53	MEC-53	Extracorporeal Membrane Oxygenation (ECMO) Machine				2	Nos			-					0		
54	MEC-54	Echocardiography machines				4	Nos			1				1	0		

[FORM: H]

**Tender No. 501 Price Schedule** 

# Supply of Medical Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital - SIUT

**Submission of Financial Bid** 

Note: Please read instruction at the end of this sheet before filling out this Schedule.

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S. No	o Item Code	Item Description	Company Name	Brand Name	Manufacturer	Required Quantity	U.O.M	Pack Size	Rate in PKR / Per Unit	Total Amount in (PKR)	C&F Rate	Foreign Currency	Conversion Rate must be entered	Total Amount C&F	Earnest Money @ 1% of Bid Amount	Delivery Schedule Remarks (if any)	Remarks (if any)
4	В	C	Q	Е	F	g	I	-	ſ	¥	Г	Σ	Z	0	Ь	Q	В
55	MEC-55	Gel warmer				8	Nos			1					0		
99	MEC-56	Pulse oximeter				æ	Nos										
57	MEC-57	BP apparatus				æ	Nos										
28	MEC-58	Diagnostic Ultrasound Trolley Mount, Colour Doppler for ICU				2	Nos										
59	MEC-59	Cell Saver (Intraoperative Auto transfusion System)				1	ON										
09	MEC-60	Activated Clotting Time (ACT) Machine				2	Nos										
61	MEC-61	Thromboelastography (TEG) System				1	ON										
62	MEC-62	Intra-Aortic Balloon Pump (IABP)				2	Nos										
63	MEC-63	IV Fluid or Irrigation Warmer Machine				8	Nos										
		Grand Total													0		

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## ould not be altered: S S

- Serial No.
- Item Code
- Item Description
- Required Quantity. Insert Unit of measurement

## Following Content should be inserted as described:

- Insert Company Name, which should be according to tax registration record.
- Insert Brand Name of Item
  - Insert Name of Manufacturer.
- Insert Pack size of Item i.e. 1 / 10 / 12 (Number of item in each pack).
- Insert Rate in Pak Rupees, single unit only.
  Sheet will calculate by itself.
  Insert C&F Rate , single unit only,
  Insert CW-rency of FOY (e.g. USD, CHF, EURO, JPY, SGD, etc)
  Insert Cornersion Rate ( Exchange rate should be of 7 working day prior to the opening date of Bid).
  Sheet will calculate by itself.
  Sheet will calculate by itself.
  Insert Delivery Schedule

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mentioned in Tender Specification. Data should be input in Text and number formate only.

In case of alternate item kindly write required details at the end of the last columns in the same row and don't change the Item Code

- - No cell should be merged.

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[FORM: H] Tender No. 501 Price Schedule

Supply of Medical Equipment for Cardiology Section of Mariyam Basheer Dawood Children & Cardiac Hospital - SIUT

**Submission of Financial Bid** 

Note: Please read instruction at the end of this sheet before filling out this Schedule.

livery Schedule Remarks (if any)	æ
Delivery Schedule	٥
Earnest Money @ 1% of Bid Amount	Ь
Conversion Rate Total Amount nust be entered C&F	0
0 1	Z
Foreign Currency	Σ
C&F Rate	1
Rate in PKR / Per Unit Total Amount in (PKR) C&F Rate	К
Rate in PKR / Per Unit	J
Pack Size	-
п.о.м	Ŧ
Required Quantity	9
Manufacturer	F
Brand Name	Е
Company Name	Q
Item Description	C
Item Code	8
S. No	A

Note: - Data must be filled in all columns except A, B, C, G, H, K, O & P. please do not create your own file rather fill this sheet as provided by SIUT.