



BID SOLICITATION DOCUMENTS (BSDs)

Under National Competitive Bidding (NCB)

FOR

**SELECTION AND RATE CONTRACTING OF MEDICAL EQUIPMENT,
MEDICAL FURNITURE, INSTRUMENT AND OTHER HOSPITAL
SUPPLIES FOR THE FINANCIAL YEAR 2025-26**

October 2025

Procurement Cell

Directorate General Health Services, Khyber Pakhtunkhwa, Peshawar

Health Department

Government of Khyber Pakhtunkhwa

Preface

This specific bid solicitation documents are prepared for Selection and Rate Contracting of Medical Equipment, Medical Furniture, Instrument and other hospital supplies for the financial year 2025-26 under Framework Agreement covered under KPPRA rules and Act.

Following the standard bidding document Format, this document contains two parts. Part one which is Fixed and is having two sections i.e., Section 1, 2 (ITB instruction to bidders, GCC general conditions of Contract) are duplicated here while part II has six sections, i.e.

- i. Invitation for Bids (IFB)
- ii. Bid Data Sheet (BDS)
- iii. Special Conditions of Contract (SCC)
- iv. Schedule of Requirements
- v. Technical Specifications
- vi. Sample Forms

To ensure maximum utilization of the supplied equipment, training of technical personals and end users is an essential part of the bid. To go further, second stage handing taking over of the supplied equipment after the expiry of standard warranty is hereby included in this specific bid. The bidders are also expected to take into consideration the feasibility for their Quoted equipment. As for as the standard warranty is concerned, in case of unnecessary breakdown / Prolonged Breakdown, for their warranty will be considered freeze until the equipment is functionalized.

Efforts are made here to make the document flawless, however in case of any errors or mistake and quarries, the bidders are expected to highlight it in the pre bid meeting for rectification alignment of the document. Furthermore, the manufacturer /suppliers can share the literature for advance Technological development in medical equipment as a futuristic activity in order to enhance the specifications accordingly. Proper submission of the bid is highly appreciated.

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Part One - Section I

Instructions to Bidders

Notes on the Instructions to Bidders

This section of the Bid Solicitation Documents provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, opening, and evaluation, and on the award of contract.

A. Introduction

1. Source of Funds

- 1.1 The Procuring Entity has received/applied for loan / grant / federal / provincial / local government funds from the source(s) indicated in the bidding data in various currencies towards the cost of the project /schemes specified in the bidding data and it is intended that part of the proceeds of this loan/grant/funds/ will be applied to eligible payments under the contract for which these Bid Solicitation Documents are issued.
- 1.2 The funds referred to above in addition shall be “Public Fund” which according to 2 (l) of KPP Rules 2014 means (i) Provincial Consolidated Fund; (ii) foreign assistance; (iii) all moneys standing in the Public Account; and (iv) Funds of enterprises wholly or partly owned or managed or controlled by Government.
- 1.3 Payment by the Fund will be made only at the request of the Procuring Entity and upon approval by the Government of Khyber Pakhtunkhwa., and in case of a project will be subject in all respect to the terms and conditions of the agreement. The Project Agreement prohibits a withdrawal from the allocated fund account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Federal Government/ Khyber Pakhtunkhwa Government, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Procuring Entity shall derive any rights from the Project Agreement or have any claim to the allocated fund proceeds.

2. Eligible Bidders

- 2.1 This Invitation for Bids is open to all suppliers from eligible source as defined in the KPP Rules, 2014 and its Bid Solicitation Documents except as provided hereinafter.
- 2.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Procuring Entity to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation for Bids.
- 2.3 Government-owned enterprises in the Province of Khyber Pakhtunkhwa may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent Entity of the Government of Khyber Pakhtunkhwa.
- 2.4 Bidders shall not be eligible to bid if they are under a declaration of ineligibility for corrupt and fraudulent practices issued by any government organization in accordance with the Section 44(1) KPP Rules 2014.

3. Eligible Goods and Services

- 3.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries of the world with whom the Islamic Republic of Pakistan has commercial relations and its Bid Solicitation Documents and all expenditures made under the contract will be limited to such goods and services.
- 3.2 For purposes of this clause, “origin” means the place where the goods are mined, grown, or produced, or the place from which the related services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially-recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 3.3 The origin of goods and services is distinct from the nationality of the Bidder.

4. Cost of Bidding

- 4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring Entity named in the Bid Data Sheet, hereinafter referred to as “the Procuring Entity,” will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. The Bid Solicitation Documents

5. Content of Bid Solicitation Documents

- 5.1 The Bid Solicitation Documents include:
 - a) Instructions to Bidders (ITB)
 - b) Bid Data Sheet
 - c) General Conditions of Contract (GCC)
 - d) Special Conditions of Contract (SCC)
 - e) Schedule of Requirements
 - f) Technical Specifications
 - g) Bid Form and Price Schedules
 - h) Bid Security Form
 - i) Contract Form
 - j) Performance Security Form
 - k) Manufacturer’s Authorization Form
- 5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bid Solicitation Documents. Failure to furnish all information required by the Bid Solicitation Documents or to submit a bid not substantially responsive to the Bid Solicitation Documents in every respect will be at the Bidder’s risk and may result in the rejection of its bid.

- 6. Clarification of Bid Solicitation Documents**
- 6.1 An interested Bidder requiring any clarification of the Bid Solicitation Documents may notify the Procuring Entity in writing. The Bidding Procuring Entity will respond in writing to any request for Documents clarification of the Bid Solicitation Documents which it receives no later than three working days prior to the deadline for the submission of bids prescribed in the Bid Data Sheet. Written copies of the Procuring Entity's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all interested bidders that have received the Bid Solicitation Documents.
- 7. Amendment of Bid Solicitation Documents**
- 7.1 At any time prior to the deadline for submission of bids, the Procuring Entity, for any reason, whether at its own initiative or in response to a clarification requested by an interested Bidder, may modify the Bid Solicitation Documents by amendment.
- 7.2 All interested bidders that have received the Bid Solicitation Documents will be notified of the amendment in writing, and will be binding on them.
- 7.3 In order to allow interested bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring Entity, at its discretion, may extend the deadline for the submission of bids.
- C. Preparation of Bids**
- 8. Language of Bid**
- 8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring Entity shall be written in the language specified in the Bid Data Sheet. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the Bid Data Sheet, in which case, for purposes of interpretation of the Bid, the translation shall govern.
- 9. Documents Comprising the Bid**
- 9.1 The bid prepared by the Bidder shall comprise the following components:
- a) a Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11, and 12
 - b) documentary evidence established in accordance with ITB Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;
 - c) documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the Bid Solicitation Documents; and
 - d) bid security furnished in accordance with ITB Clause 15.
- 10. Bid Form**
- 10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the Bid Solicitation Documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.
- 11. Bid Prices**
- 11.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.
- 11.2 Prices indicated on the Price Schedule shall be delivered duty paid (DDP) prices. The price of other (incidental) services, if any, listed in the Bid Data Sheet will be entered separately.

11.3 The Bidder's separation of price components in accordance with ITB Clause 11.2 above will be solely for the purpose of facilitating the comparison of bids by the Procuring Entity and will not in any way limit the Procuring Entity's right to contract on any of the terms offered.

11.4 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet. A bid submitted with an adjustable price quotation will be treated as nonresponsive and will be rejected, pursuant to ITB Clause 24. If, however, in accordance with the Bid Data Sheet, prices quoted by the Bidder shall be subject to adjustment during the performance of the contract, a bid submitted with a fixed price quotation will not be rejected, but the price adjustment would be treated as zero.

12. Bid Currencies

12.1 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet.

13. Documents Establishing Bidder's Eligibility and Qualification

13.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.

13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Procuring Entity's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 3.

13.3 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Procuring Entity's satisfaction:

- a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' Manufacturer or producer to supply the goods in the Procuring Entity's country;
- b) that the Bidder has the financial, technical, and production capability necessary to perform the contract;
- c) that, in the case of a Bidder not doing business within the Procuring Entity's country, the Bidder is or will be (if awarded the contract) represented by an Agent in that country equipped, and able to carry out the Supplier's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
- d) that the Bidder meets the qualification criteria listed in the Bid Data Sheet.

14. Documents Establishing Goods'

14.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the Bid Solicitation Documents of all goods and services which the Bidder proposes to supply under the contract.

**Eligibility and
Conformity to Bidding
Documents**

- 14.2 The documentary evidence of the eligibility of the goods and services shall consist of a statement in the Price Schedule of the country of origin of the goods and services offered which shall be confirmed by a certificate of origin issued at the time of shipment.
- 14.3 The documentary evidence of conformity of the goods and services to the Bid Solicitation Documents may be in the form of literature, drawings, and data, and shall consist of:
- a) a detailed description of the essential technical and performance characteristics of the goods;
 - b) a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period to be specified in the Bid Data Sheet, following commencement of the use of the goods by the Procuring Entity; and
 - c) an item-by-item commentary on the Procuring Entity's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- 14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procuring Entity in its Technical Specifications, are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names, and/or catalogue numbers in its bid, provided that it demonstrates to the Procuring Entity's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

15. Bid Security

- 15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount specified in the Bid Data Sheet. [The bid security shall be submitted from the account of the firm/bidder/contractor who submits the bid]¹
- 15.2 The bid security is required to protect the Procuring Entity against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7.
- 15.3 The bid security shall be in Pak. Rupees and shall be in one of the following forms:
- a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring Entity's country, in the form provided in the Bid Solicitation Documents or another form acceptable to the Procuring Entity and valid for thirty (30) days beyond the validity of the bid; or

¹ Inserted by KPPRA Notification No. KPPRA/M&E/Estt/1-12/2017-18 dated April 05, 2018.

b) irrevocable encashable on-demand Bank call-deposit.

- 15.4 Any bid not secured in accordance with ITB Clauses 15.1 and 15.3 will be rejected by the Procuring Entity as non-responsive, pursuant to ITB Clause 24.
- 15.5 Unsuccessful bidders' bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity prescribed by the Procuring Entity pursuant to ITB Clause 16.
- 15.6 The successful Bidder's bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 32, and furnishing the performance security, pursuant to ITB Clause 33.
- 15.7 The bid security may be forfeited:
- a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or
 - b) in the case of a successful Bidder, if the Bidder fails:
 - i. to sign the contract in accordance with ITB Clause 32;
 - or
 - ii. to furnish performance security in accordance with ITB Clause 33.

16. Period of Validity of Bids

- 16.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Procuring Entity, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Procuring Entity as non-responsive.
- 16.2 In exceptional circumstances, the Procuring Entity may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided under ITB Clause 15 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid, except as provided in the bidding document.

17. Format and Signing of Bid

- 17.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall govern.
- 17.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 17.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.
- 17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

18. Sealing and Marking of Bids

- 18.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as "ORIGINAL" and "COPY." The envelopes shall then be sealed in an outer envelope.

- 18.2 The inner and outer envelopes shall:
- a. be addressed to the Procuring Entity at the address given in the Bid Data Sheet; and
 - b. bear the Project name indicated in the Bid Data Sheet, the Invitation for Bids (IFB) title and number indicated in the Bid Data Sheet, and a statement: “DO NOT OPEN BEFORE,” to be completed with the time and the date specified in the Bid Data Sheet, pursuant to ITB Clause 2.2.
- 18.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared “late”.
- 18.4 If the outer envelope is not sealed and marked as required by ITB Clause 18.2, the Procuring Entity will assume no responsibility for the bid’s misplacement or premature opening.
- 19.1 Bids must be received by the Procuring Entity at the address specified under ITB Clause 18.2 no later than the time and date specified in the Bid Data Sheet.

19. Deadline for Submission of Bids

- 9.2 The Procuring Entity may, at its discretion, extend this deadline for the submission of bids by amending the Bid Solicitation Documents in accordance with ITB Clause 7, in which case all rights and obligations of the Procuring Entity and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

20. Late Bids

- 20.1 Any bid received by the Procuring Entity after the deadline for submission of bids prescribed by the Procuring Entity pursuant to ITB Clause 19 will be rejected and returned unopened to the Bidder.

21. Modification and Withdrawal of Bids

- 21.1 The Bidder may modify or withdraw its bid after the bid’s submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring Entity prior to the deadline prescribed for submission of bids.
- 21.2 The Bidder’s modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of ITB Clause 18. by a signed confirmation copy, postmarked not later than the deadline for submission of bids.
- 21.3 No bid may be modified after the deadline for submission of bids.
- 21.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval may result in the Bidder’s forfeiture of its bid security, pursuant to the ITB Clause 15.7.

E. Opening and Evaluation of Bids

22. Opening of Bids by the Procuring Entity

- 22.1 The Procuring Entity will open all bids in the presence of bidders’ representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders’ representatives who are present shall sign a register evidencing their attendance.
- 22.2 The bidders’ names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as

the Procuring Entity, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the Bidder pursuant to ITB Clause 20.

23. Clarification of Bids

- 22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Withdrawn bids will be returned unopened to the bidders.
- 22.4 The Procuring Entity will prepare minutes of the bid opening.
- 23.1 During evaluation of the bids, the Procuring Entity may, at its discretion, ask the Bidder for a clarification of its bid. The Bids request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

24. Preliminary Examination

- 24.1 The Procuring Entity will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- 24.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Supplier does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
- 24.3 The Procuring Entity may waive any minor informality, nonconformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.
- 24.4 Prior to the detailed evaluation, pursuant to ITB Clause 25 the Procuring Entity will determine the substantial responsiveness of each bid to the Bid Solicitation Documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the Bid Solicitation Documents without material deviations. Deviations from, or objections or reservations to critical provisions, such as those concerning Bid Security (ITB Clause 15), Applicable Law (GCC Clause 30), and Taxes and Duties (GCC Clause 32), will be deemed to be a material deviation. The Procuring Entity's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 24.5 If a bid is not substantially responsive, it will be rejected by the Procuring Entity and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

25. Evaluation and Comparison of Bids

- 25.1 The Procuring Entity will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24.
- 25.2 The Procuring Entity's evaluation of a bid will be on delivered duty paid (DDP) price inclusive of prevailing duties and will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.

25.3 The Procuring Entity's evaluation of a bid will take into account, in addition to the bid price quoted in accordance with ITB Clause 11.2, one or more of the following factors as specified in the Bid Data Sheet, and quantified in ITB Clause 25.4:

- a. incidental costs
- b. delivery schedule offered in the bid;
- c. deviations in payment schedule from that specified in the Special Conditions of Contract;
- d. the cost of components, mandatory spare parts, and service;
- e. the availability Procuring Entity of spare parts and after-sales services for the equipment offered in the bid;
- f. the projected operating and maintenance costs during the life of the equipment; the performance and productivity of the equipment offered; and/or
- g. other specific criteria indicated in the Bid Data Sheet and/or
- h. in the Technical Specifications.

25.4 For factors retained in the Bid Data Sheet pursuant to ITB 25.3, one or more of the following quantification methods will be applied, as detailed in the Bid Data Sheet:

- a. Incidental costs provided by the bidder will be added by Procuring Entity to the delivered duty paid (DDP) price at the final destination.
- b. Delivery schedule.

- i. The Procuring Entity requires that the goods under the Invitation for Bids shall be delivered at the time specified in the Schedule of Requirements which will be treated as the base, a delivery "adjustment" will be calculated for bids by applying a percentage, specified in the Bid Data Sheet, of the DDP price for each week of delay beyond the base, and this will be added to the bid price for evaluation. No credit shall be given to early delivery.

or

- ii. The goods covered under this invitation are required to be delivered (shipped) within an acceptable range of weeks specified in the Schedule of Requirement. No credit will be given to earlier deliveries, and bids offering delivery beyond this range will be treated as non-responsive. Within this acceptable range, an adjustment per week, as specified in the Bid Data Sheet, will be added for evaluation to the bid price of bids offering deliveries later than the earliest delivery period specified in the Schedule of Requirements.

or

- iii. The goods covered under this invitation are required to be delivered in partial shipments, as specified in the Schedule of Requirements. Bids offering deliveries earlier or later than the specified deliveries will be adjusted in the evaluation by adding to the bid price a factor equal to a percentage, specified in the Bid Data Sheet, of DDP price per week of variation from the specified delivery schedule.

- c. Deviation in payment schedule:

- i. Bidders shall state their bid price for the payment schedule outlined in the SCC. Bids will be evaluated on the basis of this base price. Bidders are, however, permitted to state an alternative

payment schedule and indicate the reduction in bid price they wish to offer for such alternative payment schedule. The Procuring Entity may consider the alternative payment schedule offered by the selected Bidder.

or

- ii. The SCC stipulates the payment schedule offered by the Procuring Entity. If a bid deviates from the schedule and if such deviation is considered acceptable to the Procuring Entity, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared with those stipulated in this invitation, at the rate per annum specified in the Bid Data Sheet.

d. Cost of spare parts.

- i. The list of items and quantities of major assemblies, components, and selected spare parts, likely to be required during the initial period of operation specified in the Bid Data Sheet, is annexed to the Technical Specifications. The total cost of these items, at the unit prices quoted in each bid, will be added to the bid price.

or

- ii. The Procuring Entity will draw up a list of high- usage and high-value items of components and spare parts, along with estimated quantities of usage in the initial period of operation specified in the Bid Data Sheet. The total cost of these items and quantities will be computed from spare parts unit prices submitted by the Bidder and added to the bid price.

or

- iii. The Procuring Entity will estimate the cost of spare parts usage in the initial period of operation specified in the Bid Data Sheet, based on information furnished by each Bidder, as well as on past experience of the Procuring Entity or other procuring agencies in similar situations. Such costs shall be added to the bid price for evaluation.

e. Spare parts and after sales service facilities in the Procuring Entity's country.

The cost to the Procuring Entity of establishing the minimum service facilities and parts inventories, as outlined in the Bid Data Sheet or elsewhere in the Bid Solicitation Documents, if quoted separately, shall be added to the bid price.

f. Operating and maintenance costs.

Since the operating and maintenance costs of the goods under procurement form a major part of the life cycle cost of the equipment, these costs will be evaluated in accordance with the criteria specified in the Bid Data Sheet or in the Technical Specifications.

g. Performance and productivity of the equipment.

- i. Bidders shall state the guaranteed performance or efficiency in response to the Technical Specification. For each drop in the performance or efficiency below the norm of 100, an adjustment

for an amount specified in the Bid Data Sheet will be added to the bid price, representing the capitalized cost of additional operating costs over the life of the plant, using the methodology specified in the Bid Data Sheet or in the Technical Specifications.

or

- ii. Goods offered shall have a minimum productivity specified under the relevant provision in the Technical Specifications to be considered responsive. Evaluation shall be based on the cost per unit of the actual productivity of goods offered in the bid, and adjustment will be added to the bid price using the methodology specified in the Bid Data Sheet or in the Technical Specifications.

- h. Specific additional criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.

The relevant evaluation method shall be detailed in the Bid Data Sheet and/or in the Technical Specifications.

Alternative

25.5 Merit Point System:

The following merit point system for weighing evaluation factors can be applied if none of the evaluation methods listed in 25.4 above has been retained in the Bid Data Sheet. The number of points allocated to each factor shall be specified in the Bid Data Sheet.

[In the Bid Data Sheet, choose from the range of]

Evaluated price of the goods	60 to 90
Cost of common list spare parts	0 to 20
Technical features, and maintenance and operating costs	0 to 20
Availability of service and spare parts	0 to 20
Standardization	0 to 20
Total	100

The bid scoring the highest number of points will be deemed to be the lowest evaluated bid.

26. Contacting the Procuring Entity

- 26.1 Subject to ITB Clause 23, no Bidder shall contact the Procuring Entity on any matter relating to its bid, from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Procuring Entity, it should do so in writing.
- 26.2 Any effort by a Bidder to influence the Procuring Entity in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

F. Award of Contract

27. Post-qualification

- 27.1 In the absence of prequalification, the Procuring Entity will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.3.

	27.2	The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13.3, as well as such other information as the Procuring Entity deems necessary and appropriate.
	27.3	An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring Entity will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.
28. Award Criteria	28.1	Subject to ITB Clause 30, the Procuring Entity will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.
29. Procuring Entity's Right to Vary Quantities at Time of Award	29.1	The Procuring Entity reserves the right at the time of contract award to increase or decrease, by the percentage indicated in the Bid Data Sheet, the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.
30. Procuring Entity's Right to Accept any Bid and to Reject any or All Bids	30.1	The Procuring Entity reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, 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 Entity's action.
31. Notification of Award	31.1	Prior to the expiration of the period of bid validity, the Procuring Entity will notify the successful Bidder in writing by registered letter or by cable, to be confirmed in writing by registered letter, that its bid has been accepted.
	31.2	The notification of award will constitute the formation of the Contract.
	31.3	Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 33, the Procuring Entity will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 15.
32. Signing of Contract	32.1	At the same time as the Procuring Entity notifies the successful Bidder that its bid has been accepted, the Procuring Entity will send the Bidder the Contract Form provided in the Bid Solicitation Documents, incorporating all agreements between the parties.
	32.2	Within thirty (30) days of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring Entity.
33 Performance Security	33.1	Within twenty (20) days of the receipt of notification of award from the Procuring Entity, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the Bid Solicitation Documents, or in another form acceptable to the Procuring Entity.
	33.2	Failure of the successful Bidder to comply with the requirement of ITB Clause 32 or ITB Clause 33.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring

Entity may make the award to the next lowest evaluated Bidder or call for new bids.

34. Corrupt or Fraudulent Practices

34.1 The Government of Khyber Pakhtunkhwa requires that Procuring Entity's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the KPPRA, in accordance with the KPP Act, 2009 and Rules made thereunder:

- a. defines, for the purposes of this provision, the terms set forth below as follows:
 - i. "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - ii. "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Procuring Entity of the benefits of free and open competition;
- b. will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
- c. will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Government-financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government-financed contract.

34.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 5.4 and sub-clause 24.1 of the General Conditions of Contract.

35. Integrity Pact

35.1 The Bidder shall sign and stamp the Integrity Pact provided at Form - 5 to Bid in the Bidding Document for all Provincial Government procurement contracts exceeding Rupees ten million. Failure to such Integrity Pact shall make the bidder non-responsive.

Part One - Section II.

General Conditions of Contract

Notes on the General Conditions of Contract

The General Conditions of Contract in Part One Section II, read in conjunction with the Special Conditions of Contract in Part Two Section III and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

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 Entity 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 equipment, machinery, and/or other materials which the Supplier is required to supply to the Procuring Entity 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 Entity” means the organization purchasing the Goods, as named in SCC.
 - h. “The Procuring Entity’s country” is the country named in SCC.
 - i. “The Supplier” means the individual or firm supplying the Goods and Services under this Contract.
 - j. “The Project Site,” where applicable, means the place or places named in SCC.
 - k. “Day” means calendar day.

2. Application

- 2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

3. Country of Origin

- 3.1 All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules and further elaborated in the SCC.
- 3.2 For purposes of this Clause, “origin” means the place where the Goods were mined, grown, or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

	3.3	The origin of Goods and Services is distinct from the nationality of the Supplier.
4. Standards	4.1	The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.
5. Use of Contract Documents and Information; Inspection and Audit by the Government	5.1	The Supplier shall not, without the Procuring Entity's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring Entity in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
	5.2	The Supplier shall not, without the Procuring Entity's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.
	5.3	Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring Entity and shall be returned (all copies) to the Procuring Entity on completion of the Supplier's performance under the Contract if so, required by the Procuring Entity.
	5.4	The Supplier shall permit the Procuring Entity to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the procuring Entity, if so required.
6. Patent Rights	6.1	The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring Entity's country.
7. Performance Security	7.1	Within twenty (20) days of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring Entity the performance security in the amount specified in SCC.
	7.2	The proceeds of the performance security shall be payable to the Procuring Entity as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
	7.3	The performance security shall be denominated in the currency of the Contract acceptable to the Procuring Entity and shall be in one of the following forms: a. a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring Entity's country, in the form provided in the Bid Solicitation Documents or another form acceptable to the Procuring Entity; or b. a cashier's or certified check.
	7.4	The performance security will be discharged by the Procuring Entity 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.

8. Inspections and Tests	8.1	The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring Entity. SCC and the Technical Specifications shall specify what inspections and tests the Procuring Entity requires and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
	8.2	The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at the Goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring Entity.
	8.3	Should any inspected or tested Goods fail to conform to the Specifications, the Procuring Entity may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring Entity.
	8.4	The Procuring Entity's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring Entity's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring Entity or its representative prior to the Goods' shipment from the country of origin.
	8.5	Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.
9. Packing	9.1	The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
	9.2	The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Procuring Entity.
10. Delivery and Documents	10.1	Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are specified in SCC.
	10.2	Documents to be submitted by the Supplier are specified in SCC.
11. Insurance	11.1	The Goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after having been delivered, hence insurance coverage is sellers' responsibility.
12. Transportation	12.1	The Supplier is required under the Contract to transport the Goods to a specified place of destination within the Procuring Entity's country, transport to such place of destination in the Procuring Entity's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the

Supplier, and related costs shall be included in the Contract Price.

13. Incidental Services

- 13.1 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 Goods;
 - b. furnishing of tools required for assembly and / or maintenance of the supplied Goods;
 - c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
 - d. performance or supervision or maintenance and/or repair of the supplied Goods, 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; and
 - e. training of the Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
- 13.2 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged for other parties by the Supplier for similar services.

14. Spare Parts

- 14.1 As specified in SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- a. such spare parts as the Procuring Entity 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 Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements;
 - ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

- 15.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods 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 Entity's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

- 15.2 This warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.
- 15.3 The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring Entity.
- 15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Procuring Entity 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 Entity may have against the Supplier under the Contract.

16. Payment

- 16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 16.2 The Supplier's request(s) for payment shall be made to the Procuring Entity in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Procuring Entity, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.
- 16.4 The currency of payment is Pak. Rupees.

17. Prices

- 17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in SCC or in the Procuring Entity's request for bid validity extension, as the case may be.

18. Change Orders

- 18.1 The Procuring Entity may at any time, by a written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:
 - a. drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring Entity;
 - b. the method of shipment or packing;
 - c. the place of delivery; and/or
 - d. the Services to be provided by the Supplier.
- 18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Procuring Entity's

change order.

19. Contract Amendments

- 19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

20. Assignment

- 20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under this Contract, except with the Procuring Entity's prior written consent.

21. Subcontracts

- 21.1 The Supplier shall notify the Procuring Entity in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

- 21.2 Subcontracts must comply with the provisions of GCC Clause 3.

22. Delays in the Supplier's Performance

- 22.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring Entity in the Schedule of Requirements.

- 22.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring Entity 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 Entity 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.

- 22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

23. Liquidated Damages

- 23.1 Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring Entity 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 Goods 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 Entity may consider termination of the Contract pursuant to GCC Clause 24.

24. Termination for Default

- 24.1 The Procuring Entity, 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 Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Entity pursuant to GCC Clause 22; 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 Entity has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

“corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

“fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition.

- 24.2 In the event the Procuring Entity terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Procuring Entity may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Procuring Entity for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

25. Force Majeure

- 25.1 Notwithstanding the provisions of GCC Clauses 22, 23, and 24, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 25.2 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 Entity in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 25.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring Entity in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring Entity 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.

26. Termination for Insolvency

- 26.1 The Procuring Entity may at any time terminate the Contract by giving written notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring Entity.

27. Termination for Convenience

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

27.2 The Goods that are complete and ready for shipment within thirty (30) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring Entity at the Contract terms and prices. For the remaining Goods, the Procuring Entity may elect:

- a. to have any portion completed and delivered at the Contract terms and prices; and/or
- b. to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.

28. Resolution of Disputes

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

28.2 If, after thirty (30) days from the commencement of such informal negotiations, the Procuring Entity and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanisms may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed manner and/or arbitration.

29. Governing Language

29.1 The Contract shall be written in the language specified in SCC. Subject to GCC Clause 30, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

30. Applicable Law

30.1 The Contract shall be interpreted in accordance with the laws of the Procuring Entity's country, unless otherwise specified in SCC.

31. Notices

31.1 Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.

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

32. Taxes and Duties

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



BID SOLICITATION DOCUMENTS (BSDs)

Under National Competitive Bidding (NCB)

FOR

**SELECTION AND RATE CONTRACTING OF MEDICAL EQUIPMENT,
MEDICAL FURNITURE, INSTRUMENT AND OTHER HOSPITAL
SUPPLIES FOR THE FINANCIAL YEAR 2025-26**

October 2025

Procurement Cell

Directorate General Health Services, Khyber Pakhtunkhwa, Peshawar

Health Department

Government of Khyber Pakhtunkhwa

PART TWO (PROCUREMENT SPECIFIC PROVISIONS)

- Invitation for Bids (IFB)
- Bid Data Sheet (BDS)
- Special Conditions of Contract (SCC)
- Schedule of Requirements
- Technical Specifications
- Sample Forms

Part Two

Section I. Invitation for Bids

INVITITION FOR BIDS THROUGH EPADS

(PROCUREMENT CELL)

**DIRECTORATE GENERAL HEALTH SERVICES HEALTH DEPARTMENT GOVERNMENT OF KHYBER
PAKHTUNKHWA, PESHAWAR.**

**SELECTION AND RATE CONTRACTING OF MEDICAL EQUIPMENT, MEDICAL FURNITURE,
INSTRUMENTS AND OTHER HOSPITAL SUPPLIES FOR THE FINANCIAL YEAR 2025-26**

1. In compliance with Khyber Pakhtunkhwa Public Procurement Regulatory Authority (KPPRA) Act, 2012 and KPPRA Rules, 2014, Procurement Cell, Directorate General Health Services invites bids through E-Pak Acquisition and Disposal System (EPADS) under National Competitive Bidding from Manufacturers and/or Importers and/or authorized agents for Medical Equipment, Medical Furniture, Instruments and Other Hospital Supplies for Selection and Rate Contracting Framework Agreement for various Purchasing Entities of Health Department, Government of Khyber Pakhtunkhwa for the Financial Year 2025-26.
2. Bidding shall be conducted through Single Stage – Two Envelopes Bidding Procedure, as per KPPRA Act 2012 and Rules framed there under. Under this procedure, the bidders shall submit a scanned PDF files of Technical and Financial Bid separately duly uploaded through EPADS. No hard copy of the bid will be accepted.
3. The Bid Solicitation Documents can be downloaded from the following official websites: www.healthkp.gov.pk, www.kppra.gov.pk and <https://portalkp.eprocure.gov.pk>.
4. Pre-bid meetings with the interested bidders will be held on Monday, 03rd November 2025, and Tuesday, 04th November 2025, at 11:00 AM in the Main Conference Room of Directorate General Health Services, Warsak Road, Peshawar, in accordance with the schedule mentioned in the Bid Solicitation Documents. The bidders shall thoroughly study the Bid Solicitation Documents before the Pre-Bid meeting and bring their queries/suggestions to the forum for clarification and understanding. The same shall also be submitted in written form. In case of non-submission of a hard copy on or before the pre-bid meeting day, the queries/suggestions shall not be considered or entertained.
5. Interested bidders must upload their bids through EPADS on or before 10:30 AM, Friday, 14th November 2025 at 10:30 am. The bids received through EPADS will be opened on the same day at 11:00 AM in the presence of those bidders or their authorized representatives who choose to attend the process.
6. Financial bid must be accompanied with irrevocable Bid Security in the name of the undersigned which shall be from bank account of the prospective bidder. The original Bid Security be enclosed in the sealed envelope and must be submitted at the time of Bid Opening. Each bidder shall also provide an Affidavit on Judicial Stamp Paper confirming that the original Bid Security, as specified in the Bid Data Sheet, is enclosed and a scanned copy of the same is uploaded on EPADS with financial Bid. Failure to comply with these requirements shall render the Bid non-responsive.
7. Bidders are required to offer the most competitive rate of their items, as negotiations / discounts on quoted rates are not allowed under the rules.
8. The undersigned reserves the right to reject any or all the bids as per provisions contained in Rule 47 of KPPRA Rules 2014.

**Director General Health Services,
Khyber Pakhtunkhwa, Peshawar
Tel No: 091- 9210269 Fax: 091-9210230
Email: pcdghs@gmail.com**

Bid Data Sheet

ITB Re f.	Introduction/Description	Detail
ITB 1.1	Name of Procuring Entity of Government of Khyber Pakhtunkhwa.	Directorate General Health Services, Health Department Government of Khyber Pakhtunkhwa
ITB 1.1	Loan or credit or Project allocation Number. Loan or credit or Project Allocation amount.	Budget allocated or any other Source through which amount is allocated for Health department for the year 2025-26
ITB 1.1	Name of Project	Selection & Rate Contracting under Khyber Pakhtunkhwa Framework agreement under KPPRA regime
ITB 1.1	Name of Contract	Selection and Rate Contracting of Medical Equipment, Medical Furniture, Instruments and other hospital supplies for the Financial Year 2025-26.
ITB 4.1	Name of Procuring Entity.	Director General Health Services Khyber Pakhtunkhwa, Health Department Government of Khyber Pakhtunkhwa
ITB 6.1	Procuring Entity's address, telephone, Telex, and facsimile, numbers.	Director General Health Services Khyber Pakhtunkhwa Peshawar Tel No: 091- 9210269 Fax No: 091- 9210230 Procurement Cell. Email: pcdghs@gmail.com
ITB 8.1	Language of the bid.	English
Bid Price and Currency		
ITB 11.2	Price quoted shall be:	Pakistan Rupees (PKR)
ITB 11.5	The price shall be fixed	The quoted prices will be valid till 30 th June 2026.
Preparation and Submission of Bids		
ITB 13.3 (d)	Qualification requirements.	1. Manufacturer and Importer for Hi Tech, Low Tech Medical Equipment and Hospital Furniture and Instruments (Sample Based). 2. Manufacturer, Importer and Authorized dealer for other hospital supplies that is • General Hospital Supplies (Sample Based) • Electrical, Electronics and Information Technology • Power Generation, Regulatory Equipment
ITB 14.3 (b)	Spare parts required for period of years of Operation	1. Ten Years parts availability in market and will provide certificate for the same.
ITB 15.1	Amount of bid security.	Bid security shall be @ 2% of bid value. The Bid security shall be from bank account of the bidder. The mode of provision of bid security shall be in accordance with the modalities as laid down in the relevant KPPRA Rules.
ITB 16.1	Bid validity period.	180 days from the date of opening of bids
ITB 17.1	Number of copies.	Online submission through EPADS
ITB 18.2 (a)	Address for bid submission.	Procurement Cell, Directorate General Health Services, Ex-FATA Secretariat Warsak Road, Peshawar
ITB 18.2 (b)	IFB title and number.	Selection and Rate Contracting of Medical Equipment, Medical Furniture, Instruments and other hospital supplies for the Financial Year 2025-26
ITB 19.1	Deadline for bid submission.	10:30 AM Sharp. Friday 14th November, 2025
ITB 19.3	Pre-Bid meeting with the bidders	The bidders are required to submit their inputs / reservations on Bid Solicitation Documents including Technical Specifications, Criteria etc. to Procurement Cell in writing on or before Prebid meeting. A Category wise pre-bid meetings with the interested bidders will be held on 1. Monday, 03rd November, 2025 for Hi-Tech and Low-Tech Medical Equipment. 2. Tuesday, 04th November, 2025 respectively for Other Hospital Supplies and categories, in conference room of this Directorate starting at 10.00am sharp.

ITB 22.1	Time, Date, and Place for bid opening.	11:00am sharp, Monday, 14th November, 2025 , Conference room of Directorate General Health Services KP, Old Fata secretariat Warsak Road, Peshawar.
Bid Evaluation		
ITB 23.1	Clarification of Bids	The Procuring Entity may ask the Bidder in writing, only for clarification regarding the received documents in the bid; however, no change in the prices or substance of the bid shall be sought, offered, permitted or entertained. This communication shall be with the prior approval of chairman T&E committee.
ITB 25.3	Criteria for bid evaluation	Merit Point Evaluation (Single Stage – Two Envelop) The items ranked highest in merit points (obtained through and based on technical and financial evaluation) will get unit rate central Contract.
ITB 25.4 (a) ITB 25.4 (b)	One option only Delivery schedule. Relevant parameters in accordance with Option selected.	Not Applicable
Option I Option II Option III	Adjustment expressed as a Percentage, or adjustment expressed in an amount in the currency of bid evaluation, or adjustment expressed in an amount in the currency of bid evaluation.	Not Applicable
ITB 25.4 (c)(ii)	Deviation in payment schedule. Annual interest rate.	Not Applicable
ITB 25.4 (d)	Cost of spare parts.	Free under warranty period
ITB 25.4 (e)	Spare parts and after sales service facilities in the Procuring Entity's Country.	Not Applicable
ITB 25.4 (f)	Operating and maintenance costs.	Free under warranty period
ITB 25.4 (g)	Performance and productivity of Equipment.	Not Applicable
ITB 25.4 (h)	Details on the evaluation method or reference to the Technical Specifications	As in section on Technical Evaluation of bids. The evaluation parameters of the quoted item/s may include, but not limited to, any or all of the methods including scrutiny of the Bid Solicitation Documents, physical inspection, examination, evaluation /using by the end user/s and/ or market survey including and not limited to both Public and Private Healthcare facilities, against any parameter/s, as deemed appropriate by the procuring Entity or any of its committees or sub- committees. Any discrepancy found during the market survey shall lead to disqualification of the firm/product (s). Physical Inspection of manufacturers, importers and bidders will be carried out. All the certifications from accredited bodies, as the case may be, shall contain the quoted product (s) in its scope, moreover the accredited body shall be authorized to certify the quoted product (s)
ITB 25.4 alternative	Specify the evaluation factors.	Not Applicable
ITB 28.1	Award Criteria	Section 2 (c)(i)
Contract Award		
ITB 29.1	Percentage for quantity increase or decrease.	Number of items can be increased and decreased as per requirement of the PE within permissible limits under the rules.

Section III. Special Conditions of Contract

Special Conditions of Contract

The following Special Conditions of Contract shall supplement & qualify the General Conditions of Contract (GCC).

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)

GCC 1.1 (c) The Goods are: Medical Equipment, Furniture, Instruments and other hospital supplies.

GCC 1.1 (g) The Procuring Entity is: Directorate General Health Services, Health Department, Government of Khyber Pakhtunkhwa, Peshawar; and The Purchasing Entity/ies /are: District Health Officers, Medical Superintendents, and other Heads of the Primary & Secondary care of the Health Department, Government of Khyber Pakhtunkhwa, and Health Projects with due justification and concurrence from competent forum.

GCC 1.1 (i) The Supplier is: i) Manufacturer and/or Importer registered with relevant sales and income tax authorities and have requisite qualification and eligibility for supply of Goods in the specialized Categories of health sector; and

ii) Manufacture of Medical Equipment/ Machinery, Instruments & Medical Devices in Pakistan; and

iii) Importer of Medical Equipment/ Machinery, Instruments & Medical Devices in Pakistan.

2. Sample Provision

GCC 1.1 (j)—The Project Site is: Procurement Cell, Directorate General Health Services, Khyber Pakhtunkhwa, Warsak Road, Peshawar.

When required, the Focal Person of the bidder will be informed on phone or through email to provide samples of the items in sufficient / required quantity for examination / analysis to the Procurement Cell, DGHS or any other place notified by the procurement Cell, at bidder's own risk and cost at the time and date communicated. The samples will be returnable and no payment shall be made to bidder / Focal Person on this account. Notified sample evaluation committee for sample shall evaluate the samples provided.

3. Country of Origin (GCC Clause 3)

All countries and territories as indicated in Part Two Section.VI of the Bid Solicitation Documents Eligibility for the Provisions of Goods, Works, and Services in Government-Financed Procurement. The bidder will provide the details regarding country of origin, Model, Make, manufacturer, along with details of Manufacturing Units and mode of supply, shipment, and any other associated details of the component items and that of the quoted equipment. Bidders are bound to supply the equipment from quoted country of origin only.

4. Performance Security (GCC Clause 7)

GCC 7.1— the amount of performance security, as a percentage of the Contract Price, shall be 10% i.e., of the total value of each individual supply order placed to the successful bidder.

However, the Standard bid security @ 2 percent of the bid value, as elaborated in Section-IV, Statement of Requirement, of this document, from the successful bidders as received at the time of bids submission under GCC Clause 15 shall be retained by the Procurement Cell as Bid Security and will be released back to successful bidders after receipt of 10% performance security on each individual supply order placed by the respective procuring entity and will be retained by procuring entity till completion of warranty period.

5. Standards (GCC Clause 4)

As mentioned in GCC clause 4.1.

6. Inspections and Tests

(GCC Clause 8 and in accordance with the clauses of contract with the Procuring Entity)

- i. Technical Evaluation shall be conducted by the Technical and Evaluation (T&E) Committee or scrutiny Committee to undertake verification of documents submitted by the bidder/s along with the technical bids as well as to conduct the physical inspection of the various samples &/or relevant premises as per rent agreement or ownership etc. (Section-V -Technical Specification of the Part II of these SBDs)
- ii. Machinery & Equipment and other items supplied for sample tests shall be examined and tested by a panel of experts of the T&E Committee of the Government for submission of technical report to the relevant forum for the needful.
- iii. Sample tests as well as pre-shipment inspections will also be carried out as and when needed before signing of contract agreement with all the successful bidders for Machinery & Equipment, instruments etc.
- iv. Any other appropriate method may be adopted by the T&E Committee, and / or S&RCC to assess and/or assure the quality of goods being purchased. The Procuring Entity reserves the rights to reject the quoted items/equipment at any stage before award of contract in case of any deviation from the standard specifications.

7. Packing (GCC Clause 9)

In accordance with the GCC Clause 9 as well as provided in the relevant clauses of contract agreement of DGHS with the Supplier/s (Section-VI of these SBDs –Rate Contract Agreement).

8. Delivery and Documents (GCC Clause 10)

Applicable Delivery Mode: Delivered Duty Paid (DDP) as per contract agreement of the Successful with the Procuring Entity

9. Warranty (GCC Clause 15)

The Supplier shall provide warranty as per the terms and conditions of the Rate Contract Agreement with Procuring Entity.

GCC 15.2—In partial modification of the provisions, the warranty period shall be as per contract terms and conditions. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract. If, for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall, at its discretion, either:

- a. Make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4, or
- b. Pay liquidated damages to the Procuring Entity with respect to the failure to meet the contractual guarantees. The rate of these liquidated damages shall be higher than the adjustment price used in bid evaluation.

GCC 15.4 & 15.5—The period for correction of defects in the free warranty period is three years after installation with free parts and free services, including all incidental charges, and for the next two years for free services only without parts but with all incidental charges related to services provision on the site of installation for Hi-Tech and Low-Tech Medical Equipment and Power Generation, Regulatory Equipment. Warranty period for all other items will be one year after installation.

GCC 10. 3 —upon shipment, the Supplier shall notify the Procuring Entity the full details of the shipment, including Contract number, description of Goods, quantity and usual transport document. The Supplier shall mail the following documents to the Procuring Entity:

- i. Copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- ii. Original and two copies of the usual transport document (for example, a negotiable bill of lading, a nonnegotiable sea waybill, an inland waterway document, an air waybill, a railway consignment note, a road consignment note, or a multimodal transport document) which the buyer may require to take the goods;
- iii. Copies of the packing list identifying contents of each package;
- iv. Insurance certificate;
- v. Manufacturers or Supplier's warranty certificate;
- i. Inspection certificate, issued by the nominated inspection Entity, and the Supplier's factory inspection report.
- ii. Certificate of origin; and Custom clearing documents.

10. Payment (GCC Clause 16)

(i)GCC Clause 16 as well as under the terms and condition in Rate Contract Agreement with the Procuring Entity, the goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after the goods having been delivered; hence insurance coverage is seller's responsibility, for which they may arrange appropriate coverage. Payment shall be made in Pak. Rupees in accordance with the relevant and applicable government rules and regulations

(ii)Payment shall not be made for partial and incomplete supply of goods.

11. Prices (GCC Clause 17)

- i. The bidder will not quote price of any item/s which is/are higher than the prices quoted by the bidder across the country to any procuring entity of the quoted item/s through public funding.
- ii. In case the bid price is higher than estimated cost, the Procuring Entity has the right to reject the bid and scrap the process without any liability.
- iii. In case of single bid after technical evaluation, the procuring Entity may carry out the market analysis and negotiate with the bidder before issuing a letter of consent to the successful bidder.

13. Liquidated Damages (GCC Clause 23)

As in relevant clauses of the Rate Contract Agreement signed by the Supplier with the Procuring Entity. Penalties shall be imposed as per contract agreement and notified blacklisting & debarment guidelines of the department if the firm deviates from Rate Contract Agreement.

14. Disputes Resolution (GCC Clause 28)

The dispute resolution mechanism to be applied will be pursuant to relevant clauses of Rate Contract Agreement signed by Supplier with the Procuring Entity under KPPRA grievance redressal mechanism.

If at all required, the jurisdiction of Court shall be of Peshawar, Khyber Pakhtunkhwa.

15. Bid Tie

In case of tie in the final score of two bidders, and unless otherwise not in contradiction to any of the terms & conditions and specifications of that item, the rate contracting will be offered to the bidder having higher score in its technical bid and the same will be declared as highest fair bid (successful bidder). If technical and financial score are the same, the contract may be awarded to both firms.

16. Governing Language (GCC Clause 29)

The Governing Language shall be: English

17. Applicable Law (GCC Clause 30)

The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan, which includes the following legislation:

- i. The KPPRA Act 2012, KPPRA Rules 2014 and prevailing regulations etc.
- ii. The Contract Act 1872.
- iii. The General Financial Rules of the Govt. of Khyber Pakhtunkhwa and all the relevant laws, rules and regulations pertaining to budgeting & financial management of public fund.
- iv. The Bonded Labor System (Abolition) Act of 1992.
- v. The Factories Act 1934.
- vi. Company Act 2017.

18. Notices (GCC Clause 31)

GCC 31.1—Procuring Entity address for notice purposes: Procurement Cell, Directorate General Health Services, Khyber Pakhtunkhwa, Warsak Road, Peshawar.

Tel: 091-9210196, Fax:091-9210230, Email: pcdghs@gmail.com

Supplier's address for notice purposes: As mentioned in their bidding document

19. Duties & Taxes (GCC clause 32)

The Unit price quoted by the bidder shall be: inclusive of all applicable duties and taxes. All prices shall include relevant taxes & duties, where applicable. The benefit of exemption from or reduction in the GST or other taxes shall be passed on to the Purchasing Entity.

20. Legal Documentary Proof

The bidder must possess valid legally enforceable exclusive authorization from the Foreign/Local Manufacturer; they should have a documentary proof to the effect that they are the original Manufacturer of the required goods. Bidders shall establish all legal documentary proofs where required/ ask by the procurement cell.

21. Ineligibility for Corrupt and Fraudulent Practices

Bidders should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any Government (Federal, Provincial), a local body or a public sector organization.

22. Letter of Authorization

The Authorized agent (importer) shall have to produce Exclusive letter of embassy attested authorization / Sole Agency Certificate from Manufacturer and in case of Manufacturer, documentary proof to the effect that they are the original

Manufacturer of the required goods shall be provided, or joint venture/ consortium/ alliance of the local Sole agents/manufacturers. In case of imported products, the authorization shall be attested from the embassy of Pakistan in the country of manufacturing or embassy of the manufacturing country in Pakistan or having the apostille certificate from the country of origin.

23. Technical Staff and Tools

The Bidder should have strong engineering background and necessary tools/ testing equipment, trained staff for the goods required after sales services.

24. Minor Deviation

The Procuring Entity may waive off any minor informality, nonconformity, or irregularity in a bid which does not constitute a material deviation (or changes the substance of the bid), provided such waiver does not prejudice or affect the relative ranking of any Bidder. Any item other than quoted and approved shall not be supplied to procuring entity without intimation to procurement cell and supply shall be subject to clearance from S&RCC on recommendation of technical experts of procurement Cell notified by chairman T&E.

25. Deviation from critical provision

Deviations from, or objections or reservations to critical provisions shall be deemed to be a material deviation form technical proposals and thus the bid will be declared as non-responsive. Any model supplied other than quoted and approved will be considered as deviation/ forgery and will be rejected straightaway at the cost and risk of the supplier.

26. Prevailing Rules, Regulation and Policies

A bid once opened in accordance with the prescribed procedure shall be subject to only those rules, regulations and policies that are in force at the time of issue of notice for invitation of bids.

27. Alternate Bid

Different models/ prices offered for a single item by the same bidder shall be considered as alternate bid and shall be non-responsive.

28. After Sale Service

Certificate from the bidder that the after sales services / backup services shall be provided in case of change of local agent, the bidder will provide the after sales services themselves or through newly appointed agent for the period mentioned from the date of commissioning.

29. Testing and Calibration

The firm must have all kind of testing and calibration equipment, which is required to maintain the products, which they are dealing. The list of all required testing equipment would be provided along with the bid. The available testing equipment must be calibrated. The successful bidders shall provide complete technical manual and operation manual to the in charge of central workshop Peshawar and all regional workshops.

30. Manufacturer Official Website

The quoted model of imported product shall be available on the current official website of the manufacturer; otherwise, the quoted product shall be considered obsolete/ redundant and will straight away be rejected.

31. Inspection of the Premises

The Procuring Entity has the right to inspect the premises of bidder to inspect the setups ensuring proper after sales services, documents mentioned in technical bids and any other relevant details regarding testing tools, calibration tools, spare parts etc. by relevant technical personnel.

32. Opening of the Financial Proposals

After technical evaluation is completed, the Procuring Entity shall notify the date, time and location for opening of the financial proposals. Bidders' attendance at the opening of financial proposals is optional.

33. Incomplete and Conditional Bids

Incomplete/ Conditional bid shall stand rejected. All items described in the technical proposal must be priced in financial proposal. No conditional bid in term of Technical/Financial bid will be entertained and the bidder will straight away be disqualified.

34. Bidders Influence

Any effort by a Bidder to influence the Procuring Entity in its decisions on bid evaluation, bid comparison, or Contract Award will result in the rejection of the Bidder's bid and subsequent black listing, if Procuring Entity so desires. Canvassing by any Bidder at any stage of the Tender evaluation is strictly prohibited.

35. Quantity Variation

The Procuring Entity reserves the right at the time of Contract award to increase or decrease the quantity of goods as per permissible limits under the Rules 2014 originally specified in Schedule of Requirements without any change in unit price or other terms and conditions.

36. Original Equipment Manufacturer

The manufacturer should have documentary evidence to the effect that they are the original manufacture of the quoted product/s with indication of manufacturing site and its location.

37. List of Related tools / spare parts

The details regarding tools and spare parts shall be submitted in bid which will be verified during inspection. Marks will be awarded after verification & recommendation by relevant technical personnel during inspection stages.

38. Periodic Preventive Maintenance (PPM)

The successful bidders are bound to provide PPM report quarterly till warranty period duly signed from end user / Medical Superintendent / DHO. PPM procedure shall be performed as per guidelines of services manual.

39. Details of Kits/reagent Prices for Laboratory Items

The firms are required to provide the prices of reagent/ kits, till warranty period of equipment as for laboratory items along with the price of machine, which will be evaluated by the committee for approval or disapproval of award of contract.

40. Extended warranty

The firms submit extended warranty for the below equipment will get additional marks as mentioned in technical evaluation criteria for high-Tech and Low-Tech Medical Equipment.

1. Laparoscope machine for Gynea /OBS and General 4K.
2. Laparoscope machine for Gynea /OBS and General
3. Mammography (3D) Machine
4. Digital Fluoroscopy Machine
5. Digital OPG X Ray
6. Mobile C-Arm

41. Technical Bid Submission Format

1. All the bidders must submit the quotation in the given proforma below.

2. Attached the supported documents i.e., Brochure / Catalogue and Data sheet clearly highlighted the specifications mention in the technical quotation.

Technical Bid Quotation Format

Name of Equipment / Item:

Model:

Manufacturer:

Country of Origin:

Category of equipment / item:

S. No in SBDs:

Quoted Specification of the bidder

Section IV. Schedule of Requirements

Instructions to bidders

- As detailed elsewhere in this document, 2 % of bid security of the total bid value of equipment / items. The mode of provision of bid security shall be in accordance with the modalities as laid down in the relevant KPPRA Rules and these bid solicitation documents (BSDs). The Bid security shall be from bank account of the bidder. Ordinary cheque and cross cheque in the form of bid security shall result in bid rejection.
- Bids must be computer typed & printed; and the offered bid prices must be written both in words & figures. Bid prices/ quotations with cutting and over-writing shall not be accepted to the extent of that particular quoted item. An authorized person of the bidder shall sign & stamp all pages of the bid having numbers on each page. Bidders shall submit bids in hard binding, and bids submitted in box file/ loose file will be considered non-responsive.
- Fully compliance with the required specifications as per Statement of Requirement is mandatory. While minor deviations may be accommodated, subject to the condition that the main functions and performance in any aspect would not be affected. More than four minor deviations will be considered as major deviation and the bidder will be considered as non-responsive for the quoted item. Sample provision is mandatory for sample-based items SCC Clause 2.
- The technical proposal shall contain all the details in accordance with standard specification of the items/goods mentioned in the Schedule of Requirements (SOR) and technical specifications which must be supported by catalogue/Brochures. Bids will be submitted on the format mentioned in BSDs. All bidders are also required to submit the relevant detail of technical proposal and required documents in soft copies on computer USB and official email of procurement Cell in PDF format or docx format, duly labeled by a permanent marker with the name of bidder.
- Registration of the bidder with Drug Regularity Authority of Pakistan (DRAP) for Hi-tech and Low -tech Medical equipment is mandatory.
- Registration of the bidder with Pakistan Nuclear Regularity Authority (PNRA) is mandatory for all types of X Rays emission equipment.
- In case of imported items, the quoted items shall be registered for use in their country of origin, for which the Importers should provide valid authorization certificate for their quoted products duly attested by the embassy of the country of origin in Pakistan or the embassy of Pakistan in the country of origin of the quoted items or where the commercial office located for the quoted items or apostille certificate from the country of origin. Non-provision of valid embassy attested authorization or apostille certificate for imported items will lead to disqualification of firm.
- All certifications (i.e., Manufacturer authorization, ISOs, CEMDD, CEIVD, MDR, IVDR, USFDA, PMDA, MLHW, DRAP, PEC, etc) and data/ documents shall be valid. Committee may carry out the verifications on or before award of contract and in case of any fraudulent practice; legal action will be taken against the bidder concerned. Any certificate expires before bid opening will not be entertained, neither the renewal in progress will be considered.

- Non-Provision of mandatory documents mention in these BSDs shall lead to disqualification of the firm / quoted items.
- Non-Provision of mandatory warranty certificate shall lead to disqualification of the firm / quoted items SCC Clause 9.
- The downtime of any equipment will not be included in the standard warranty period.
- The bidder is bound to provide local training for at least 5 persons including the technical persons of Procurement Cell, Workshops Persons and end user.
- After sale satisfactory performance certificate must be recognized from relevant forums having dispatch number, signature of the officer and date on letter head of procuring entity. The satisfactory performance certificate of non-recognized institution with relevant forums will not be considered.
- The bidding is carried out for Rate Contract through Framework Agreement and hence the quantity is not mentioned, and the supply order for each item will depend on the requirement of the procuring entity.
- The Procuring Entity, at any stage of the procurement proceedings, having credible reasons for or prima facie evidence of any defect in Supplier's capacities may require the Suppliers to provide information concerning their professional, technical, financial, legal or managerial competence.
- The Procuring Entity has the right to inspect the premises of bidder, to inspect the setups ensuring proper after sales services, verify documents (if needed) mentioned in technical bids and any other relevant details. Premises (office/workshop) of bidder shall be insured through ownership/or Rent agreement.
- The bidder shall provide the shipment trail of the quoted item from the manufacturing site till destination.
- The Unit price quoted by the bidder shall be inclusive of all applicable duties and taxes. All prices shall include relevant taxes & duties, where applicable. The benefit of exemption from or reduction in the GST or other taxes shall be passed on to the Procuring Entity.
- Alternate bid will declare as non-responsive.
- Any reservations on BSDs including special conditions, criteria, specifications etc. (if any) shall be submitted in writing in or before the Pre-bid meeting in the given format in soft form (dox,pdf) and hard form signed by authorized person/representative of the firm.
- **The schedule for supply of goods shall be as under:**
- Supply within 90 days for imported items from the date of issuance of supply order by the Purchasing Entity.
- Supply within 60 days for local items from the date of issuance of supply order by the Purchasing Entity.

List of High-Tech Medical Equipment

S. No	Nomenclature
1.	Anesthesia Machine with Cardiac Monitor having two vaporizers
2.	Argon Laser
3.	Auto Refractor with Karatometer
4.	Fully Automated Nucleic Acid Amplification Test System (NAAT)
5.	B. Scan
6.	Bronchoscope Flexible full set with all accessories
7.	Bronchoscope Rigid
8.	Cardiac Monitor (5 parameter ECG, SpO2, NIBP, TEMP, Resp)
9.	Cardiac Monitor (7 parameter ECG, SpO2, NIBP, Dual IBP, TEMP, Resp, ETCO2)
10.	Defibrillator
11.	Color Doppler Machine
12.	CR System (computerized radiography system) with compatible UPS
13.	Cystoscope flexible set with light source complete
14.	Cystoscope Rigid
15.	Digital Fluoroscopy Unit
16.	Digital OPG X Ray
17.	DR system for existing X-ray machines with compatible UPS
18.	Echo Machine
19.	Endoscope System (Adult / Peads)
20.	Esophagoscopes instruments set
21.	ETT Machine
22.	Portable Ultrasound Machine
23.	High End Color Doppler Machine
24.	High End Echo Machine
25.	Hysteroscope

S. No	Nomenclature
26.	ICU Central Station for cardiac monitors
27.	ICU Ventilator (Neonatal& Pediatric & Adult) Compressor
28.	ICU Ventilator (Neonatal& Pediatric & Adult) Turbine
29.	Laparoscope machine for Gynea /OBS and General
30.	Laparoscope machine for Gynea /OBS and General 4K
31.	Mammography System (3D)
32.	Mobile C-Arm
33.	Mobile X-Ray plant 300 mA/125KV AC & Battery Operated
34.	Nasopharyngo scope with suction
35.	Operating Microscope for ophthalmology
36.	Phacoemulsification Machine
37.	Sigmoidoscope with universal lighting
38.	Sinus Endoscopy set with proof puncture needles
39.	Slit Lamp With Attached Applanation Tonometer
40.	Transport / Portable Ventilator for Ambulance
41.	Ultrasound machine (General purpose) within built trolley mounted
42.	Tissue Fusion and Vessel Sealing System
43.	Vital Sign Monitor
44.	Digital Radiography System
45.	X Ray Plant 500mA (3-Phase)
46.	X-Ray Plant 300mA in built or external AVR and UPS
47.	X-Ray Plant 500mA with inbuilt or external AVR and UPS
48.	Yag Laser
49.	24 Hour BP Monitoring machine
50.	Video Laryngoscope

List of Low-Tech Medical Equipment

S. No	Nomenclature
1.	Air Purification System
2.	Air Drill with Cylinder/Orthopedic pneumatic drill with cylinders.
3.	Arterial Blood Gas Analyzer (POCT)
4.	Autoclave Automatic 100 Liters Sliding door
5.	Autoclave Automatic 150 Liters Sliding door
6.	Autoclave Automatic 200 Liters Sliding door
7.	Automated Electrolyte Machine with UPS
8.	Automated ESR Analyzer
9.	Automatic Blood Bag Shaker
10.	Baby Incubator
11.	Baby Suction Machine
12.	Binocular Microscope
13.	BIPAP
14.	Blood Bag Tube Sealer
15.	Blood Bank Refrigerator / Blood storage cabinet
16.	Blood warmer
17.	Coagulation Analyzer
18.	Centrifuge (Bench Top)
19.	Cervical and Lumbar Traction Table
20.	CPAP
21.	CTG Machine
22.	Dehumidifier
23.	Deionizer
24.	Delivery table/ D&C Table

S. No	Nomenclature
25.	Dental cabinet
26.	Dental Unit with Chair and regulator (10 KVA)
27.	Dental X-ray with sensor
28.	Portable Dental X-ray
29.	Dialysis chairs
30.	Dialysis Machine
31.	Distillation water Assembly
32.	Dry Heat Sterilizer/ Hot air oven
33.	ECG Machine 3 channels
34.	ECT Machine
35.	EEG 32 Channels
36.	Electric Amalgamator
37.	Electric Autopsy Saw
38.	Electric cautery (Dental)
39.	Electric Dermatomes
40.	Electric Ripple mattress
41.	Electric surgical unit Diathermy
42.	Electro Mechanical Operation Table
43.	Electro-therapy unit
44.	Semi-Automated Elisa Machine (Reader, incubator shaker and Washer) Programmable with UPS
45.	Fully Automated Elisa Machine with UPS
46.	EMG 4 Channels
47.	ENT workstation (Examination +treatment)
48.	Fracture Operation Table with Ortho Traction Attachment
49.	Fully Automated Chemistry Analyzer with UPS
50.	Fully Automated Immunoassay Analyzer with UPS

S. No	Nomenclature
51.	Glucometer
52.	Gynae Vacuum Suction Apparatus / vacuum extractor with trolley
53.	High Performance Liquid Chromatography (HPLC) System
54.	Head Light with Cool Illumination
55.	Hematology Analyzer 3 Part differential with UPS
56.	Hematology Analyzer 5 Part differential with UPS
57.	HFNC
58.	Humidifier
59.	Hydraulic Operation Table
60.	Indirect Ophthalmoscope
61.	Infant Warmers (Radiant Warmer)
62.	Infra-Red Radiator Large
63.	Infra-Red Radiator Small
64.	Infusion pump
65.	Laboratory Incubator
66.	Microtome Machines
67.	Mini Autoclave For dental
68.	Nebulizer
69.	Neonatal CPAP Machine
70.	Ophthalmoscope + Retinoscope Rechargeable
71.	Orthopedic Drill Battery operated
72.	Oxygen Concentrator
73.	Paraffin Wax Bath For Foot
74.	Paraffin Wax Bath For Hand
75.	PH Meter
76.	Pharmacy / medicine / Vaccine Refrigerator

S. No	Nomenclature
77.	Phototherapy Unit
78.	Plasma and Lab Deep Freezer(-40oC)/ Plasma storage cabinet
79.	Point of care Testing (POCT) analyzer (Immunofluorescence Quantitative Analyzer)
80.	POP cutter / Plaster Cutting Saw
81.	Portable lamps AC/DC or Emergency light with single reflector AC/DC Or Examination light AC/DC
82.	Pulse Oximeter (Hand held / Desktop)
83.	Pulse Oximeter (Fingertip)
84.	Pure Tone Audiometer
85.	Resuscitation Trolley / ICU Trolley / CPR Trolley
86.	Semi-Automated Chemistry Analyzer with UPS
87.	Shadow less lamp (Ceiling type) or Ceiling OT light for minor OT or Ceiling OT light for post mortem
88.	Short Wave Diathermy
89.	Sonic Aid Machine/Fetus Heart Detector/ Fetoscope
90.	Spirometer/ Pulmonary function unit
91.	SS Filtration Assembly
92.	Suction machine Heavy Duty/ Electric suction Machine
93.	Syringe Destroyer
94.	Syringe Pump
95.	Temperature Controlled Bath Tub
96.	Therapeutic Ultrasound
97.	Three Bodies Refrigerator
98.	Three Channel Holter monitor
99.	Transcutaneous Electrical Nerve Stimulators (Tens)/Electric Stimulator
100.	Ultra Violet Lamp Large
101.	Ultra Violet Lamp Small
102.	Ultrasonic Nebulizer

S. No	Nomenclature
103.	Urine meter
104.	Vein Detector
105.	Vortex mixer
106.	Water Bath
107.	Incinerator plant
108.	Alarm Signaler with light/sound/vibration
109.	Pre-Programmed Hearing Aids
110.	Anti HCV Antibodies, Rapid Diagnostic Testing Kits
111.	Hepatitis B Surface Antigen (HBsAg) Rapid Diagnostic Testing Kits
112.	Medical Gas Pipe line system

List of Medical Furniture, Instruments (Sample Based)

S. No	Nomenclature
1.	Baby Cots
2.	Newborn Baby Crib (imported)
3.	Bed side Locker
4.	Bed side steel stairs
5.	Bed with side Table and over bed trolley (local)
6.	Bed with side table over bed trolley (imported)
7.	Children Bed (Imported)
8.	Couch for Ultrasound / Examination couch
9.	Cylinder Trolley 240 CFT
10.	Cylinder Trolley 48CFT
11.	Dissection Table (small)/ Mortuary table
12.	Dissection Table(large)/ Mortuary table
13.	Dressing Trolley
14.	Drip stand
15.	Dry Clean Trolley
16.	Electric Cardiac Bed/ICU Bed (Imported)
17.	Folding Screen
18.	Gynae examination couch
19.	Instrument Trolley
20.	Manual Cardiac Bed/ICU Bed
21.	Orthopedic Traction Bed
22.	Patient electric bed (Imported)
23.	Patient Trolley
24.	Revolving steel stool

S. No	Nomenclature
25.	Stretcher (Imported)
26.	Stretcher (Local)
27.	Surgeon revolving steel stool
28.	Wheel Chair
29.	Quadriceps Bench
30.	AO Basic Set
31.	AO Small Fragment Set
32.	Appendectomy Surgery Set
33.	Bone Set Large, Small and Medium
34.	Cataract Surgery Set
35.	Cholecystectomy Set
36.	Colostomy set
37.	C-Section set
38.	Cutting Instrument Set
39.	D & C Set
40.	DCR Instrument Set
41.	Dental Instrument complete Set
42.	DHS set
43.	Dissecting Instrument Set
44.	Dissection box for post-mortum with all accessories
45.	Dressing Set for Ward
46.	E & C Set
47.	Ear Surgery Instrument Set
48.	Electric Foreign Body Set
49.	General Instrument Set
50.	Glaucoma Set

S. No	Nomenclature
51.	Haemorrhoidectomy set
52.	IMN Set
53.	Inter locking Nail set (Full instruments)
54.	Kidney Stone Removal Set
55.	Laminectomy Sets
56.	Laparatomy set
57.	Large Fragment Set
58.	Myringoplasty Set
59.	Normal Delivery set
60.	Obs/ General Gynae set
61.	Obstetric surgery set minor and major
62.	Prostatectomy Set
63.	Rhinoplasty Set
64.	Small Fragment Set
65.	SMR Set
66.	Squint Surgical Set
67.	Thoracotomy set
68.	Thyroidectomy Set
69.	Tonsillectomy Set
70.	Urethral Dilator set
71.	Vaginal Hysterectomy Set
72.	Varicose Vein set
73.	Vascular set
74.	VP Shunt
75.	Broken Screw Removal Set

List of General Hospital Supplies (Sample Based)

S. No	Nomenclature
1.	Adult weighing scale
2.	Ambo bag Adult
3.	Ambo bag Paeds
4.	Attendant bench
5.	Baby weighing scale
6.	BP apparatus with stand
7.	BP mercury desktop with paed and adult cuff
8.	BP Set Wall Mounted
9.	Digital Blood Pressure Monitor
10.	Box for disposal of sharps
11.	Containers for sputum
12.	Containers for Urine
13.	Culture Plates
14.	Digital Thermometer
15.	Cupboard Steel Large
16.	ENT Diagnostic Set (adult and Paeds)
17.	Fire extinguisher 4 Kg
18.	Fire extinguisher 6 Kg
19.	Fire extinguisher 9 Kg
20.	Jester (1 to 10 ul) Adjustable
21.	Jester (10 to 100ul) Adjustable
22.	Jester (100 to 1000ul) Adjustable
23.	Jester Fix 1000ul
24.	Jester Fix 100ul

S. No	Nomenclature
25.	Jester Fix 10ul
26.	Jester Fix 20ul
27.	Jester Fix 500ul
28.	Jester Fix 50ul
29.	Jester Fix 5ul
30.	Lead Apron
31.	Lead Glass Shield
32.	Lead Gloves
33.	Mattress Foam with Raxine Cover Medical Grade
34.	Mattress Foam with Rexine Cover
35.	Medicine (Iron Rack) 6x4x2
36.	OPD chairs S.S
37.	Oxygen Flow Meter with humidifier
38.	Steel Almirah for Medicines
39.	Steel File cabinet
40.	Stethoscope
41.	Stethoscope Nursery
42.	Thermal Gun
43.	Vision testing drum
44.	Waste bin sets (Comprising 3 bins of White, Yellow and Red Color each measuring)
45.	X-Ray Illuminator Double Table Top/ X- Ray Viewer / X-Ray Viewing Box
46.	Air 240 Cft Cylinder
47.	Air 48 Cft Cylinder
48.	CO2 240 Cft Cylinder
49.	CO2 48 Cft Cylinder
50.	Nitrous Oxide 240 Cft cylinder

S. No	Nomenclature
51.	Nitrous Oxide 48 Cft cylinder
52.	Oxygen 240 Cftcylinder
53.	Oxygen 48 Cftcylinder
54.	Bed Sheet
55.	Blanket
56.	Draw Sheet
57.	EYE Operation Towel
58.	Lithotomy Sheet
59.	Abdominal Sheet
60.	Pillow With Cover
61.	OT Mask
62.	Towel
63.	Surgeon Suit Male/Female
64.	Nurse Suit With Wasket
65.	Gloves
66.	OT Caps
67.	OT GOWN
68.	Table Cover large
69.	OT Sheet
70.	Pneumatic Tourniquet (Small, Large)

List of Electrical, Electronics and Information Technology items

S. No	Nomenclature
1.	Shoe Covering machine
2.	Ergometer Cycle
3.	Treadmill
4.	2 Ton air conditioners (Cabinet Type)
5.	4 Ton air conditioners (Cabinet Type)
6.	LED TV 50"
7.	Refrigerator with double Glass-door
8.	Refrigerator with Glass Single-door
9.	Ceiling Fans 56"
10.	Bracket Fans 18"
11.	AC 1 tone Split unit inverter type
12.	AC 1.5 tone Split unit inverter type
13.	AC 2 tones Split unit inverter type
14.	Biometric Machine
15.	CCTV System
16.	Door Air Curtain
17.	Electric Geysers 10 Gallons
18.	Electric Geysers 15 Gallons
19.	Electric and Gas Geyser 35 Gallon
20.	Electric and Gas Geyser 55 Gallon
21.	Electric Water Cooler 40 Litters with Filter
22.	Electric Water Cooler 60 Litters with Filter
23.	Electric Water Cooler 80 Litters with Filter
24.	Water Dispenser

S. No	Nomenclature
25.	ILR/Deep Freezer
26.	Refrigerator 12 CFT
27.	Refrigerator 14CFT
28.	Refrigerator 18 CFT
29.	Printer (Copy + Scan + Print)
30.	Heavy Duty Photocopier Machine
31.	Printer
32.	Scanner
33.	Computer
34.	Laptop
35.	Multimedia Projector
36.	Color Printer
37.	Smart Board/Interactive Display
38.	R.O water purification plant for dialysis machine
39.	Lead Lining for Radiology Room

List of Power Generation, Regulatory Equipment Items

S.No	Nomenclature
1.	Generator 20 KVA
2.	Generator 40 KVA
3.	Generator 50 KVA
4.	Generator 100 KVA
5.	Generator 200 KVA
6.	5KVA Solar Off Grid Hybrid Inverter
7.	10 KVA Solar Off Grid Hybrid Inverter
8.	20 KVA Solar Off Grid Hybrid Inverter
9.	60KVA three phase Automatic voltage regulator
10.	30 KVA single phase Automatic voltage regulator
11.	5 KVA UPS

Section V Technical Specifications and Technical Criteria

Hi-Tech Medical Equipment

S. No	Nomenclature	Specifications
1.	Anesthesia Machine with Cardiac Monitor having two vaporizers	<u>Anesthesia unit with 2 Vaporizers and inbuilt ventilator</u> Unit shall be comprised of the following components. • Non interchangeable pipeline inlets. • Pipeline and cylinder gauges for O₂ and N₂O. • Pin index cylinder yokes for at least one or more cylinders of O₂ and N₂O each. • N₂O cut off device in case of O₂ failure. • O₂ failure alarm. • Gas out let and O₂ flush control. • Lockable anti-static casters. • Monitor shelf / built-in stand for monitor. • Bar assembly for mounting of at least 2 vaporizers. • Impact resistant and easy to clean frame. • Cleanable works surface. • Absorber support arm. • Electronic / Mechanical three gas flow meter unit. • With Electronics / Mechanical Mixing • O₂, N₂O and Air (4-bar) hoses. • Isoflurane and Sevoflurane vaporizer (models of the vaporizers must be mentioned). • Should support future upgrade for AG, Paramagnetic oxygen or galvanic oxygen monitoring and EtCO₂. • One or more drawer's unit power outlets with 3 or more sockets. • Auxiliary O₂ outlet. • Writing shelf/platform. • Soda-lime absorber with CO₂ bypass function ,1-2 Kg complete with valve for bag/ventilator, manometer, 3-liter breathing bag, breathing tube, mouth, and Y piece. <u>Ventilator:</u> • Ventilator must be inbuilt with the anesthesia unit. Ventilator to be complete with manometer display. The ventilator shall be capable of ventilating pediatric patients. The ventilator shall have the following features as a minimum requirement. • Ventilation mode: VCV, PCV, SIMV-VC, SIMV-PC, PSV • Electronic Microprocessor controlled. • On/Off switch. • Breathing mode selection. (Standby/Volume/Spontaneous and pressure). • Built in monitor 15" or better color screen to display all the mentioned parameters. • Inverse I: E Ratio Capability. • Able to display P-V, F-V lung function loop and store up to 2-3 lung function loops. • 3 waveform and lung function loop can be displayed simultaneously in one screen. • Gas specific input connectors (Air/Oxygen ISO) • Tidal Volume from 20 ml to 1400ml or better on either side • Rate or frequency 4 to 80bpm or better on either side • I:E ratio from 2:1 to 1: 8 or better on either side • PEEP off from 4 to 20 cmH₂O or better on either side. • Inspiratory pressure limits from 10 to 60 cmH₂O or better. • Adult bellows graduated from approximately 20ml to 1400ml. • Battery backup (90 minutes or more). <u>Audio Visual Alarm for the following:</u>

- Alarm mute.
- Low/High FiO₂ Alarms (18% to 100%).
- Low Supply Pressure
- High Airway Pressure.
- High Continuous Air Pressure
- Low Pressure
- Main failure.
- Low Battery.
- The ventilator shall be supplied complete with drive hose, O₂ 240 CFT cylinder, cylinder connector and power cable.

The following re-usable and autoclavable accessories shall be supplied with the unit.

- | | |
|---------------------------------------|---------|
| • Reusable Adult Breathing system | 2. No's |
| • Reusable Pediatric Breathing system | 1. No's |
| • Re-breathing bag 0.5l | 3. No's |
| • Re- breathing bag 1L | 3. No's |
| • Re-breathing bag 2L | 3. No's |
| • Forceps Magill adult | 2. Nos |
| • Forceps Magill Child | 2 No's |

Multi Parameter Patient Monitor

(3ch 5 lead ECG, SpO₂, NIBP, Dual IBP, TEMP, Resp., ETCO₂)

- Display for easy Viewing 12" or better color TFT/LCD/ LED for easy set-up (with all parameters display).
- ECG, SpO₂, NIBP, 2-IBP, TEMP, and Respiration
- EtCO₂ (Side stream/main stream type with basic accessories)
- 15 or more Arrhythmias analysis should be detected and alarmed.
- Multi-lead ECG algorithm
- S-T/QT Analysis
- Pacemaker detection.
- Save 48 hours or more waveforms.
- IBP cable and sensor kit
- Up to 72 hours or better of graphic and tabular trend of all parameters,

PERFORMANCE:

Heart rate: 30 ~ 300 bpm or better on either sides And Ped/Neo: 15-350bpm or better

Respiration

- Respiration rate: 4~150bpm or better on either side.

SPO₂:

- Range: 30 ~ 100% or better on either side
- Neonate and adult probe.

Temperature:

- Range; 10 -45 °C (50 - 113F) or better

NIBP:

- Range: 30-260 mmHg (± 10% mmHg)

GENERAL:

- Alarm: All parameters on/off selective independently
- Power input 220Vac, 50Hz
- With Battery Backup time: Minimum 03 hours or better
- ACCESSORIES:
- ECG 5 Lead cable. 01
- Disposable Electrodes Adult, Neonate & Paeds 20 each
- SPO₂ Finger sensor with fixed or detachable extension (each for adult, Paeds and neonate) 01

		• NIBP Reusable Neonate, Paeds & Adult Cuff 02 • NIBP Hose 01 • AC power code 01 • Ground cable 01 • Operation Manual 01 • ETCO2 (Side stream) with basic acc. 02 • IBP Cable 02 • Temperature sensor & cable 02 Note: Separate price must be quoted for Anesthesia machine and Patient Monitor.
2.	Argon Laser	• Wave Length: 532nm • Power: 1.2W or better • Pulse Duration: 0.1sec to 1sec or better • Aiming Beam: 635nm – 650nm • Cooling: Thermoelectric/Air cooling • With Foot Switch • Spot Size: 50um – 500um • Single Spot mode: Single • Standard slit lamp • Standard filter having red, yellow and green filters • Laser application lenses-One macular grid, one standard PRP and one wide field lens • Laser Probe: Straight: 20G Qty 1 23G Qty 1 25G Qty 1 - Curved 20G Qty 1 - Flexible Curved: 23G Qty 1 25G Qty 1 - Steerable: 23G Qty 1 25G Qty 1 (Price should be quoted separate for laser probe) <u>Accessories:</u> 1. Power Foot Switch 2. Safety goggles (2)
3.	Auto Refractor with Karatometer	Technical Specification: <u>Refraction measurement,</u> • Sphere -20 TO 22D or better (VD 10mm) (0.01/0.12/0.25D step). • Cylinder 0 to ±10D or better (0.01 / 0.12 / 0.25D step). • Axis Angle 0 to 180° or better (1° step). <u>Measurement of Corneal Radius:</u> • Curvature radius 5.0-10.0 mm or better (0.01mm step). • Cylindrical power 0-±10D or better. • Axis Angle 0-180 degree (1-degree step or better). • Pupil diameter measurement range: Ø 2.0mm – Ø 8.5mm or better. • Vertex distance: 0, 10, 12, 13.5, 15mm or better. • PD Measurement range 40-85 mm (1mm step) • In built Thermal Printer with automatic cutter • LCD display: color 5.7 Inch or better. • Power saves: OFF, 3, 5, 10 min • (Selectable) Standard Accessories: Test eye; 1No.

		• Printer paper: 3 Rolls: Chin rest Paper: 1 pack (sheets as per standard). Chin rest pin: 2 No. • Dust Cover: 1 No. • Contact lens holder: 1 No. • Operation manual. • Local Motorized stand
4.	Fully Automated Nucleic Acid Amplification Test System (NAAT)	• Technology Fully automated Nucleic Acid Amplification Test (NAAT) system using RT-PCR / TMA for viral DNA/RNA detection and quantification. • Applications Intended for in-vitro diagnostic use in detection/quantification of HBV DNA, HCV RNA, HIV RNA, SARS-CoV-2, and other infectious agents. • Sample Types Plasma, serum, swabs, or other validated clinical specimens. • Sample Input Primary tube or aliquot handling; barcoded samples for positive ID. • Throughput Capable of medium to high throughput molecular testing (250 or better samples per 24h depending on configuration). • Automation End-to-end automation: sample preparation → nucleic acid extraction → amplification → detection → result reporting. • Random Access & Continuous Loading Supports walk-away automation, with random access (on-demand test addition) and continuous sample/reagent loading. • Assay Menu Broad virology menu (HIV, HBV, HCV, CMV, SARS-CoV-2, STI panels, etc.). • Detection Real-time fluorescence or chemiluminescence-based detection with internal controls. • Data Management Integrated LIS/HIS connectivity, barcode tracking, automated QC, audit trail. • Biosafety Closed-tube system minimizing contamination; meets IVD biosafety standards. • Operator Requirement Minimal hands-on time; requires only basic molecular training. • Footprint Bench-top or floor-standing medium-sized platform suitable for hospital labs, blood banks, and reference laboratories. • Power & Environment Standard lab electrical supply, temperature/humidity-controlled lab environment. • Maintenance Routine automated calibration and onboard QC features. • Startup Kit Startup Kit of HBV, HCV will be provided free of cost. Note: The following Parameters per kit price must be quoted for three years (HBV, HCV, HIV, SARS-COVID, CMV, HPV & CT/NG),
5.	B. Scan	<u>Ophthalmic ultra sound for A -scan biometry, B –scan with pachymetry</u> <u>B-mode:</u> • Gain adjustable 20 -110db or more. • TGC 0-30db or better. • Dynamic range 25 – 80db or more • Probe: 10 MHz or better.

		- Scanning angle: 30 to 60 degree or better. A scan: - Probe: 8 MHz or more. - Depth 1 – 50mm or more. - Operating modes cataract, aphakic, phakic and manual. - Calculation: SRK, SRK II, HOLLADAY, SRK/T., HOOFER-Q, POST REFRACTIVE, HAIGIS. 8" or more color touch screen monitor with printer. - Time gain suspension. - Image line real time replay function. - With A, B, B+A features.																		
6.	Bronchoscope Flexible full set with all accessories	Bronchoscope: - The working length of the fiber scope should be 60 cm. - The outer diameter should be 5.7 mm or less. - Range of bending at the tip should be minimum 180 degree up and 130 degrees down or more on either side. - Working Channel diameter: 2.0mm or better LIGHT SOURCE: - Compatible light source 150 Watt or better (Xenon / LED) from the same manufacturer, - Automatic light adjustments to maintain optimum brightness/natural color tone. VIDEO SYSTEM - HD Camera Head compatible with scope, HD Image/ Video processor having capability of image storage and transfer in USB etc. Medical Grade monitor having display size 21 inch or more should be mounted on trolley. - Voltage source: 220 VAC																		
7.	Bronchoscope Rigid	Size: 3mm WL 200mm or better 4mm WL 215mm or better 5mm WL 245mm or better 6mm WL 300mm or better 6.5mm WL 350mm or better (± 10% of size) Forceps: - According to the bronchial / tracheal tubes <table> <tr> <td>• Foreign body forceps, Alligator jaws</td> <td>01</td> </tr> <tr> <td>• Grasping forceps, soft foreign body</td> <td>01</td> </tr> <tr> <td>• Biopsy Forceps</td> <td>01</td> </tr> <tr> <td>• Fenestrated Forceps</td> <td>01</td> </tr> <tr> <td>• Peanut Forceps</td> <td>01</td> </tr> <tr> <td>• Magnetic Extractor</td> <td>01</td> </tr> <tr> <td>• Optical biopsy forceps</td> <td>01</td> </tr> <tr> <td>• Optical grasping forceps</td> <td>01</td> </tr> <tr> <td>• Aspiration catheter</td> <td>10</td> </tr> </table> Accessories - Adapter with sliding glass window plug, sealing cap, notched lens and keyhole opining, movable. - Plug for ventilation attachment of bronchoscope. - Adaptor for Bronchoscope to any type of pediatric respiration equipment. Light Source - Compatible Light Source (From same manufacturer).	• Foreign body forceps, Alligator jaws	01	• Grasping forceps, soft foreign body	01	• Biopsy Forceps	01	• Fenestrated Forceps	01	• Peanut Forceps	01	• Magnetic Extractor	01	• Optical biopsy forceps	01	• Optical grasping forceps	01	• Aspiration catheter	10
• Foreign body forceps, Alligator jaws	01																			
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• Peanut Forceps	01																			
• Magnetic Extractor	01																			
• Optical biopsy forceps	01																			
• Optical grasping forceps	01																			
• Aspiration catheter	10																			

		• Automatic / Manual Light Adjustment. • Along with fiber optic cable. Video System • HD Camera Head compatible with scope, image processor having capability of image storage and transfer in USB etc. Medical Grade monitor having display size 21 inch or more should be mounted on trolley. • Voltage source : 220 VAC																		
8.	Cardiac Monitor (5 parameter ECG, SpO ₂ , NIBP, TEMP, Resp)	<u>Multi Parameter Patient Monitor</u> (5ch ECG, SpO₂, NIBP, TEMP, Resp.) • Display for easy Viewing 12” or more color TFT/LCD/ LED for easy set-up (with all parameters display). <u>Advance for high-end-user</u> • ECG, SpO₂, NIBP, 2-TEMP, and Respiration • Arrhythmias analysis should be detected and alarmed. • Multi-lead ECG algorithm • S-T/ QT Analysis • Pacemaker detection. • Up to 72 hours of graphic and tabular trend of all parameters <u>PERFORMANCE:</u> <u>Heart rate:</u> 30 ~ 300 bpm or better on either sides And Ped/Neo:15-350bpm or better <u>Respiration</u> • Respiration rate: 4~150bpm or better on either side. <u>SPO₂:</u> • Range: 30 ~ 100% or better on either side • Neonate and adult probe. <u>Temperature:</u> • Range; 10 -45 °C(50 - 113F) or better <u>NIBP:</u> • Range; 30-260 mmHg (± 10 mmH) <u>GENERAL:</u> • <u>Display:</u> 12” or more Color TFT/ LCD/ LED • <u>Alarm</u> • Alarm: All parameters on/off selective independently • Power input 220VAC,50Hz • With Battery Backup time: Minimum 90 minutes or better <u>ACCESSORIES:</u> <table><tr><td>• ECG 5 Lead cable.</td><td>01</td></tr><tr><td>• Disposable Electrodes Adult, Neonate & Paeds.</td><td>20 Each</td></tr><tr><td>• SPO₂ Finger sensor with fixed or detachable extension (each for adult, Paeds and neonate) cable of minimum 3-meter length.</td><td>01 Each</td></tr><tr><td>• NIBP Reusable Neonate, Paeds & Adult Cuff</td><td>01 Each</td></tr><tr><td>• NIBP Hose</td><td>01</td></tr><tr><td>• AC power code</td><td>01</td></tr><tr><td>• Ground cable</td><td>01</td></tr><tr><td>• Operation Manual</td><td>01</td></tr><tr><td>• Temperature sensor & cable</td><td>01</td></tr></table> Local / Imported wall mounted stand • With one monitor holding capacity • With basket for accessories • Rust free material with powder coating • Adjustable angles for different views. (up/down and right lift)	• ECG 5 Lead cable.	01	• Disposable Electrodes Adult, Neonate & Paeds.	20 Each	• SPO ₂ Finger sensor with fixed or detachable extension (each for adult, Paeds and neonate) cable of minimum 3-meter length.	01 Each	• NIBP Reusable Neonate, Paeds & Adult Cuff	01 Each	• NIBP Hose	01	• AC power code	01	• Ground cable	01	• Operation Manual	01	• Temperature sensor & cable	01
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• Operation Manual	01																			
• Temperature sensor & cable	01																			

9.	Cardiac Monitor (7 parameter ECG, SpO2, NIBP, Dual IBP, TEMP, Resp, ETCO2)	<u>Multi Parameter Patient Monitor</u> (5ch ECG, SpO2, NIBP, Dual IBP, TEMP, Resp.,ETCO2) • Display for easy Viewing 15” or more color TFT/LCD/ LED for easy set-up(with all parameters display) • ECG, SpO2, NIBP, 2-IBP, 2-TEMP, and Respiration • EtCO2 (Side stream type / main stream with basic accessories) • 15 or more Arrhythmias analysis should be detected and alarmed • Multi-lead ECG algorithm • S-T/QT Analysis • Pacemaker detection. • IBP cable and sensor kit • Up to 72 hours of graphic and tabular trend of all parameters, <u>PERFORMANCE:</u> <u>Heart rate:</u> 30 ~ 300 bpm or better on either sides And Ped/Neo:15-350bpm or better <u>Respiration</u> • Respiration rate: 4~150bpm or better on either side. <u>SPO2:</u> • Range: 30 ~ 100% or better on either side • Neonate and adult probe. <u>Temperature:</u> • Range; 10 -45 °C(50 - 113F) or better on either side <u>NIBP:</u> • Range; 30-260 mmHg (± 10% mmHg) <u>GENERAL:</u> <u>Alarm</u> • Alarm: All parameters on/off selective independently • Power input 220VAC,50Hz • With Battery Backup time: Minimum 90 minutes or better <u>ACCESSORIES:</u> • ECG 5 Lead cable. 01 • Disposable Electrodes Adult, Neonate & Paeds. 20 Each • SPO2 Finger sensor with fixed or detachable extension (each for adult, Paeds and neonate) cable of minimum 3-meter length. 01 Each • NIBP Reusable Neonate, Paeds & Adult Cuff 01 Each • NIBP Hose 01 • AC power cord 01 • Ground cable 01 • Operation Manual 01 • ETCO2 (Side stream) with basic acc. 01 • IBP Cable 01 • Temperature sensor & cable 01 Local / Imported wall mounted stand • With one monitor holding capacity • With basket for accessories • Rust free material with powder coating • Adjustable angles for different views. (up/down and right lift)
10.	Defibrillator	• Semi-automatic 200 joules or better biphasic defibrillator with monitor and AED mode. • Synchronized output with ECG. • Control of energy charging/ delivering on main panel and paddle. • The energy range should be adjustable for Paeds and adults up to 200Joules.

		• Charging Time for full energy will be less than 07 sec. • Screen Size of approx. 5.6 inch or more colored. • Display of Heart Rate: 30 to 300 bpm • ECG through Pads / paddles and 3 Lead ECG patient cable with arrhythmia detection • Built in recorder for printing of full summery on standard paper including waveforms, Frozen Waveforms, Event Summary, Tabular Trends, User test, and Configuration. • Alarms for High and low Heart rate, low battery warning. • AC 220V / 50 Hz operated. • Built-in Rechargeable battery with charger • Auto tester/self-check. • External pediatric and adults Paddles, ECG cable with reusable electrodes for adult & Peads. • AED facility. • AED pads • Pacing facility
11.	Color Doppler Machine	Fully Digital Channels with Integrated Data Management System Having 500GB Hard Disk Drive for Still and Cine Clips Storage's • Modes 2D/M-Mode, Doppler, Pw, Hprf Doppler, Color Flow Imaging • System Capability 2 – 16 MHz or more • Tissue Harmonic Imaging • Viewing Depth: 30cms or better. • Frame Rate: 500 FPS or better. • Built-In Cine Loop: 2000 Frames/256 MB or better. • Real time freeze & image magnification ability better than 4x Pre & Post Processing • Sweep Speed: Slow, Medium, Fast • 8" or better Touch Command Screen for easy Operation of the System. • System Dynamic Range: 50 to 180db or better Doppler Mode Specifications: • On Line 3-Ports for Trans-thoracic Probes • Doppler Beam Steering and Bi-Directional Stereo Audio • Color Doppler • PW Doppler Must Be Continuously Steerable In Color Blood Flow Imaging Mode in Real Time • Colorized Spectrum Display • Tissue Harmonic Imaging with Two Frequencies • Built in battery for backup. • 2D Image with Color Flow • Power Doppler • Auto Image Optimization/Quick Scan for Single Button Optimization of All Scanning Parameters Including STC Overall Gain and Doppler Spectrum. • Compound Scanning Using Frequency as Well as Spatial Compounding. • Trapezoid Imaging for Linear Probes Measurement Package: • To provide comprehensive software package for measurement of distance circumference, area, time, depth etc. System Complete with Following Facilities and Accessories: • 19-Inches or better Color Monitor

		Standard Probes: • 2.0 – 5.0 MHz or More Multi-Frequency Convex Probe • 4.0 – 10 MHz or More Multi-Frequency Linear Probe • 4.0 – 10 MHz or More Multi-Frequency TVS Probe STD Recording Devices: • Built-In CD/DVD/USB Recorder for Digital Image Storage • Built-In / Separate Compatible Imported Online Ups (Minimum Backup Time > 10Minutes) • B/W Thermal Printer. (Model/ Make must be mentioned)
12.	CR System (Computerized radiography system) with compatible UPS	Digitizer Exposure size: 14"x17" / 10"x12" / 8"x10" Sampling pitch: • 2 Types: 100 µm to 175 µm or better. Digital Gradation level • 4096 Levels (16-Bit) Processing Capability • 50 Plates / hour or better Console • Image Processing: • Automatic Body Part recognition • Automatic Processing Parameter study. • Image Output: • Maximum: Host: 2ch for Normal, 1ch for backup Printer: 1ch for Normal, 1ch for backup. • DICOM Support: • Basic Gray scale Print Management (SCU) Storage (SCU) • Modality work list Management • Modality performed Procedure step • Gray scale Standard Display Function (Print output) Computer Desktop (as per OEM manufacturer) or • CPU Core i 7 Processor: 3.4 GHz • Bit Processing: 64 Bits • Cache L1-L2: 8MB • With compatible graphics card • CD/DD/Super Drive Support Installed Processor Core i7 Hard Disk: 1 TB • Memory Ram type: DDR3 • Number of memory /Ram Slots: 2 Slots • Memory Ram Size: 8 Giga Byte, supported up to 16 Giga Byte • USB: 06 USB Ports or better Monitor : Medical grade monitor, color TFT (LCD) • Size: 19" or better. • Brightness: 300 Cd/m2 or better. • Contrast Ratio: 2000:1 or better With • Brightness stabilization • Back light sensor. • Power saving mode & • USB Port. • Accessories: AC power cord, Signal Cable, USB cable. <u>Cassettes / Imaging Plates system:</u> Total 08 No's of different sizes cassettes/ imaging plates. • 14"x17" (2Nos) • 10" x 12" (2Nos)

		8" x 10" (2Nos) <u>Laser / thermal printer with dual tray system:</u> - Films Size: 14"x17", 10"x12" 8"x10" - Film: Dry Image recording film - Image Memory: Print Memory (64MB/Standard) Number of Pixels: 50 um or better Image Data Input: 8-Bits /12-Bits. - Output Gradation: 16834 levels (14-Bits) - Image Mode: Pixel Replication / Function Interpolation Process - Processing Capability: 60-Sheets/ hour or better - Protocol: DICOM Print Management. Compatible UPS (model, make must be mentioned)
13.	Cystoscope flexible set with light source complete	CYSTOSCOPE FLEXIBLE SET - Working length: as per user - Distal Tip: 4 .8mm to 5.5 mm - Working channel: 2.4mm or better - Active Deflection: 180° to 210°up,120° down or more - With Passive Deflection. - Light Carriers: 2, - Field of view: 110° to 120° minimum or better on either side. - Depth of focus, 5-50 mm or better. - Complete with grasping forceps, - Fiber optic cable. - Instrument lubricant. - Biopsy port seals, cleaning brush & carrying case - With compatible light source (Xenon / LED) from the same manufacturer. Video System - HD Camera Head compatible with scope, image processor having capability of image storage and transfer in USB etc Medical Grade monitor having display size 21 inch or more should be mounted on trolley. - Voltage source : 220 Vac
14.	Cystoscope Rigid	Video System - HD Camera Head compatible with scope, image processor having capability of image storage and transfer in USB etc Medical Grade monitor having display size 21 inch or more should be mounted on trolley. - Voltage source : 220 Vac 1. ADULT BASIC UROLOGY SET (Separate Prices should be quoted) Cystoscope With Accessories (For Adults) - Telescope 30° Degree, 4mm, Autoclavable length 30cm Cystoscope-Urethroscope Sheath 19 to 25 Fr, with Obdurate Cystoscope-Urethroscope Sheath 17 to 20 Fr, with Obdurate Telescope Bridge with 1 Lockable instrument channels - Grasping Forceps Compatible Double action jaws, Flexible Length 30 to 40 cm Resectoscope With Accessories (For Adults) - Telescope 25°- 30° Degree, 4mm, Autoclavable length 30cm Working element active / passive. - Resectoscope sheath, including connecting tubes for in and outflow 26Fr, Rotatable inner tube with ceramic insulation - Outer Sheath 26 FR Inner Sheath 24 FR Standard Obturator Visual Obturator - Unipolar High Frequency cord, with 4mm plug, Length 300cm Glass syringe 100ml to 150ml - Cutting Loop Urethrotome (For Adults) - Telescope 0° - 12° Degree, 4mm, Autoclavable length 30cm Working element active/ passive.

- Urethrotome Sheath, 21-22Fr, with channel for Fusiform Boogies Obturator, for Urethrotome sheath, 21-22Fr
- Supplementary Sheath, half round to insert a balloon catheter to slip on Urethrotome sheath
- Set of 4-5 Cold knife Stone Punch (For Adults) Stone working element
- Sheath for working element
- Obturator for Sheath
- Ellick evacuator

2. NEONATAL UROLOGY BASIC SET (Separate Prices should be quoted)

CYSTOSCOPE SET FOR NEONATES

- Telescope 0° Degree (1.2-1.9mm)
- Cystoscope Sheath 7.0 -8.5 Fr
- Pediatric Biopsy Forceps Flexible (Compatible with sets 3 Fr)
- Button Electrode (Compatible with sets)
- Cold knife Triangular 3 Fr (compatible with set)
- Hook electrode 3 Fr
- HF Cable

CYSTOSCOPE SET FOR INFANTS & CHILDREN

- Telescope 0°/30°/70° Degree (1.2mm, 1.9mm, 2.7mm)
- Cystoscope Sheath (9.0Fr - 14Fr)
- Adopter with 1 Instrument port
- Insert with Deflector
- Operating (Compact) cysto-urethroscope 50 - 120 Degree (7.5 - 12 Fr) with straight working channel
- Grasping Forceps Flexible 3-5 Fr
- Biopsy Forceps Flexible 3-5 Fr
- Cold knife Triangular 3 Fr (compatible with set)
- Hook electrode 3-5 Fr
- Button Electrode 3-5 Fr
- HF Cable

RESECTOSCOPE FOR NEONATES

- Telescope 0° 300 Degree (1.9 mm)
- Resectoscope Sheath 8-9 Fr
- Instrument port
- Working Element
- Cutting Loop
- Hook electrode
- Coagulating electrode

RESECTOSCOPE FOR INFANTS & CHILDREN

- Telescope 0° 300 Degree (1.9-2.7 mm)
- Resectoscope Sheath 11-13 Fr
- Instrument port
- Telescope Bridge compatible
- Working Element with electrode attachment
- Cutting Loop
- Hook electrode
- Coagulating electrode
- Grasping Forceps 3-5 Fr
- Endoscopic Micro scissors 5 Fr
- Bladder syringe compatible 50-100 ml
- Accessories:
- Sterilization Container

		• Protection Tube 3. PEDIATRIC UROLOGY BASIC SET (Separate Prices should be quoted) OPTICAL URETHROTOME PAEDS • Telescope 0° Degree (1.9 mm) • Urethrotome Sheath 8.0Fr to 11Fr Instrument port compatible with sheath • Working Element • Set of 4-5 Cold Knife (Straight, round, sickle & hook) • Protection Sheath CYSTOSCOPE & RESECTOSCOPE FOR ADOLESCENT • Telescope 0° 300 Degree (2.7 mm) • Cystoscope sheath 14-15 Fr • Resectoscope Sheath 14-15 Fr • Telescope Bridge compatible • Instrument port • Working Element with electrode attachment • Cutting Loop • Hook electrode • Coagulating electrode • Grasping Forceps 5-7 Fr • Cold knife (Straight, round, sickle & hook) • Endoscopic Micro scissors 5-7 Fr • Bladder syringe compatible 50-150 ml 4. URS SEMI RIGID SET (Separate Prices should be quoted) • Uretero-roscope, Autoclavable, Semi Rigid Tip size 6 • 9Fr, Angle: 5-12 degree • Working Length: 43cm • Instrument Channel with lateral offset eye piece or Equivalent Silicone • automatic valve, ø 3.9 mm, 5 pieces / package Rubber cap for • instrument channel • Flexible cleaning brush for instrument channel Grasping • Forceps (Compatible with sets) Biopsy Forceps • (Compatible with sets) • 2-3 prong forceps (Compatible with Set) • Sterilization Tray compatible with sets 5. VIDEO CYSTOSCOPE URETHROSCOPE (Separate Prices should be quoted) Video Cysto-Urethroscope • Sensor steerable Specification: • Working channel inner Diameter 6-6.5Fr • Direction of view 0° • Deflection: UP: 210 Deg, Down: 140 Deg • Angle of view 120° • Sheath size 16Fr • Working length 37cm-40 Cm • Carrying case Grasping forceps • Biopsy forceps, Compatible Pressure compensation cap Leakage tester • Cleaning brush Adaptor • Coagulation electrode, unipolar, 4Fr., length 73cm • Unipolar high frequency cord, with 4mm plug, length 300cm • Sealing for instrument ports and package of 10, single use recommended cleaning brush for
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- instrument ports
- Trolley imported
- Plastic container for flexible endoscopes, suitable for gas and hydrogen peroxide sterilization

6. PNEUMATIC / ELECTRO KINETIC / ULTRASONIC INTRACORPOREAL LITHOTRIPSY SYSTEM (Separate Prices should be quoted)

Pneumatic Intracorporeal Lithotripsy System

- User Mode Set as a single shot or continuous shot
- Output Energy 0-10 bar adjustable continuous or better
- Average Pressure 4 to 5 bars
- Working Air Pressure 0-8 bar compressed medical air
- Frequency of use Max. 15 Hz or better
- Electrical foot pedal
- Power supply cable
- Compressed air supply tube
- Set of connectors for exhaust
- Spare fuses
- Pneumatic Hand piece kit
- Standard Probe of all sizes
- Ø 0.8 mm , length 640 mm or equivalent
- Ø 1.0 mm , length 640 mm or equivalent
- Ø 1.2 mm , length 640 mm or equivalent
- Ø 1.5 mm , length 640 mm or equivalent
- Ø 2.0 mm , length 450 mm or equivalent
- Probe covers for each probe
- Sterilization Methods ETO or autoclave
- Original Trolley
- Medical Compressor Optional

OR

- Electro kinetic Intracorporeal Lithotripsy System
- Highest security for tissue with short stroke
- Precise working through low-vibration hand piece
- Single and continuous pulses controlled by footswitch Handle with Integrated rod
- Autoclavable: self-contained unit handle/rod
- Low-vibration: secure and sensitive handling possible
- Handles with 3 different integrated rods
- 3 intensities, microprocessor controlled 250, 500 and 950 mJ selectable
- Centered micro spark plasmas to keep distances to the tissue and facilitate targeting
- Endoscope protection through rounded edges at the tip of the probe
- No breaking problem compared to laser fiber
- Electrical foot pedal
- Power supply cable
- Electro kinetic Hand piece kit
- Standard Probe of 5 different sizes
- Highly flexible probes but keep their position
- Precisely worked probe tip for reproduceable shock waves
- Original Trolley

OR

- Ultrasonic Intracorporeal Lithotripsy System
- A Powerful Solution with its unique microcontroller-based algorithm
- sophisticated design that transmits more energy to the probe
- The system can also fragment and aspirate stones simultaneously

- Plug-and-play system that saves time
- Self-calibrate within a few seconds before beginning a procedure
- Variety of semi-flexible and rigid probes
- Single-piece design creates a larger suction channel
- Connector prevents probes from bending during a procedure
- Dual-Function Footswitch to fragment
- hard and soft stones using side-by-side
- Standard Probe of 5 different sizes
- Cleaning rod
- Power cord
- Original Trolley

7. INTRACORPOREAL LITHOTRIPTER (COMBINE UNIT OF TWO ENERGIES I.E., PNEUMATIC, ULTRASONIC) (Separate Prices should be quoted)

Consisting Of:

- Dual foot pedal, Compressed air connection, Pneumatic hand piece, ultrasound hand pieces stone
- catcher and a selection of a Pneumatic and Ultrasound, Probes
- Technical specification of Pneumatic Lithotripter

Pneumatic + Ultrasound

- 1 x Main control unit including:
- 1 x holder for stone fragment catcher 1 x Electric foot pedal:
- 1 x Spare tube for the pneumatic hand piece without connector 1 x spare fuses
- 1 x stone catcher Autoclavable, reusable:
- 1 x Ultrasound hand piece set:
- 1 x Pneumatic hand piece set including:
- 20 x pneumatic probes: (5 each or End user to specify)
- 5 x Probe, 2.0 mm, length 425 mm:
- 5 x Probe, 1.0 mm, length 605 mm:
- 5 x Probe, 0.8 mm, length 605 mm:
- 5 x Pneumatic probe 1.0 mm, length 570 mm:
- 20 x Ultrasound probes, Ø 3.3 x 403 mm:
- 1 x Vacuum/Suction set incl.:
- 1 x Suction/vacuum System body:
- 1 x Suction set for Suction/vacuum System (silicone tubing with 2 connecting pieces): 1 x
- Suction/vacuum System tube set including:
- 1 x Suction tube for Suction/vacuum System, Ø 4.0 mm, length 353 mm (to be combined with
- pneumatic probe):
- 1 x Suction tube for Suction/vacuum System, Ø 3.5 mm, length 380 mm: 1 x Length adapted
- pneumatic probe, Ø 1.6 mm, length 453 mm
- 1 x Suction tube for Suction/vacuum System, Ø 1.6 mm, length 595 mm: 1 x Length adapted
- pneumatic probe, Ø 0.8 mm, length 668 mm.
- 1 x roller clamp (set of 2) for adjustment of suction flow in connection. 1 x Compressed air tube
- 3.0 m for the compressor:
- 1 x main cord Europe for power supply:
- 1x Intra corporeal lithotripter pump 1 x Medical Air Compressor
- 1 x Imported Cart
- 1 x Double reusable suction jar set of 2 jars with equal capacity

		• Shock Pulse Handpiece Double Paddle Footswitch Nose Cone • Cleaning Stylet Small & Large Probe Wrench Generator Specifications: • Voltage: 90–264 VAC Frequency: 50/60 Hz • Electro-medical: Class I, Type BF Frequency: 19,500 Hz - 21,500 Transducer with Nose Cone • Diameter: 2 in (4.8 cm) • Length: 7.7 in (19.6 cm) • Weight: 0.99 lbs (0.45 kg) • Cable Length: 10 ft (3 m) Validated Lifetime: 100 Reuses • Integrated probes of both ultrasonic + high frequency bursts of mechanical wave energies to • delivered simultaneously from a single probe with suction control • Lithotripsy Probes Set Reusable: 3 different sizes 8. PCNL SET (ADULT) (Separate Prices should be quoted) Percutaneous Nephroscope Set for Adult PCNL Set • Broad View Telescope with Parallel eye piece, 0/6/12/20/25/30 Deg. • With compatible Instrument channel and instruments • Sealing cap • Sheath 20FR to 27 FR. Or better, automatic locking mechanism distal tip straight, with swiveling • irrigation connector • Obturator Hollow • Telescope dilator 9-27 Fr. • Consisting of: 1 hollow guide rod 6 Fr. And telescope Dilator 30 Fr. • Compatible Stone grasping forceps, and Two / Three-pronged stone grasper • Compatible suction irrigation pump 9. MINI PCNL (Separate Prices should be quoted) Mini PCNL • Consist of telescope 7-12 degree or better eye piece • Operating Sheath Size 7.5 to 12 Fr or better • instrument channel 6.5 to 7.5 fr for instrument and irrigation for mini Nephroscope Continuous • irrigation Nephroscope Sheaths 11-21 Fr • Minimum 3 sizes operating sheath 14-21 with Dilators compatible with the Nephroscope and all • accessories stone grasping forceps, • 2 / 3 prong stone grasper • grasping forceps with alligator Jaw • Compatible suction irrigation pump
15.	Digital Fluoroscopy Unit	COMPRISING OF FOLLOWING: - • Microprocessor Controlled, High Frequency, 01 Tube Rad/Fluoroscopy type X-ray Generator, 1000 mA /150 KV /80 KW. • 90/-25 or more Degree Remote Controlled Rad / Fluoro tilting table, 4-way movement of table top, tube column with Motorized collimator. • 19” Inch or more LCD Medical Grade monitor on trolley. • Overhead rotating anode double Focus x-ray tube • 01 pair of H.T Cable X-RAY GENERATOR • Microprocessor Controlled • High Frequency, 01 Tube Radiography / Fluoroscopy Operation. • Maximum mA Radiography: 1000mA

- Maximum KVp Radiography: 150 KV
 - Minimum KV radiography: 40 KV
 - Power Rating: 80 KW
 - Minimum Exposure Time: 1 millisecond
 - Maximum mA Fluoroscopy: 4 mA or more
 - Maximum KVp Fluoroscopy: 100 KV or better
 - Automatic mains Line compensation
 - Three Point Console
 - Anatomical Programming
 - Automatic Brightness Control
 - Power Requirement: 3 Phase 380/480 V / 50 Hz
 - Integrated Operating console with that of remote-controlled table 90/-25 or more Degree Remote Controlled Tilting table for Rad/ Fluoroscopy
 - Diagnostic +90/-25 or more Degree Remote Controlled Rad / Fluoroscopic Table
 - With 4-way movement of table top.
 - 2 No's 19" Inch or more LCD Medical Grade Monitor (Model and Make must be mentioned) on Trolley.
 - Automatic light control
- Motorized Tilting Table**
- Microprocessor controlled for safety, superior reliability, and real time-check of the equipment, including the self-diagnosis function.
 - Rad/ Fluoroscopy Diagnostic table to offers full patient support for all radiographic and fluoroscopic procedures from +90 degree vertical through -25-degree Trendelenburg with an automatic stop at the horizontal position.
 - Motor driven collimator
 - Remote controlled compression, the compression force, adjustable 80 N or more.
- Flat Panel DEECTOR**
- Detector type: amorphous silicon
 - Active area nominal: 17 x 17 Inch
 - Pixel size: not more than 150 μ m
- Tube Arm**
- Feature of Longitudinal displacement of Tube arm should be available with longitudinal movement of tabletop.
 - Focus-film distance: Continuously variable focus-film distance with preset positions at for very high-quality degree.
 - Oblique incidences: - $\pm$ 40° or better along a longitudinal displacement of 40 cm or better.
 - Motorized Collimator
- Accessories**
- Adjustable height footrest
 - Shoulder rest
 - Handgrips
 - Compression belt
 - Leg support
- X-Ray Tube**
- Rotating anode double Focus x-ray tube
 - Small focus: 0.6 x 0.6 mm
 - Large Focus: 1.2x 1.2 mm
 - Anode heat storage capacity: 600KHU or better
 - Tube Voltage: 150 KV
 - Software: Software must be DICOM supported. Should have the facility to zoom,

		invert image, contrast adjustment, to export patient diagnostic images to usb or CD/DVD and through PACS system, have the facility to show patient ID, name gender, age, and hospital name in the diagnostic image. Works • Electrification, cooling requirement, and cable requirement etc. shall be responsibility of the bidder. <u>Separate Cost: (Optional where required but shall be quoted):</u> Per square feet cost lead lining cost shall be quoted,
16.	Digital OPG X Ray	Digital panoramic (child, adult), view lateral and Bitewing (child, adult) imaging with Ceph and 3D. • X-ray generator: High frequency inverter type. • Modes for child and adults. • Anode Voltage: 60-90 kV or better on either side in steps of 1 to 2KV • Anode Current: 4-12 mA or better on either side • Exposure Time: 4-20sec • Focal spot:0.5mm • Filtration:0.5 mm Al or better • Computer Desktop with 19-inch medical grade monitor and single tray Dicom printer • Sensor acquisition of 12-bit images. • Pixel pitch 100 micron or better • Should have TMJ program, Sinus program, Colored display, should have quick short program • Vertical Movement: Motorized and manual Adjustment • Automatic Patient Positioning • Chin rest Centering: Laser Light • 2 No's Ultra-light Lead Apron for patient and operator: with 0.5mm Thick lead sheet • Input power 220VAC, 50Hz • Compatible UPS for computer system back up time at least 30 minutes. • Height Adjustable stool for patients. Computer Desktop (as per OEM manufacturer) Or • CPU Core i 7 Processor: 3.4 GHz • Bit Processing: 64 Bits • Cache L1-L2: 8MB • With compatible graphics card • CD/DD/Super Drive Support Installed Processor Core i7 Hard Disk: 1 TB • Memory Ram type: DDR3 • Number of memory /Ram Slots: 2 Slots • Memory Ram Size: 8 Giga Byte, supported up to 16 Giga Byte • USB: 06 USB Ports or better
17.	DR system for existing X-ray machines with compatible UPS	Flat panel detector with acquisition software and dry film printer Flat panel detector (model and make must be mentioned) • The Flat panel Detector should be wireless. • Pixel size of 150 Microns or better. • The size (active area) of the Flat panel Detector should be at least 14 x 17 inch. • Image's pre-viewing should be available in about less than 3secs after exposure and the cycle time should be less than 10 seconds. • KV rang 40 ~ 150kVp • The flat panel detector should be able to Rotate/Tilt for various applications. • The flat panel Detector should be fixed in the vertical Bucky Stand Should be in

		position to handle Vertical Chest X Ray, Horizontal Abdominal X Rays applications. • AED Mode should be present. • Easy positioning at the time of out of bucky exposures. • The detector should be able to work at normal room temperature and humidity. • The detector system should not require frequent calibrations on daily start-up • Offered detector should have load bearing capacity of 150 kgs or more. • Backup time Battery • Life of the battery 120 images @ 90 s cycle • Recharging time less than 3 hours • One extra Lithium Battery with the detector should be provide. IMAGE ACQUISITION IMAGE PROCESSING • PC based computerized IMAGE ACQUISITION IMAGE PROCESSING with window-based software. • 19-inch medical grade TFT monitor with high resolution 1K x1K or better Brightness: 300 Cd/m² or better Contrast Ratio: 2000:1 or better With Brightness stabilization • The software has capability to support 2 detectors or more • Image saving in CD/DVD and DICOM format should be possible. • Multi core processor (core i7, 3.4Hz) bit processing 64 Bits, Cache 8MB, special graphic card for medical grade monitor installed in CPU. RAM not less than 4GB and should have image storage disk of at least 1TB internally • The system should have ready DICOM interface and networking capability with PACS. • Post processing function must be available. Measurement Tools, Window Level, Rotate, Repeat / Reject, Magnify, Zoom, Images elaboration with examination specific algorithms • Filming options should be available • Power Supply – 220V, 50Hz. • Dry film printer with at least 2 online film trays, for printing the digital images (Model and brand must be mentioned) • Compatible UPS (model, make must be mentioned)
18.	Echo Machine	Fully digital processing channels with integrated data management system having 500GB hard disk drive for still and cine clips storage. • Modes: • 2d/m-mode, doppler, pw, cw & hprf doppler, color flow imaging • System capability 2 – 16 mhz or more • Tissue harmonic imaging, • Viewing depth: 30cms or better. • Frame rate: 1000 or better. • Built-in cine loop: 2000 frames/256 mb or better. • Real time freeze & image magnification ability better than 4x pre & post processing • Sweep speed: slow, medium, fast • 8” or better touch command screen for easy operation of the system. • System dynamic range: 50 to 180db or better Doppler mode specifications: • On line 3-ports for trans-thoracic probes. • Doppler beam steering and bi-directional stereo audio. • Color doppler • Colorized spectrum display. • Tissue harmonic imaging with two frequencies • 2d image with color flow

		• Power doppler • Auto image optimization/quick scan for single button optimization of all scanning parameters including stc overall gain and doppler spectrum. • Compound scanning using frequency as well as spatial compounding. • Trapezoid imaging for linear probes. • 2D wall motion tracking for strain rate imaging. • Stress echo system. • Upgradeable to contrast harmonic imaging. Measurement package: • To provide comprehensive software package for measurement of distance circumference, area, time, depth etc. And separate software for, cardiovascular including venous doppler study, imt (intima medial thickness) System completes with following facilities and accessories: • 21-inches or better display (lcd/tft). Standard probes: • 2-5 mhz or more multi-frequency sector probe for adult. (model and make must be mentioned) • 3-7.0 mhz sector probe for paed. (model and make must be mentioned) Std recording devices: • Built-in cd/dvd/usb recorder for digital image storage • Built-in / separate compatible imported ups (minimum backup time > 10minutes) • B/w thermal printer. (model/make must be mentioned)
19.	Endoscope System (Adult / Peads)	HIGH-DEFINITION (1920x1080) FLEXIBLE VIDEO ENDOSCOPE SYSTEM System Configuration • HD Video Processor with LED/Xenon Light Source or better. • HD Video Gastroscope (adult and Paeds) • HD Video Colonoscope(adult and Paeds) • HD Video Duodenoscope (adult) • HD Medical Graded Monitor • Endoscopic storage cabinet • Endoscope Disinfector. • Along with trolley that should accommodate the monitor, video processor, and other accessories. • ERCP Table Video processor • HD (1920*1080) or better video Processor • It should have a brilliant illumination. • It should have the ability to provide frozen image. • It should be equipped with flash principle allowing to suppress RSA and achieved improved freeze performance. • Processor should be able to store in trolley • It should have facility for USB port on front and rear panel. • Minimum 3 output ports HDMI/ DVI and SDI • It should also have a facility of internal and external image and video recording. • Button for White balance • It should have Auto-HDR facility to deliver a bright image from the near view to far view and minimizes noise and halation at the same time. • It should have both Digital and Optical image enhancement feature.

- It should have PIP facility.
- It should facilitate DICOM compatibility.

Medical Grade Monitor

- Full High definition 26 inch or more
- Resolution : 1920*1080 or better
- Input voltage: 220VAC , 50Hz
- Interface ports : HDMI/DVI and SDI

Adult Video Gastroscope

- HD flexible Scope
- Capture video/image with resolution of (1920*1080)
- Button for freezing and photography should be available
- Angle of view 140° or better
- Outer diameter insertion tube 9-12 mm
- Instrument channel Diameter 3.5-4.2mm or better
- Working length 1000 mm or better
- Tip deflection/Angulation Range Up 210o Down 90o Right 100o Left 100o or better on either side
- Air/water channels available
- Biopsy forceps reusable
- With standard set of accessories.

Adult Video Colonoscope

- HD flexible Scope
- Capture video/image with resolution of (1920*1080)
- Button for freezing and photography
- Angle of view 140° or better
- Outer diameter insertion tube 9-12 mm
- Instrument channel Diameter 3.5-4.2mm or better
- Working length 1650 mm or better
- Tip deflection/Angulation Range Up 180o Down 180o Right 160o Left 160o or better on either side
- Water jet function available
- Air and suction hose should be available
- Biopsy forceps reusable
- With standard set of accessories.

Adult Video Duodenoscope

- HD flexible Scope
- Capture video/image with resolution of (1920*1080)
- Button for freezing and photography
- Angle of view 100° or more
- Insertion tube outer diameter 11 to 12 mm
- Distal end outer diameter 13 to 14 mm
- Working length 1200 or more
- Instrument Channel 4 mm or more
- Tip Angulation range Up/Down 120°/90° Right/Left 110°/90°

Paeds Video Gastroscope

- HD flexible Scope
- Capture video/image with resolution of (1920*1080)
- Button for freezing and photography
- Angle of view 140° or better
- Outer diameter insertion tube 5-6 mm
- Instrument channel Diameter 2.2mm or better
- Working length 1000 mm or better
- Tip deflection Up/Down: 210/90 or better Right/Left: 100/100 or better
- Air and suction hose should be available
- Biopsy forceps reusable
- With standard set of accessories.

Peads Video Colonoscope

- HD flexible Scope
- Capture video/image with resolution of (1920*1080)
- Button for freezing and photography
- Angle of view 140° or better
- Outer diameter insertion tube 9-11 mm
- Instrument channel 2.8 or better
- Working length 1650 mm or better
- Tip deflection Up/Down: 180/180 or better
- Right/Left: 120/120 or better
- Air and suction hose should be available
- Biopsy forceps reusable
- With standard set of accessories.

Endoscope washer Disinfector

- Automatic disinfection system & should be able to clean all infected areas of endoscopes.
- Compatible with quoted endoscopes.
- Automatic fault alarm, automatic processing function
- Shall be compatible with wide range of endoscope disinfection solutions.

Endoscopic storage cabinet

- Compatible with above Endoscopes
- Front opening/with complete fittings
- Should have capability to store the scopes safely and disinfected.
- Must have UV disinfection.
- Must be suitable for at least 08 number of scopes.
- Must have biometric lock mechanism.
- Must have air drying system.

ERCP Table

ERCP Table with Doctor stool chair

- Electric table for Gastroenterology Procedure
- Length : 6 ft or better
- Width : 2 ft or better
- Elevation :Head and Leg Both Side (Motorized)
- Height Adjustment (Motorized)

		• Compatible with C-arm • X-Ray Permeable table Top • Lockable anti-static casters/wheels for easy & smooth movement • With remote control • Input power 220VA , 50Hz • Mattress 2 inch or more high density water proof, anti bacterial cover. • With 2 Nos of Doctor stool chair All the system should operate on 220VAC, 50Hz and a Compatible online UPS should be provided for the whole system with backup time 30 minutes or better. All standard Maintenance tools and cleaning /lubrication materials where applicable shall be included. Note: The bidder should quote prices of each endoscope and monitor separately. The total price will be calculated for financial evaluation. The bidder must quote video processing unit, Endoscopes, and display monitors High Definition (1920x1080) to be deemed compliant and USFDA Approved; otherwise, the bidder will be deemed non-compliant.
20.	Esophagoscopes instruments set	• Esophagoscopes tube, Appr. Size 1, 6x8 mm (h x w) • WL: 350mm. • Cap with window, proximal illumination insert, Magnifier. • Universal Cap, Straight Handle, Double bellows, • Foreign Body Forceps, alligator jaws, WL: 450mm. • Universal Forceps, WL: 450mm. • Biopsy Forceps, spoon shaped, WL: 450mm. • Retrograde biopsy forceps, WL: 450mm. • Small tumor forceps, cutting WL: 450mm. • Rotation forceps for hard foreign bodies WL: 450mm. • Grasping forceps, for soft foreign bodies WL: 450mm. • Working Length:700mm, • Ultra Slim • Instrument Channel: 3.7 mm. • Deflection (Up/Down):180/90 deg. • Deflection (Right/Left):110/110 deg. • Depth of focus: 5-100mm. • Biopsy Forceps, dia2.1mm. • Injector Cannula.
21.	ETT Machine	Specification: • PC based computerized stress test machine with window-based software. • 12-Channel Stress Test with recording, presentation and Evaluation of ECG. • Manual and automatic event memory • ST-Trend and ST-Level display of all 12 channels. • Display of blood pressure, heart rate and arrhythmia. • QRS-Complex show in a superimposed mode. • Review function at any time during exercise • Standard or individual protocols. • Automatic control of treadmills in speed and elevation in load QRS-Analysis: • Analysis of the stress Test with control of histograms. • ST level and Trend histograms of all leads.

		• Display of QRS complex • Manual ECG with time cursor. • With built-in calipers for measurement control • ECG analysis during exercise Resting software: • Resting ECG software 12 or better Leads simultaneous • Data management software • Rhythm recording in resting mode • QT desperation software • Interpretation Treadmill (Model and Make must be mentioned): • Heavy duty whispers quiet even at high speed • Speed :0 – 22.0 km/h or better • Elevation: 0 ° to 20 ° • AC 220V / 50Hz • Patient weight :200 kg or better • Emergencies stop button • Side and front rail Computer system (Model and Make must be mentioned) or as per OEM: • Branded computer system compatible with Unit. • 19 Inch TFT monitor with resolution of 1024x1024. • Alphanumeric key board and mouse. CPU (Model and Make must be mentioned) or as per OEM: • Intel Core i7 • Processor 8Mb cache 3.40GHz • 16GB RAM DDR3 • 1TB internal Hard Disk • DVD R/W • With Mouse and Keyboard Components: • Dedicated patient cable • Laser printer (Model and Make must be mentioned)
22.	Portable Ultrasound Machine	Portable light weight ultrasound machine • Imaging Mode: B, B/B, B/M, M, 4B, Power Doppler Image, PW Doppler • 12” or more LCD / LED / TFT monitor • Scanning Depth: From 2.0 – 30 cm minimum or more • Internal memory for operating software and data storage. • Cine loop Memory in B/B, M and B/M Mode • Zoom: Pan Zoom in Real Time & Frozen Condition • Measurement Calculation: B-Mode: Distance, Circumference, Area, Volume • Built-in Imaging Archive for storage of Still and Cine Clips • M-Mode, Distance, Time, Velocity, Heart Rate (2 Cycles) • Pulsed Wave Doppler with adjustable gate size • Software Packages: Abdomen, Urology, Gynecology, Obstetrics, Cardiology, Vascular, Small Parts, Orthopedics • Power Supply: 100-240V AC 50/ 60 Hz • TGC: 8-Segment or More • 2 or more active probe connectors • Tissue Harmonic Imaging • USB Ports and BNC Connector for Thermal Printer

		• Measurement and Calculation Software Package Probes • Electronic Convex Array Transducer Quantity 1 • Electronic Linear Array Transducer Quantity 1 • Built-in battery backup of at least 90 minutes or better • Thermal printer • Carrying bag for ultrasound with safe positions for probes • Gel 20 Liters
23.	High End Color Doppler Machine	Fully Digital Processing Channels with Integrated Data Management System Having 500GB Hard Disk Drive for Still and Cine Clips Storage and 128GB or more SSD for operating system and application software. • Modes 2D/M-Mode, Doppler, Pw, Hprf Doppler, Color Flow Imaging • System Capability 2 – 18 MHz or More • Fusion/Tissue Harmonic Imaging • Viewing Depth: 35cms or better. • Frame Rate: 2000 FPS or better. • Built-In Cine Loop: 2000 Frames/256 MB or better. • Real time freeze & image magnification ability better than 10 x pre & post processing • Sweep Speed: Slow, Medium, Fast • 10” or better touch command screen for easy operation of the system. • System dynamic range: 50 to 220db or better Doppler Mode Specifications: • Pulse Repetition Frequency Range; PWD: 1.0 To 18 KHz or better • Doppler Beam Steering • On Line 4-Ports for Trans-thoracic Probes • Doppler Beam Steering and Bi-Directional Stereo Audio • Color Doppler • PW Doppler must be continuously steerable in color blood flow imaging mode in real time. • Colorized Spectrum Display • Tissue Harmonic Imaging with Two Frequencies • Elastography 2D Image with Color Flow • Power Doppler Standard Features • Needle enhancement for biopsy needle visualization • Auto image optimization / quick scan imaging for automatic stc/gain and Doppler spectrum adjustment with optimal image quality by using one touch operation. • B-flow/dynamic flow imaging / e-flow / x-flow • Trapezoid imaging/virtual convex imaging with linear probe • Compound/x view+/aplipure imaging for both frequency compounding and spatial compounding in b/w and color mode • N-sight / adaptive suppression / precision imaging / xflow/ cross beam to enhance b-mode imaging, detailed in layers and boundaries and sharpened outlines of the lesions and reduce cluttering. • 3D imaging for the acquisition of volume data and display of 3D images in b/w as well as color without using a 4D transducer. • B-flow with color XDclear-2/x flow/micro v/superb micro vascular imaging with

		spectral Doppler to clearly show blood flow in tiny vessels, liver capsula, gall bladder wall etc or equivalent. • Live strain rate Elastography / compressed elastography with quantification for body organs specially breast to visualize lesions. • Live Shear wave Elastography with quantification and adjustable area based display for body organs especially liver with convex, linear & TVS probes to visualize tissue stiffness by generating images through shear wave propagation, speed, and elasticity modes. Measurement Package: • To provide comprehensive software package for measurement of distance circumference, area, time, depth etc. System Complete with Following Facilities and Accessories: • 21-Inches or better color monitor Standard Probes: • 2.0 – 5.0 MHz or More Multi-Frequency Convex Probe • 4.0 – 10 MHz or More Multi-Frequency Linear Probe • 4.0 – 10 MHz or More Multi-Frequency TVS Probe • 5 – 15 MHz High Frequency Linear • The bidder should provide one convex and one linear probe compatible with Shear Wave elastography. STD Recording Devices: • Built-In CD/DVD Recorder for Digital Image Storage • Built-In / Separate Compatible Imported Online Ups (Minimum Backup Time > 10Minutes) • B/W Thermal Printer. (Model/ Make must be mentioned)
24.	High End Echo Machine	Fully digital processing channels with integrated data management system having 500GB hard disk drive / SSD for still and cine clips storage, operating system and application software. • Modes: • 2d/m-mode, doppler, pw, cw & hprf doppler, color flow imaging • System capability 2 – 18 mhz or more, m-mode, tissue/fusion harmonic imaging, • Tissue doppler imaging with pulse wave tdi doppler spectrum. • Viewing depth: 40cms or better. • Frame rate: 2000 or better. • Built-in cine loop: 2000 frames/256 mb or better. • Real time freeze & image magnification ability better than 10 x pre & post processing • Sweep speed: slow, medium, fast • 10” or better touch command screen for easy operation of the system. • System dynamic range: 50 to 220db or better Doppler mode specifications: • Pulse repetition frequency. Pwd, Cwd. • Doppler beam steering • On line 4-ports for trans-thoracic probes. • Doppler beam steering and bi-directional stereo audio. • Color doppler • Both cw & pw doppler must be continuously steerable in color blood flow imaging mode in real time colorized spectrum display. • Tissue harmonic imaging with two frequencies • 2d image with color flow • Power doppler

		• Auto image optimization/quick scan for single button optimization of all scanning parameters including stc overall gain and doppler spectrum. • Compound scanning using frequency as well as spatial compounding. • Trapezoid imaging for linear probes. • 2D wall motion tracking for strain rate imaging. • 3D imaging for the acquisition of volume data and display of 3D images in b/w as well as color without using a 4D transducer. • Stress echo system. Measurement package: • To provide comprehensive software package for measurement of distance circumference, area, time, depth etc. And separate software for, cardiovascular including venous doppler study, imt (intima medial thickness) System completes with following facilities and accessories: • 21-inches or better display (lcd/tft). • Ecg including cables and transducers/electrodes. Standard probes • 2-5 mhz or more multi-frequency sector probe for adult. • 2-7 mhz sector probe for paed. • 4-10 mhz or more sector probe for neonates. • 4-10 mhz or more multi-frequency linear probe Std recording devices: • Built-in cd/dvd recorder for digital image storage • Built-in / separate compatible imported ups (minimum backup time > 10minutes) • B/w thermal printer. (model/make must be mentioned)
25.	Hysteroscope	• Telescope 30°, size 2.9 mm (with irrigation connector, for use with Continuous-Flow Operating Sheaths), Working length as per Manufacturer. • Continuous-Flow Examination Sheath, size 3.7 mm, Working length as per Manufacturer, With suction adaptor. • Telescope 30°, diameter 2.9 mm, working length as per Manufacturer, Autoclavable, and fiber optic light connection Incorporated. • Inner Sheath, size 4.3 mm, with working channel for semi rigid 5 Fr. operating instruments and LUER-Lock Tube Connector. • Outer Sheath, size 5 mm with LUER-Lock Tube Connector. • Scissors, semi rigid, blunt, single action jaws, 5 Fr., length 34 cm • Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length 180 cm • Wire tray for cleaning, sterilization and storage. • Scissors, semi rigid, blunt, single action jaws, 5 Fr., length 34 cm • Biopsy and Grasping Forceps, semi rigid, double action jaws, 5 Fr., length 34 cm • Punch, through-cutting, single action jaws, semi rigid, 5 Fr., length 34 cm • Fiber Optic Light Cable, with straight connector, diameter 3.5 mm, length as per manufacturer. • Equipment cart rides on 4 dual castor anti-static wheels equipped with shelves & drawers • (Locally Supply).
26.	ICU Central Station for cardiac monitors	Central Station Monitor for use in intensive and coronary care units. • Unit shall be capable of monitoring a minimum of 8 beds and a maximum of 16 beds. • Shall provide most recent 72 hours of tabular trends and graphic trends for all parameters. • Shall allow instant alarm bed viewing. • Each bed monitor window shall always be displayed.

- The user shall be able to easily configure the display.
- Shall be capable of producing a shift report including graphic trends report, tabular trends.
- Full patient report.

Shall be supplied with the following:-

- Installation Kit including Hub Controller, cabling (according to the need of institution)
- Laser Printer Interface, Laser Printer (Model and Make must be mentioned)

Central Monitor

- Branded monitor for display
- Resolution 4K
- Screen size must be 40" or better.
- Software from same manufacturer with all certificates

Branded CPU (Model and Make must be mentioned):

- Intel Core i5 or better
- Processor 2.40GHz or better
- 4GB RAM or better
- 1TB internal Hard Disk or better
- DVD R/W
- With Keyboard and Mouse

All the parameters displayed on the monitors should also be displayed on the central station monitor and should be compatible with each other.

Multi Parameter Patient Monitor. (Model and Make must be mentioned)

(5ch ECG, SpO2, NIBP, Dual IBP, TEMP, Resp.,ETCO2)

- **Display for easy Viewing 15" or better color** TFT/LCD/ LED for easy set-up
User selective 10 or better traces/ waveform display.
- ECG, SpO2, NIBP, IBP, 2-TEMP, and Respiration
- EtCO2 (Side stream type with basic accessories)
- 15 or more Arrhythmias analysis should be detected and alarmed.
- Multi-lead ECG algorithm
- ST/QT Analysis
- Pacemaker detection.
- IBP cable and sensor kit
- Up to 72 hours of graphic and tabular trend of all parameters.

PERFORMANCE:

Heart rate: 30 ~ 300 bpm or better on either sides And Ped/Neo:15-350bpm or better

Respiration

- Respiration rate: 4~150bpm or better on either side.

SPO2:

- Range: 30 ~ 100% or better on either side
- Neonate and adult probe.

Temperature:

- Range; 10 -45 °C(50 - 113F)

NIBP:

- Range; 30-260 mmHg (± 10 mmHg)

GENERAL:

- Display: 15" or better Color TFT/ LCD/ LED or better (with all parameters display)
- Alarm

		- Alarm: All parameters on/off selective independently - Power input 220Vac,50Hz - With Battery Backup time: Minimum 02 hours or better <u>ACCESSORIES:</u> - ECG 5 Lead cable. 01 - Disposable Electrodes Adult, Neonate & Paeds 20 Each - SPO2 Finger sensor with fixed or detachable extension (each for adult, Paeds and neonate) 01 Each - NIBP Reusable Neonate, Paeds & Adult Cuff 01 Each - NIBP Hose 01 - AC power code 01 - Ground cable 01 - Operation Manual 01 - ETCO2 (Side stream) with basic acc. 01 - IBP Cable 01 - Temperature sensor & cable 01 Note: Prices of Central Station Monitor and Patient Monitor must be quoted separately.
27.	ICU Ventilator (Neonatal& Pediatric & Adult) Compressor	Ventilator, electrically operated microprocessor controlled, suitable for adult / Paeds / Neonate use. - Tidal Volume: 5 ~ 2000 ml or better on either side. - Frequency: 3 ~ 120b/min or better on either side. - I:E ratio: 1:7- 4:1 or better - Inspiratory Time: 0.2-8s or better - Inspiratory Pressure: 6-60 cmH2O or better - Support Pressure: 0-60 cm H2O or better - Pressure Trigger: -10- -3cm H2O, OFF or better on either side - Flow Trigger: 3-9 L/min OFF - PEEP: 1-30 cmH2O - FiO2: 21-100% - Patient Circuit: Autoclavable / disinfectible (adult, Paeds & Neonate) - Supplied with pole clamp. - O2 and Air input hoses - With Humidifier. <u>Modes:</u> Invasive and non-invasive ventilation which could be used inside ICU or outside ICU. - Volume control: CMV/AC , SIMV, PRVC - Pressure Control: CMV/AC, SIMV, CPAP, PS - Mode suitable for weaning <u>Monitoring:</u> - Standard parameters - One Hour or more Built-in Battery Backup - TFT / LCD Monitor Size: 12" or more - Display Loops including Pressure-Volume, Flow-Volume, Flow Pressure, show up to 2 loops simultaneously. - Should operate on O2,Air/ or both - Alarms for Gas failure, RR, Pressure, Apnea, Volume, Low Battery - With built-in Compressor (30 Minutes or more backup UPS) - With Trolley.
28.	ICU Ventilator (Neonatal&	Ventilator, electrically operated microprocessor controlled, suitable for adult / Paeds / Neonate use.

	Pediatric & Adult) Turbine	• Tidal Volume: 20 ~ 2000 ml or better on either side. • Frequency: 1 ~ 80b/min or better on either side. • I:E ratio: 1:7- 4:1 or better • Inspiratory Time: 0.2-8s or better • Inspiratory Pressure: 3-60 cmH2O or better • Support Pressure: 0-60 cmH2O or better • Pressure Trigger: -20- -0.5cmH2O, OFF • Flow Trigger: 0.5-15 L/min OFF • PEEP: 0-30 cmH2O • FiO2: 21-100% • Patient Circuit: Autoclavable / disinfectible (adult, Peads & Neonate) • Supplied with pole clamp. • O2 and Air input hoses • With Humidifier. <u>Modes:</u> Invasive and non-invasive ventilation which could be used inside ICU or outside ICU. • Volume control: CMV/AC , SIMV, PRVC/APCV • Pressure Control: CMV/AC, SIMV, CPAP, PS • Mode suitable for weaning <u>Monitoring:</u> • Standard parameters • One Hour or more Built-in Battery Backup • TFT / LCD Monitor Size: 12" or more • Display Loops including Pressure-Volume, Flow-Volume, Flow Pressure, show up to 2 loops simultaneously. • Should operate on O2,Air/ or both • Alarms for Gas failure, RR, Pressure, Apnea, Volume, Low Battery • With built-in Turbine (45 Minutes or more backup UPS) • With Trolley.
29.	Laparoscope machine for Gynea /OBS and General	Full High Definition Gynea and General Laparoscopy System High definition three chip (3xCCD) / 3xCMOS Camera System • Resolution 1920 x 1080 or better • Camera Console 220V with Universal Coupler. • Pure Digital Signal with FHD video (native resolution) • Brightness Control on Console and camera head • Digital Zoom (should have facility of digital zooming) and White Balance Control on Camera Head • Integrated Gain/Shutter / Enhancement with automatic brightness control Video Output- • DVI (DVI-D & DVI-I), SDI, HD-SDI, • Automatic light source (From same manufacturer) • LED Bulb • Light Adjustment • Standby Mode • Universal Jaw Assembly branded FIBER OPTIC CABLE • 4.8 mm x 240 cm or more Snap fit cable MONITOR • Quantity: 1 • 26" inch or more FHD medical grade LED Monitor (Model must be mentioned) • Full High-Definition Resolution: 1920 x 1080 or more.

- Brightness: 600 Cd/m2 or more.
- Contrast ratio: 300 Cd/m2 or more
- Aspect Ratio: 16:9 or more.
- Brightness stabilization
- Back light sensor.
- Power saving mode & Accessories: AC power cord, Signal Cable.

INSUFFLATOR

- 40 Liter or more of high flow, Microprocessor controlled unit.
- Soft approach pressure control for safe recovery of abdominal pressure
- Gas heating
- LCD based central display monitor.
- Audio visual warning signals
- Smoke evacuation.

Along with stainless steel lockable wheels Trolley

Along with compatible cautery / diathermy.

Adult Laparoscopic instruments for general surgery and Gynae

FHD TELESCOPES, Fully autoclavable with working length 300 mm or better

- Wide angled distortion free view
- Universal adaptor for other light sources
- 0 degree, 10mm,
- 30 degrees 10mm,
- 0-degree 5mm,
- 30 degrees 5mm

Trocars (Long & Standard):

- 5 mm 03Nos each
- 10 mm 03Nos each

Scissor: As per working length

Grasping forceps 03 No

Grasping and dissecting forceps 02 No

L Hook electrode: 01 No

Universal Monopolar cable: 01 No

Insufflation's needle: 01 No

Suction/irrigation cannula 01 No

Clip Applicator 300/400 Clips: 01 No

Needle Holder: 01 No

Uterus Manipulator 01 No

Knot Pusher: 01 No

Reducing sleeve 5mm to 10mm 02 No

Container system for instrument and telescope

Peds Laparoscopic instruments

FHD TELESCOPES, Fully autoclavable with working length 300 mm or better

- Wide angled distortion free view

		• Universal adaptor for other light sources • 30 degree, 4mm, • 0 degree, 5mm • 30 degree , 5mm Trocars (Long & Standard): • 5 mm 02Nos each • 3.5mm to 4 mm 02 Nos each • 10 mm 01Nos each Scissors for peads surgery (3.5-4mm) Grasping forceps (3.5-4mm) 03 No Grasping and dissecting forceps (3.5-4mm): 02 No L Hook electrode (3.5-4mm): 01 No Universal Monopolar cable: 01 No Insufflation's needle: 01 No Suction/irrigation cannula (3.5-4mm): 01 No Clip Applicator 300/400 Clips: 01 No Needle Holder 01 No Uterus Manipulator: 01 No Knot Pusher: 01 No Reducing sleeve 5 mm to 10 mm 01 No Reducing sleeve 3.5 mm to 5 mm 01 No Container system for instrument and telescope Note: Prices must be quoted separately for • Gynea and General Laparoscopy System • Adult Laparoscopic instruments for general surgery and Gynae • Peads Laparoscopic instruments • Monitor. Camera, Monitor and processor should be FHD
30.	Laparoscope machine for Gynea /OBS and General 4K	Ultra-High Definition Gynea and General Laparoscopy System Ultra-High definition three chip (3xCCD) / 3xCMOS Camera System Resolution 3840 x 2160p 50/60 • Camera Console 220V with Universal Coupler. • Pure Digital Signal with UHD 4K video (native resolution) • Brightness Control on Console and camera head • Digital Zoom (should have facility of digital zooming) and White Balance Control • on Camera Head • Integrated Gain/Shutter / Enhancement with automatic brightness control Video Output- • DVI (DVI-D & DVI-I), SDI, HD-SDI, • Automatic light source (From same manufacturer) • LED Bulb • Light Adjustment • Standby Mode • Universal Jaw Assembly branded FIBER OPTIC CABLE • 4.8 mm x 240 cm or more Snap fit cable

MONITOR

- Quantity: 1
- 32" inch or more 4K medical grade LED Monitor (Model must be mentioned)
- 4K Ultra High-Definition HD Resolution: 3840 x 2160 or more.
- Brightness: 800 Cd/m2 or more.
- Contrast ratio: 350 Cd/m2 or more
- Aspect Ratio: 16:9 or more.
- Brightness stabilization
- Back light sensor.
- Power saving mode & Accessories: AC power cord, Signal Cable.

INSUFFLATOR

- 40 Liter of high flow, Microprocessor controlled unit.
- Soft approach pressure control for safe recovery of abdominal pressure
- Gas heating
- LCD based central display monitor.
- Audio visual warning signals
- Smoke evacuation.

Along with stainless steel lockable wheels Trolley (Locally export quality)

Along with compatible cautery / diathermy.

Adult Laparoscopic instruments for general surgery and Gynae

HD TELESCOPES, Fully autoclavable with working length 300 mm or better

- Wide angled distortion free view
- Universal adaptor for other light sources
- 0 degree, 10mm,
- 30 degrees 10mm,
- 0 degree 5mm,
- 30 degrees 5mm

Trocars (Long & Standard):

- 5 mm 03Nos each
- 10 mm 03Nos each

Scissor: As per working length

Grasping forceps 03 No

Grasping and dissecting forceps 02 No

L Hook electrode: 01 No

Universal Monopolar cable: 01 No

Insufflation's needle: 01 No

Suction/irrigation cannula 01 No

Clip Applicator 3 in 1 200/300/400 Clips: 01 No

Needle Holder: 01 No

Uterus Manipulator 01 No

Knot Pusher: 01 No

		Reducing sleeve 5mm to 10mm 02 No Container system for instrument and telescope Peads Laparoscopic instruments HD TELESCOPES, Fully autoclavable with working length 300 mm or better • Wide angled distortion free view • Universal adaptor for other light sources • 30 degree, 4mm, • 0 degree, 5mm • 30 degree , 5mm Trocars (Long & Standard): • 5 mm 02Nos each • 3.5mm to 4 mm 02 Nos each • 10 mm 01Nos each Scissors for peads surgery (3.5-4mm) Grasping forceps (3.5-4mm) 03 No Grasping and dissecting forceps (3.5-4mm): 02 No L Hook electrode (3.5-4mm): 01 No Universal Monopolar cable: 01 No Insufflation's needle: 01 No Suction/irrigation cannula (3.5-4mm): 01 No Clip Applicator 3 in 1 200/300/400 Clips: 01 No Needle Holder 01 No Uterus Manipulator: 01 No Knot Pusher: 01 No Reducing sleeve 5 mm to 10 mm 01 No Reducing sleeve 3.5 mm to 5 mm 01 No Container system for instrument and telescope Note: Prices must be quoted separately for • Gynea and General Laparoscopy System • Adult Laparoscopic instruments for general surgery and Gynae • Peads Laparoscopic instruments • Monitor.
31.	Mammography System (3D)	1. BASIC UNIT: • Swivel arm system consisting of X-ray tube unit, compression device and object table with integrated detector • Motorized, iso centric rotation of the swivel arm with preset rotation angle • The motorized, height-adjustable object table must adjust from examination stand as well as via the foot switch • Motorized and manual compression with pre-selectable compression force • Digital display of compression force and compression thickness • Automatic collimation to the required radiation field size according to the

		compression plate selected • Integrated positioning/collimator light • Function for optimizing compression force • Pre-programmable exposure parameters for optimized patient dose and AEC (Automatic Exposure Control) • Source-image distance: 65 cm or more • Swivel range (motorized): + 180° to – 135° or more • Height adjustment (motorized): 70 cm to 138 cm or better • Grid Ratio: 5:1, 31 lines/cm or more • Magnification factors: 1.5, geometric or better 2. X-Ray Generator: • System with integrated, microprocessor-controlled, high-frequency generator • Power output: 5 kW or better • kV Range: 23 kV to 49 kV or better (adjustable in 1 kV increment) • mAS Range: 5 mAS to 500 mAs or better • Exposure Modes: Automatic or Manual 3. X-Ray Tube: • Mammography X-ray tube unit with dual-focus rotating-anode tube (Molybdenum/Tungsten/Rhodium) • Mammography X-ray tube unit with rotating anode • Focal spot: 0.1 / 0.3 or better • Anode Heat Storage Capacity: 300 kHU or more • Anode speed: As per OEM • Nominal Voltage: As per OEM • Optical Anode Angle: As per OEM 4. Flat Panel Detector: • An integrated Flat Panel Detector • Latest detector technology • Detector size: 24 cm x 29 cm or more • Pixel size: 100 µm or less 5. Acquisition WorkStation • Patient directory • Image processing: Application-oriented (lookup tables) for contrast/brightness, Edge enhancement, Dynamic range control, Noise reduction, Detection of breast border, electronic shuttering • Text/graphic functions: Image orientation label, Image annotation and comment, Length and angle measurement, Interactive zoom and pan, Gray-scale inversion, Split screen function, should the facility to send the image to reporting workstation, • RAM: 16 GB or more • Hard Disk: 1 TB or more for image data • TFT color display Screen size: 2MP 21” or better 6. Reporting workstation: • DICOM interface for image data communication based on the DICOM 3 standard: DICOM Storage (Send/Receive), DICOM Query/Retrieve, DICOM Storage Commitment, DICOM Print, DICOM HIS/RIS.
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		• DVD / CD burner writing of images in DICOM format to DVD/CD • TFT color display Screen size: 3 MP 21” or better, with Artificial intelligent base computerized added detection software and laser jet printer 7. Stereotactic Biopsy Unit: optional price should be quoted • The biopsy unit should be automatic stereotactic biopsy • The biopsy unit should comprise of a hand box for controlling the needle positioning device, a standard needle holder, a face shield to protect the patient from swivel arm movements, and calibration accessories. • The biopsy unit should simply slide onto the object table and must be automatically detected by the machine for biopsies from any projection. • Workflow should be automated with remote tube movements of the stereo pair acquisition controlled from the AWS, and automatic needle positioning • Stereotactic biopsy shall be performed on seated and recumbent patients • Biopsy volume vertical needle guidance • Should have three axes (x, y & z) in vertical approach • Biopsy compression plates with and w/o window for vertical needle guidance • Swivel range of X-ray unit during stereotactic exposure: + 15° and – 15° or better • Biopsy unit Weight: As per OEM 8. 3D TOMOSYNTHESIS: • 3D volumes of the breast shall be displayed in individual slices • Number of exposures during tomosynthesis should not exceed 25 during a scan from various angles • Optimum depth resolution shall be achieved with large angle range and short exposure time • Conventional and tomosynthesis exposures shall be possible during the same examination • Tube angulation: ± 15° or better • Scan time: 25 seconds or less • Number of projections: As per OEM • Pixel size tomosynthesis: 100 µm or less • Display on AWS: Projections: Reconstructed slices, Cine mode, Dose / projection, Dose / scan. • Contrast enhancement mammography option should be available 9. Standard Accessories with Mammography system (Sizes will be as per OEM) • Flexible compression plates: 18cm × 24 cm, 24cm × 29 cm or more • Mag Spot compression plate: 9 cm x 9 cm or more • Wall Holder: Compression Plates • Compression foot/paddle • Two magnifying glass / hand mirrors for viewing • Laser Printer: capable of printing 8×10 and 10×12 Films • X-Ray shield from original manufacturer integrated with acquisition console for protection • Illuminators for viewing mammograms • Memo pads 80 Qty. • Mammography chair • 3 Nos of Lead apron with thickness of 0.5mm
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		- Compatible UPS for whole system with at least 30 minutes backup 15 days on site training <u>UPS:</u> - Compatible UPS should be supplied <u>Separate Cost: (Optional where required but shall be quoted):</u> - Per square feet cost lead lining cost shall be quoted. - Separate rate shall be quoted for Stereotactic Biopsy. - The renovation will also include the installation of lead lining and X-ray protection in the Mammography Room, ensuring full compliance with the Pakistan Nuclear Regulatory Authority (PNRA) guidelines for radiation protection and safety standards.
32.	Mobile C-Arm	Microprocessor controlled High frequency Mobile C- arm machine should provide the excellent image quality at low radiation with the following specification - Output Power: 4.5 KW or better - Radiography & Fluoroscopy KV: 40-110 KV or better with 0.3-20 mAs or better on either side - Technique selector switch for Fluoro & Rad. Mode Selection. - System should have ABC or ADC or ADRC control - System should have auto-Mode and Manual mode for user in fluoroscopy. 21cm x 21cm Dynamic flat panel detector or better - Pixel Pitch : 200µm or less - Anode Double / Single Focus x-ray tube 75 KHU or better - Anode cooling capacity should 35 KHU/Minutes or higher - Focal spot as per OEM - Automatized collimator by focusing on the area of interest to Prevention of unnecessary X-Ray exposure 2 No's medical grade TFT monitors on trolley, Size: 19 inch or better or 1 No medical grade monitor on trolley, Size: 32 inch or better having PIP facility. 12 inch or better touch screen console for easy operation. - Waterproof Footswitch should be available for foot control - Lockable anti-static casters. Software Software must be DICOM supported. Should have the facility to store 20,000 or better images and having last image hold, zoom, invert image, contrast adjustment, to export patient images to USB or CD/DVD and through PACS system, have the facility to show patient ID, name, gender, age, date and hospital name etc. C-Arm movement - Orbital rotation should have 110° or better - Rotation 180° - Switches for up/down movement - Horizontal travel 200mm or more - Motorized Vertical Up/Down 400 mm or more. - Wigwag + 10° or better Power Requirement: 220VAC , 50Hz Accessories 3 Apron lead thickness 0.5mm 3 Thyroid shield lead thickness 0.5mm 3 Goggles and Caps - Stand/Wall Mount for Lead Aprons
33.	Mobile X-Ray	Mobile X-ray machine battery operated, and motor driven by the battery system general purpo

	plant 300 mA/125KV AC & Battery Operated	mobile x-ray unit for radiography. <u>X-Ray Generator</u> • KV Range: 40kv to 125 kV in 01 kV Steps. • mA Range: Max. 300mA or better • mAs range: 1 mAs to 300mAs or better • 30KW or better • Preset anatomical programs (APR) available for different parts of body. • Number of exposures which can be done on fully charged battery should be greater than 80. <u>X-Ray Tube Unit</u> • Rotating anode: Single / Double focus • Focus Size: 0.7&1.3 mm or better on either side. • Anode heat storage capacity : 100 KHU or better X-Ray Beam Limiting Device Projector Lamp: Halogen/LED • Filtration: 1.2mm Aluminum or better. • Column adjustment facility available • Collimator rotation available • Independent battery system for exposure and movement • Transportation mode • Examination mode • Big wheel for easy movement • Brakes for control of movement • Input voltage 100-220VAC, 50Hz • Cassette Box: For Storage of at least 3 Cassettes • 2 No's lead Apron thickness 0.5mm
34.	Nasopharyngoscope with suction	Flexible Naso-pharyngo-laryngoscope for universal application, Immersible. • Outer dia: 3.7mm or less • Working length: 300mm to 400mm, • Total Length: 545mm or better • Deflection up/down: 130°/100° or better • Depth of Focus: 5mm to 50 mm, • Field of view: 75° -85° or better • Complete with compatible light source and fiber optic cable. VIDEO SYSTEM • HD Camera Head compatible with scope, image processor having capability of image storage and transfer in USB etc Medical Grade monitor having display size 21 inch or more should be mounted on trolley. • Voltage source : 220 Vac
35.	Operating Microscope for ophthalmology	• Inclinal binocular tube with converging optics • Paired eye pieces 10xs/12.5 xs • Adjustable / continually motorized zoom. • Motorized fine focusing with foot control. • Objective f=175mm viewing with XY and centration • LED illumination system with variable light intensity control. • UV filter, cobalt blue, and green filters. • Mobile floor stands with manual height adjustment through counter balanced arm.
36.	Phacoemulsification Machine	• Gravity fed fluid delivery; eye pressure determined by height of irrigation source. • Solenoid valving element. Suction: • Peristaltic aspiration pump with reusable tubing sets.

		• 5 to 500 mg Hg vacuum range or better • Flow rate from 2 to 50 cc/min or more. • 25 levels of rise time in U/S mode from 0.5 to 12 seconds or better. Phacoemulsification: • Piezoelectric crystal / Normal standardized handpiece with approx. 40 kHz or better • Panel or linear control of U / S power with system footswitch. • Single burst, multiple burst & continuous burst modes. • Phaco handpiece light weight • Capability of wide range of phaco tips & sleeves. Vitrectomy: • Adjustable cutting speed from 60 to 700 cuts per minute or more. • Single mode cut available. • Vitrectomy guillotine cutter. Diathermy: • Adjustable bipolar power from 5 to 100%. • Linear control with system footswitch. Consisting of: <table><tr><td>Phaco console.</td><td>01</td></tr><tr><td>20Ga Phaco tip, 30o / straight / kelvin</td><td>04</td></tr><tr><td>Silicone sleeve 20G</td><td>05</td></tr><tr><td>Phaco tip wrench</td><td>02</td></tr><tr><td>Re-useable I/A tubing set</td><td>02</td></tr><tr><td>Test chamber</td><td>05</td></tr><tr><td>Disposable drainage bag</td><td>10</td></tr><tr><td>Diathermy bipolar cable</td><td>01</td></tr><tr><td>Diathermy forceps</td><td>01</td></tr><tr><td>Sterilization tray</td><td>02</td></tr><tr><td>Double linear footswitch</td><td>01</td></tr><tr><td>Re-useable phaco handpiece</td><td>01</td></tr><tr><td>Anterior Vitrectomy Cutters</td><td>10</td></tr><tr><td>Pneumatically powered guillotine cutter re-usable</td><td>01</td></tr></table>	Phaco console.	01	20Ga Phaco tip, 30o / straight / kelvin	04	Silicone sleeve 20G	05	Phaco tip wrench	02	Re-useable I/A tubing set	02	Test chamber	05	Disposable drainage bag	10	Diathermy bipolar cable	01	Diathermy forceps	01	Sterilization tray	02	Double linear footswitch	01	Re-useable phaco handpiece	01	Anterior Vitrectomy Cutters	10	Pneumatically powered guillotine cutter re-usable	01
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37.	Sigmoidoscope with universal lighting	Features of Sigmoidoscope: Specifications and Qualifications: • Angle of view field: 100° or more • Diameter of Distal End: ø13mm or less • Diameter of Insertion Tube: ø12.8mm or less • Range of Tip Bending: 180 °U, 180°D, 160 °R, 160 °L • Depth of View: 3-100mm or more • Diameter of Instrument Channel: ø3.2mm or more • Working Length: 750mm to 950mm or better • Working distance: 56mm or more Light Source: • Along with compatible light source (Xenon/LED) power (from the same manufacturer). • Power voltage and frequency ~ 220V/50HZ • Air pump: 0.03MPa= Pressure=0.06Mpa;																												

		Video System: HD Camera Head compatible with scope, image processor having capability of image storage and transfer in USB etc Medical Grade monitor having display size 21 inch or more should be mounted on trolley.
38.	Sinus Endoscopy set with proof puncture needles	- Flexible Sino scope for universal application also in pediatric, immersible - Outer Dia, 3.7mm. - WL400mm or better. - Total Length 650 mm. - Dia of Flexible Section 3.6 mm. - Deflection up/down 180°/90° or better - Depth of Focus 3-50 mm - Field of view 95° or better. - Instrument Channel 1.1 mm Dia. - With proof puncture needles. - With compatible light source (From same manufacturer) and fiber optic cable. Video System - HD Camera Head compatible with scope, image processor having capability of image storage and transfer in USB etc Medical Grade monitor having display size 21 inch or more should be mounted on trolley.
39.	Slit Lamp with Attached Applanation Tonometer	- Binocular Microscope. - With Applanation Tonometer. - Magnification Changer: 2 steps or more. - Total magnification range: x10 to x16 or better. - Papillary Adjustment: 50-80mm or better. - Diopter Adjustment: $\pm$/-5D or better - Light source: LED - Lenses 78D, 90D <u>Slit illumination:</u> - Slit Width: 0-10 mm or more. - Aperture Diameter: 0, 3, 6, 5, 10 mm / continuous - Slit Length: 0.5-10mm. - Slit Rotation: $\pm$/-900. <u>Base movement as per manufacture design:</u> - Vertical Movement - Longitudinal Movement - Lateral Movement - Fine Base Movement. <u>Chin rest:</u> - Vertical Movement - Local motorized table.
40.	Transport / Portable Ventilator for Ambulance:	Transport / Portable Ventilator for Ambulance: - Unit to be used for adult and child ventilation during Cardiopulmonary resuscitation and for ventilation during transpiration, when necessary. - Display size 6 inches TFT touch screen or more - To have frequency control 1 to 100 bpm, - Tidal volume control 20-2000ml - Inhalation pressures monitor 5 to 80 cm H₂O. - Oxygen control 21 to 100%. - Ventilation Modes: V-A/C, P-A/C, V-SIMV, P-SIMV, CPAP, PSV, Apnea, NIV (Non-invasive ventilation) - PEEP facility 1 to 30 cmH₂O or better.

		- I:E Ratio: 4:1 - 1:10 or better <u>Monitoring:</u> - FiO2, MV, MVspn, MVleak, TVi, TVe, TVe spn, Ppeak, Pplat, Pmean, PEEP, ftotal, fmand, fspn, R,C - Alarm settings: Tidal Volume, Minute Volume, Air pressure, Frequency, FiO2, Apnea alarm time 5-60s - Patient circuit silicon Adult and paed's type autoclavable. - With built in battery Backup of 4 hours or more - Input Voltage: 220V, 50 Hz AC /12V DC , - Test Lung Adult / Paeds. - With turbine (Built-in)
41.	Ultrasound machine (General purpose) with inbuilt trolley mounted	Heavy duty U/S machine (inbuilt trolley mounted) with - Imaging Mode: B,B/B,B/M,M - Gray Scale: 256 or better - Display: 15" TFT or better - Scanning Depth: From 20 to 24cm or better on either side - Pre-Processing: Signal Processing, Dynamic Range, Frame Correlation, Line Correlation, - Image Enhancement, Scanning Angle Selection, Harmonic Imaging) - Post-Processing Gray Map Y- Correction, Rejection Left-Right - Reverse, Up-Down Reverse - Storage: 100 still images or better and having USB storage option - Cine Loop: 256 Frame or better Cine loop Memory In - B/B, M and B/M Mode. - Zoom: Pan Zoom in Real-Time & Frozen Condition - Measurement & Calculation: - B-Mode: Distance, Circumference, Area, Volume, Angle, Ratio. - Built-In Imaging Archive "Storage: Over 100,000 still Images" Histogram, Profile, - M-Mode, Distance, Time, Velocity, Heart Rate (2 Cycles) - Software Packages. - Abdomen, Urology, Gynecology, Obstetrics, Cardiology, Vascular, Small Parts, Orthopedics. - Power Supply: 220 VAC, 50Hz - Standard Configurations: Main Unit 3 active Probe Connector. - Tissue Harmonic Imaging. 256-Frame Cine Loop In B, B/B,M& B/M Mood - USB Ports minimum 2. - Measurement and Calculation Software Packages - Electronic Convex Array Transducer. (Model must be mentioned).2.5/3.5/5.0 MHz. - Electronic Linear Array Transducer: (Model must be mentioned) 5.0/7.5/10 MHz. - Thermal Printer (Branded, model and make must be mentioned) 50 Roles Thermal Paper. - With built in/external UPS system for minimum 1 hour backup. - Ultrasound Gel 20Ltr - With built in mounted trolley. Note: TVS probe price should quoted separately (optional)

42.	Tissue Fusion and Vessel Sealing System	• Advance Bipolar seal and cut technology can be used in general surgery, Gyne, urology and thoracic surgery. • Sealing time from 2 to 4 sec or better. • Uniform tissue compression distal to proximal for better sealing. • Tip first closer for retain tissues within the jaws for improved compression. • Jaw to allow simplified navigation in challenging anatomy. • Including items:- Generator 5mm Instrument with for Laparoscopy (Disposable) 5mm Maryland instrument without articulating jaw for Laparoscopy (Disposable) 5mm instrument for open surgery (Disposable) Foot switch Power cord Imported Trolley with wire basket Note: Individual Price shall be quoted for the instruments and will order as per requirement. The total price will be calculated for financial evaluation.
43.	Vital Sign Monitor	<u>Dedicated Vital Sign Monitor with mobile floor mounted stand and holder for accessories (ECG, SpO2, NIBP, TEMP, Resp.)</u> • Display for easy Viewing 5.6" or more color TFT/LCD/ LED for easy set-up (with all parameters display). <u>PERFORMANCE:</u> <u>Respiration</u> • Respiration rate: 2~150bpm or better on either side. <u>SPO2:</u> • Range: 30 ~ 100% or better on either side • Neonate and adult probe. <u>Temperature:</u> • Range; 0 -45C(32 - 113F) or better <u>NIBP:</u> • Range; 15-260 mmHg (± 10mmH) <u>GENERAL:</u> • Alarm: All parameters on/off selective independently • Power input 220VAC,50Hz • With Battery Backup time: Minimum 04 hours or better <u>ACCESSORIES:</u> • SPO2 Finger sensor with fixed or detachable extension (each for adult, Peads and neonate) cable of minimum 3-meter length. 01 Each • NIBP Reusable Neonate, Paeds & Adult Cuff 01 Each • Temperature sensor & cable 01 • AC power code 01
44.	Digital Radiography System	HIGH FREQUENCY X-RAY MACHINE 500 MA (RADIOGRAPHY ONLY) • Input power: 3φ, 380 - 440v, 50 Hz, X-RAY unit Comprising of following. • High Frequency X-Ray Generator 500mA /150 KV / 40 KW or more. • 4 Way Floating top Bucky table Floor to ceiling or free-standing Tube stand. <u>X-ray tube head with;</u> • Focal spot Size 0.6 x 1.2 mm or better on either side • 300 KHU or more. • Manual / Motorized Collimator. • Pair of H.T cable

		• Bucky wall stand. <u>X-RAY GENERATOR RAD TYPE, 01 TUBE SYSTEM</u> • Microprocessor controlled High frequency. • Power: 40 kW or better. • kV Range: 40 - 150kV • mA Range: 10 -500mA • Minimum exposure time: 1 milli second or less • Exposure time range: 1ms – 8.0 sec or more • mAs Range: 02 - 500mAs or more • Should have Anatomical Programming for different body parts • Digital display of parameters. • Hand Switch for Radiography. • With control console. • Pedestal/wall mounted control console. • Automatic main line compensation. <u>ROTATING ANODE, DOUBLE FOCUS XRAY TUBE (model must be mentioned)</u> • Small Focus: 0.6 x 0.6 mm or Less. • Large Focus: 1.2 x 1.2 mm or Less. • Tube voltage: 150kV. • Anode heat storage capacity: 300 KHU or more. <u>X-RAY TABLE (model must be mentioned)</u> • Four-way floating top • Having motorized up down movement • Oscillating Grid Ratio 8:1 or better • Electromagnetic Brakes <u>COLUMNSTAND WITH COLLIMATOR (model must be mentioned)</u> • Column stands with electromagnetic brakes for movement control. <u>HIGH TENSION CABLES:</u> • Pair of High-Tension Cables, each 12 m or more long <u>WALL BUCKY STAND (model must be mentioned)</u> • Vertical Travel, up and down with balancing system & Electromagnetic Brakes • Oscillating Grid Ratio 8:1 or better <u>FLAT PANEL DETECTORS</u> Two (02) Flat panel detectors (one of x-ray table and one for wall stand) with acquisition software and dry film printer Flat panel detectors (model and make must be mentioned) • Pixel size of 140 Microns or better. • The size (active area) of the Flat panel Detectors should be at least 17 x 17 inch. • Image's pre-viewing should be available in about less than 3secs after exposure and the cycle time should be less than 10 seconds. • KV rang 40 ~ 150kVp • AED Mode should be present • The detector should be able to work at normal room temperature and humidity. • The detector system should not require frequent calibrations on daily start-up IMAGE ACQUISITION IMAGE PROCESSING • IMAGE ACQUISITION IMAGE PROCESSING software. • 19-inch or better medical grade TFT monitor with high resolution 1Kx1K or better • Brightness: 300 Cd/m2 or better • Contrast Ratio: 2000:1 or better with Brightness stabilization • The software has capability to support 4 detectors or more • Image saving in CD/DVD and DICOM format should be possible. • Multi core processor (core i7, 3.4Hz) bit processing 64 Bits, Cache 8MB, special
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		graphic card for medical grade monitor installed in CPU. RAM not less than 4GB and should have image storage disk of at least 1TB internally • The system should have ready DICOM interface and networking capability with PACS. • Post processing function must be available. Measurement Tools, Window Level, Rotate, Repeat / Reject, Magnify, Zoom, Images elaboration with examination specific algorithms • Filming options should be available • Power Supply – 220V, 50Hz. • Dry film printer with at least 2 online film trays, for printing the digital images (Model and brand must be mentioned) • Electrification, cooling requirement, and cable requirement etc. shall be responsibility of the bidder. <u>Separate Cost: (Optional where required but shall be quoted):</u> • Per square feet cost lead lining cost shall be quoted.
45.	X Ray Plant 500mA (3-Phase)	HIGH FREQUENCY X-RAY MACHINE 500 MA (RADIOGRAPHY ONLY) • Input power: 3φ, 380 - 440v, 50 Hz, <u>X-RAY unit Comprising of following.</u> • High Frequency X-Ray Generator 500mA /150 KV / 40 KW or better. • 4 Way Floating top Bucky table Floor to ceiling or free-standing Tube stand. <u>X-ray tube head with:</u> • Focal spot Size 0.6 x 1.2 mm or better on either side • 300 KHU or more. • Manual Collimator. • Pair of H.T cable • Bucky wall stand. <u>X-RAY GENERATOR RAD TYPE, 01 TUBE SYSTEM</u> • Microprocessor controlled High frequency. • Power: 40 kW or better. • kV Range: 40 - 150kV • mA Range: 10 -500mA • Minimum exposure time: 1 milli second or less • Exposure time range: 1ms – 8.0 sec or more • mAs Range: 02 - 500mAs or more • Should have Anatomical Programming for different body parts • Digital display of parameters. • Hand Switch for Radiography. • With control console. • Pedestal/wall mounted control console. • Automatic main line compensation. <u>ROTATING ANODE, DOUBLE FOCUS XRAY TUBE (model must be mentioned)</u> • Small Focus: 0.6 x 0.6 mm or Less. • Large Focus: 1.2 x 1.2 mm or Less. • Tube voltage: 150kV. • Anode heat storage capacity: 300 KHU or more. <u>FOUR WAY FLOATING TOP BUCKY TABLE (model must be mentioned)</u> • Four-way floating top. • Oscillating Grid Ratio 8:1 or better • Cassette Tray to accommodate cassettes up to 14x17inch. • Electromagnetic Brakes. • Grid ratio 8:1 or better <u>COLUMNSTAND WITH MANUALCOLLIMATOR (model must be mentioned)</u>

		• Column stands with electromagnetic brakes for movement control. • Manual Collimator <u>HIGH TENSION CABLES:</u> • Pair of High-Tension Cables, each 12 m or more long <u>WALL BUCKY STAND (model must be mentioned)</u> • Vertical Travel, up and down with balancing system & Electromagnetic Brakes • Oscillating Grid Ratio 8:1 or better Cassette Tray to accommodate cassettes up to 14x17 inch
46.	X-Ray Plant 300mA in built or external AVR and UPS	<u>FREQUENCY X-RAY MACHINE 300 MA (RADIOGRAPHY ONLY) with Inbuilt or external AVR and UPS, in case of external AVR the model /brand /make of the main x ray unit and each quoted component must be mentioned.</u> • The AVR must be able to control the voltage between 100VAC to 260VAC, to provide constant output voltage of 220VAC 50Hz. • In case of external AVR and UPS system the AVR/UPS system shall be compatible with the x ray unit for minimum of 70 to 100 exposes on different KV and mA. (Compatibility certificate from the supplier must be provided). • AVR and UPS maximum power, brand model must be mentioned. • With over and under current, voltage and heat protection. <u>X-RAY unit Comprising of following: -</u> • High Frequency X-Ray Generator 300 mA /125 KV / 25 KW or better. • With inbuilt /external AVR and UPS system minimum 70 to 100 exposures or better. • 4 Way Floating top Bucky table Floor to ceiling or free-standing Tube stand. <u>X-ray tube head with:</u> • Focal spot Size 0.6 x 1.2 mm or better on either side • 140KHU or more. • Manual Collimator. • Pair of H.T cable • Bucky wall stand. <u>X-RAY GENERATOR RAD TYPE, 01 TUBE SYSTEM</u> • Microprocessor controlled High frequency. • Power: 25 kW or better. • kV Range: 40 - 125kV • mA Range: 10 -300mA • Minimum exposure time: 1 milli second • Exposure time range: 1 ms – 4 sec or more • mAs Range: 02 - 300 mAs or more • Should have Anatomical Programming for different body parts • Digital display of parameters. • Hand Switch for Radiography. With control console. • Pedestal for control console. • Automatic main line compensation. • Input voltage: 220VAC, 50Hz. <u>ROTATING ANODE, DOUBLE FOCUS X-RAY TUBE(model must be mentioned)</u> • Small Focus: 0.6 x 0.6 mm or better. • Large Focus: 1.2 x 1.2 mm or better. • Tube voltage: 125kV. • Anode heat storage capacity: 140 KHU or more. <u>FOUR WAY FLOATING TOP BUCKY TABLE (model must be mentioned)</u> • Four-way floating top.

		• Oscillating Grid. • Cassette Tray to accommodate cassettes up to 14x17inch. • Electromagnetic Brakes. • Grid ratio 8:1 <u>COLUMN STAND WITH MANUAL COLLIMATOR(model must be mentioned)</u> • Column stands with electromagnetic brakes for movement control. • Manual Collimator • Column stand console with handle having facility of tube rotation(vertical axis), Vertical movement and horizontal movement. <u>HIGH TENSION CABLES:-</u> • Pair of High-Tension Cables, each 12 m or more long <u>WALL BUCKY STAND(model must be mentioned)</u> • Vertical Travel, up and down with balancing system & Electromagnetic Brakes • Oscillating Grid • Cassette Tray to accommodate cassettes up to 14x17 inch. • Grid ratio 8:1. • Electrification, cooling requirement, and cable requirement etc. shall be responsibility of the bidder. <u>Separate Cost: (Optional where required but shall be quoted):</u> • Per square feet cost lead lining cost shall be quoted,
47.	X-Ray Plant 500mA with inbuilt or external AVR and UPS.	<u>HIGH FREQUENCY X-RAY MACHINE 500 MA (RADIOGRAPHY ONLY) with Inbuilt or external AVR and UPS</u>, in case of external AVR the model /brand /make of the main x ray unit and each quoted component must be mentioned. • The AVR must be able to control the voltage between 100V to 260V & to provide constant output voltage of 220V,50Hz. • In case of external AVR and ups system the AVR/UPS system shall be compatible with the x ray unit for minimum of 70 to 100 exposes on different KV and mA. (Compatibility certificate from the supplier must be provided). • AVR and UPS maximum power, brand and model must be mentioned. • With over and under current, voltage and heat protection <u>X-RAY unit Comprising of following: -</u> • High Frequency X-Ray Generator 500mA /125 KV / 32 KW or better. • With inbuilt /external AVR and UPS system minimum 70 to 100 exposures or better. • 4 Way Floating top Bucky table Floor to ceiling or free-standing Tube stand. <u>X-ray tube head with:</u> • Focal spot Size 0.6 x 1.2 mm or better on either side • 300 KHU or more. • Manual Collimator. • Pair of H.T cable • Bucky wall stand. <u>X-RAY GENERATOR RAD TYPE, 01 TUBE SYSTEM</u> • Microprocessor controlled High frequency. • Power: 32 kW or better. • kV Range: 40 - 150kV • mA Range: 10 -500mA • Minimum exposure time: 1 milli second or less • Exposure time range: 1ms – 8.0 sec or more • mAs Range: 02 - 500mAs or more • Should have Anatomical Programming for different body parts

		- Digital display of parameters. - Hand Switch for Radiography. - With control console. - Pedestal/wall mounted control console. - Automatic main line compensation. - Input voltage: 220V, 50Hz. <u>ROTATING ANODE, DOUBLE FOCUS X-RAY TUBE (model must be mentioned)</u> - Small Focus: 0.6 x 0.6 mm or Less. - Large Focus: 1.2 x 1.2 mm or Less. - Tube voltage: 150kV. - Anode heat storage capacity: 300 KHU or more. <u>FOUR WAY FLOATING TOP BUCKY TABLE (model must be mentioned)</u> - Four-way floating top. - Oscillating Grid Ratio 8:1 - Cassette Tray to accommodate cassettes up to 14x17inch. - Electromagnetic Brakes. - Grid ratio 8:1 <u>COLUMN STAND WITH MANUAL COLLIMATOR (model must be mentioned)</u> - Column stands with electromagnetic brakes for movement control. - Manual Collimator <u>HIGH TENSION CABLES: -</u> - Pair of High-Tension Cables, each 12 m or more long <u>WALL BUCKY STAND (model must be mentioned)</u> - Vertical Travel, up and down with balancing system & Electromagnetic Brakes - Oscillating Grid Ratio 8:1 - Cassette Tray to accommodate cassettes up to 14x17 inch - Electrification, cooling requirement, and cable requirement etc. shall be responsibility of the bidder. <u>Separate Cost: (Optional where required but shall be quoted):</u> - Per square feet cost lead lining cost shall be quoted,
48.	Yag Laser	- Laser Wave Length: 1064nm - Mode: Super Gaussion/Q switch - Optical Break Down: 2.5mJ or better in air - Pulse Duration: <4.5ns - Maximum Laser Energy: Single Pulse, 10mJ Double Pulse, 23mJ Triple Pulse, 32mJ or more - Energy Levels: 20 Steps or more - Frequency: Max 2Hz - Focus Diameter: 10um - Angle of exit aperture: 15° to 18° - Aiming Beam: 630nm – 680nm - Focus Shift Variable: +150um, 0, -150 um. - Input Voltage: 220V, 50Hz - Magnification: 5,8,12,20,32x through Galilean changer with 10x eyepiece and tube= 130mm or more - Tube: Parallel Tube f=125 or more with 50-78mm PD adjustment with convergent tube - Eye Pieces: 10X high eyepoint eyepieces with +/- 8D

		• Slit Adjustment: Width 0-14mm or more. • Isolation Transformer: Machine should have isolation transformer for safe handling. • Stand: Motorized, Local made Along with following lenses: 1. Capsulectomy Lens (Compatible with Machine) 2. Iridectomy Lens (Compatible with Machine) 3. Gonio Lens (Compatible with Machine)
49.	24 Hour BP Monitoring machine	• The system should have. 1. Solid State light weight 2. 1 No's Digital Recorders 3. Two Cuffs 4. Artifact subtraction/Noise reduction 5. With USB port / Flash card port/Internal storage • Analyzer with Auto analysis Facility. • Complete with software. • Compatible with PC to get analysis on printer. <u>Branded CPU and Monitor (Model and Make must be mentioned):</u> • Intel Core i5 or better, • Processor 3.20GHz • With Compatible graphics card • 4GB RAM • 1TB internal Hard Disk • DVD R/W • With Keyboard and Mouse • LCD Monitor Size: 17 Inch or more Price to be quoted separately for system and device supplied.
50.	Video Laryngoscope	Blades • Newborn: Miller 0 • Infant: Miller 1 / Macintosh 1 • Pediatric: Macintosh 2 • Adult: Macintosh 3 / Macintosh 4 • Difficult airway intubation: Macintosh 5 Display • 2.5" or better LCD • Resolution: 640×480 or better Camera • CMOS • Serial camera shooting by pressing the button on the handle for training and presenting Uploading • Upload picture and video by USB / memory card • Connects to external monitor and is convenient for training and presentation Power • Battery Type: Rechargeable lithium battery • 180 minutes continuous working time • Charging Port (Power Adapter) Standard Accessories • Carrying suitcase • Reusable video laryngoscope blades all sizes

Low-Tech Medical Equipment

S. No	Nomenclature	Specifications
1.	Air Purification System	• Automatic air purification system • Air purification system for the removal of bacteria, viruses, and Hazardous gases from indoor areas of hospitals, OT/ICU/dental/labs, and Wards. • Air Cleaning capacity 2000 Cubic feet per hour or more • Minimum particle removal size 0.001um or less. • Should have filter less technology. • Cleaning efficiency 99.99 %. • Unit should be wall mounted. • Input Power 220VAC, 50Hz
2.	Air Drill with Cylinder / Orthopedic pneumatic drill with cylinders.	• Modular Hand Piece • Pneumatic hand piece with forward, safe and reverse activated on hand piece. Speed and torque variable with different attachment gear system. Twist Lock quick change attachment • Progressive Trigger Action • Cannulations up to 4 or more • Chuck with Key • Attachment ¼ Jacobs Chuck Size ¼ (4 to 6.35mm) • Fully Cannulated up to 4 or more • Maximum Speed 900 more • Attachment 4.00 mm Jacob Chuck Size 5/32 (4.0mm) • Fully Cannulated • Quick Coupling Chuck • AO Small attachment Stainless Steel • AO Large attachment Stainless Steel • Cannulations 2 to 3.5mm • Hudson Reaming Adaptor • 5:1 Hudson Reamer Attachment Stainless Steel • 4.0 mm or better Cannulations • 5:1 Large AO Reamer Attachment Stainless Steel • 4.0 mm or better Cannulations • 5:1 Reamer attachment Wire Driver • Wire Driver Attachment • Cannulations .8 to 4 mm diameter • Maximum Speed 900 to 12500 rpm or better Pin Driver • Pin driver attachment • Maximum Speed 1250 rpm or more • Pneumatic Oscillating Saw • Operate-able in different positions. • Speed Variable 0-14000 rpm or better • Blade Oscillation Arc 4degree • Saw Blade for Oscillating • St OscilBlade 13.5 x 64 x.6mm, Box of 5 • St OscilBlade 71mm x 19.5mm x1.2, Box of 5 • St OscilBlade 71mm x 33mm x1.2mm, Box of 5 • St OscilBlade 71mm x 19.5mm x 8mm, Box of 5

		• Leg Bone Osc Blade 12.5x73.8 x 63,1.06mm, Box of 5 • St OscilBlade 19.5mm x 86mm x 0.8mm, Box of 5 • St OscilBlade 8.5mm x 38mm x 0.4mm, Box of 5 • St OscilBlade 25.4 x 90 x 1.27mm sterile, Box of 5 • Leg Bone Osc Blade 9.5 x 30 x 0.64, 0.84mm, Box of 5 • Universal House,10" • Nitrogen Regulator Single Connection • Can be operated at forward and reverse mode. • Size 6mm to19mm • Individual complete reversible with tip and solid shaft • T-handle for hand reaming • Sterilization container Complete with Air hose connector, cylinder (Full Size) and pressure regulator.
3.	Arterial Blood Gas Analyzer (POCT)	• Microprocessor control light weight portable machine • Test category: pH, pO₂, pCO₂, Na, K, Ca, Glu, Lac, Hct • Easy to operate. • Measuring time should be less than 15 minutes or better • Sample type: whole blood • Patient data storage facility • With battery backup of more than 1 hour or better • Capable to show result on screen
4.	Autoclave Automatic 100 Liters Sliding door	• Minimum 8 or more sterilization cycles (Vacuumization, Heating, Sterilization, Exhaust and Drying), For (a) wrapped as well as unwrapped instruments, (b) flash sterilization, open, packed. • Single door, high pressure, high vacuum autoclave for sterilizing hospital, materials. • Having fully automated Sliding door. • With Printer • Electrically operated with inbuilt electric steam generator • System should be operated with a high vacuum pump. • Chamber should be made of stainless steel or better material. • 5 inches or more touch screen showing working process parameters, easy control and operation. • Water level indicator • Internal Chamber Capacity: 100 liters or more • Sterilization Temperature Range: 121°C to 134°C or more • Maximum Chamber pressure: 2 bar or more • Chamber Temperature and pressure gauges/display • Cycles run countdown function. • Autoclave should be properly equipped with door safety locks & safety valves for chamber. • With integral alarm system when temperature set-points are exceeded or fallen below. • With Pressure safety valve, over-temperature limiter, over pressure limiter • Low water protection with audio visual indicator • Autoclave should execute Vacuum test, Bowie & Dick test or more. • Should be supplied with compatible plant, with imported parts. • Accessories: Basket 02 Nos Trays 10 Nos All necessary work including plumbing and electrical work will have to be done

		by the supplier. The hospital will only provide space and water outlet.
5.	Autoclave Automatic 150 Liters Sliding door	• Minimum 8 or more sterilization cycles (Vacuumization, Heating, Sterilization, Exhaust and Drying), For (a) wrapped as well as unwrapped instruments, (b) flash sterilization, open, packed. • Single door, high pressure, high vacuum autoclave for sterilizing hospital, materials. • Having fully automated Sliding door. • With Printer • Electrically operated with inbuilt electric steam generator • System should be operated with a high vacuum pump. • Chamber should be made of stainless steel or better material. • 5 inches or more touch screen showing working process parameters, easy control and operation. • Water level indicator • Internal Chamber Capacity: 150 liters or more • Sterilization Temperature Range: 121°C to 134°C or more • Maximum Chamber pressure: 2 bar or more • Chamber Temperature and pressure gauges/display • Cycles run countdown function. • Autoclave should be properly equipped with door safety locks & safety valves for chamber. • With integral alarm system when temperature set-points are exceeded or fallen below. • With Pressure safety valve, over-temperature limiter, over pressure limiter • Low water protection with audio visual indicator • Autoclave should execute Vacuum test, Bowie & Dick test or more • Should be supplied with compatible RO plant, with imported parts. • Accessories: Basket 02 Nos Trays 10 Nos All necessary work including plumbing and electrical work will have to be done by the supplier. The hospital will only provide space and water outlet.
6.	Autoclave Automatic 200 Liters Sliding door	• Minimum 8 or more sterilization cycles (Vacuumization, Heating, Sterilization, Exhaust and Drying), For (a) wrapped as well as unwrapped instruments, (b) flash sterilization, open, packed. • Single door, high pressure, high vacuum autoclave for sterilizing hospital, materials. • Having fully automated Sliding door. • With Printer • Electrically operated with inbuilt electric steam generator • System should be operated with a high vacuum pump. • Chamber should be made of stainless steel or better material. • 5 inches or more touch screen showing working process parameters, easy control and operation. • Water level indicator • Internal Chamber Capacity: 200 liters or more • Sterilization Temperature Range: 121°C to 134°C or more • Maximum Chamber pressure: 2 bars or more • Chamber Temperature and pressure gauges/display • Cycles run countdown function. • Autoclave should be properly equipped with door safety locks & safety valves for chamber.

		• With integral alarm system when temperature set-points are exceeded or fallen below. • With Pressure safety valve, over-temperature limiter, over pressure limiter • Low water protection with audio visual indicator • Autoclave should execute Vacuum test, Bowie & Dick test or more • Should be supplied with compatible RO plant of, with imported parts. • Accessories: Basket 02 Nos Trays 10 Nos All necessary work including plumbing and electrical work will have to be done by the supplier. The hospital will only provide space and water outlet.
7.	Automated Electrolyte Machine with UPS	System consisting of : • Electrolyte analyzer for Na, k, Ca, Cl • For whole blood, plasma, serum, urine • Sample: - blood / plasma / serum • Digital display • Self-diagnostics programmed; system monitoring and maintenance modes • Patient results storage: 120 samples or better QC data storage : 20 or better • With Integral printer • Calibration: Automatic • Connections: USB port and LIS • With startup kit. UPS: • Branded and compatible UPS for at least 30 minutes backup. • Input Voltage : 110-260v 50Hz, Output : 220v 50 Hz.
8.	Automated ESR Analyzer	Microprocessor controlled fully automated ESR analyzer with the following specifications: • Operation: Automated / Manual • LCD screen • Internal thermal printer • Easy operator software, Calibration & Controls • Results time: 30 seconds or less • Result / Hour: 100 samples/hour or better • EDTA blood sample volume: 180 µl or less with automated withdrawal per test and 100 µl or less with manual withdrawal per test. • Simple position: 15 or better
9.	Automatic Blood Bag Shaker	• Microprocessor controlled. • Digital display: For speed and time • Digital speed control 5 to 100 RPM or better • Tilting angle adjustment: 7° to 13° • Timer range: 1 min to 99 hours. • Min. Blood bags: 2 bags • Should measure the blood weight
10.	Baby Incubator	• Microprocessor controlled. • Incubator to have a large double Plexiglas hood with excellent dual viewing panels mobile on lockable castors. • Temperature range: 35 to 37-degree C. • To have an integrated sensor module to collect air and skin temperatures Spo2, oxygen, humidity and pass this information to the display. • 7 inch or more LCD/TFT screen should be available to display relevant

		information. • The sensor module to have a visual alarm facility to complement the audible alarm. • The mattress base to be contoured, x-ray translucent. • To be able to tilt ± 12 degrees or more. • Trend data for 24 hours or more. • The hood to have four doors, two on either side'. Openings with 4 tubing access ports. • The unit to have the temperature, oxygen level and humidity to preset levels. • To have an alarm for all these parameters with a low initial alarm intensity to avoid undue disturbance. • Oxygen to be able to be calibrated from 21% to 65%, • The humidity module to be front loading / side loading and to need filling daily. • The mattress base tilts control to be knobs on the base. • Noise should be ≤ 45dbi. Accessories: Telescopic IV stand. Monitoring shelf, Cylinder holder Ventilator tube support. Spo2 sensor for neonatal
11.	Baby Suction Machine	• Performance : suction controlled 0-600mmHg or more (Adjustable) • Capacity : 30l/min or more • Controls : On/Off switch • Safety : positive pressure restricted • With filter. • Complete with autoclave able receiver jar 1x1000 ml or more(Autoclavable) • Suction tip: 1 No • Suction pipe length 2m, with hose. • Mobile on four antistatic castors • With the over flow safety
12.	Binocular Microscope	<u>Standard Microscope Consisting of:-</u> • Binocular Head Adjustable Inter Papillary Distance • Rotating Quadruple Nose Piece • Adjustable stage with venire Scale And spring clip for slides • Coaxial Controls • Condenser carrier, vertically adjustable • Bright field condenser, NA ,1.25,FlipTop • Light adjustment for condenser • Aperture Iris Diaphragm • Halogen /LED illumination Eye Piece • Lenses:- X10 20mm wide field, focusable • Objective Lenses:- X4 Plain Achromatic X10 Plain Achromatic N.A0.25 X40 Plain Achromatic N.A0.65 X100 Plain Achromatic N.A1.25, • Oil Immersion With following accessories: - Blue iris aperture

		Oiler Dust cover
13.	BIPAP	• Device should have CPAP, BILEVEL S, BILEVEL T, B BILEVEL ST modes. • Once the patient stops breathing the device should automatically switches into the T-mode and provides respiration for the patient in the prescribed safety frequency. • The device should have Alarm indicators. • High maximum pressure 25 hPa./cmH₂O equivalent • Average noise level should be less than 30dB. • With humidifier. • Advanced data management with SD card/internal storage • Simple handling. • Easy to replace filter.
14.	Blood Bag Tube Sealer	• The system should be heavy duty and be able to seal the blood bag tubing quickly and effectively. • Should be simple to handle. • System should gently seal the tubing with no hemolysis using radio frequency. • Should be capable of making wide seal of 2 mm thickness. • The sealing time should not be more than 2 seconds. • Sealing trigger should be automatic. • Should have indication lamps for Sealing Process. • No warm-up time should be required. • Should ensure easy separation of tube segments after the sealing. • Power input 220-240V/ 50 Hz AC
15.	Blood Bank Refrigerator / Blood storage cabinet	• Cabinet to have smooth stainless-steel interior and exterior of AISI 304 S grade. • Outer door to stay open for ease of access and to have assisted closing with magnetic gasket. • With transparent inner door. • With Five or more shelves. • With lockable glass door. • With interior lighting. • 5 inch or better LCD/Digital display for temperature and warning / error messages. • Temperature range: 2 to 8 ±1 degree C • To have seven days chart recorder/microprocessor controlled digital data logger technology. • Alarm for warning and error messages. • USB port with frontal access for data transfer. • Minimum Capacity: 250 x 450 or equivalent in liters to 500cc bag or better. • With Servo controlled stabilizer.
16.	Blood warmer	• Microprocessor control blood /fluid warmer machine. • Should have a digital temperature display of blood. • Should be able to warm fluid/blood to a temperature range of 37- 40 degree C. • Should be able to maintain or warm fluid/blood at a flow rate of 2.5 L/min • Should have inbuilt water tank/ dry in line heating system to warm the infused fluid/blood. • Should have a warm water column or heated sleeve up to the patient end to maintain the temperature up to the point of entry into the vein.

		- Alarms for disconnections, less water and over temperature. - Should be useful for both in adult and Pediatric patients. - Power 220VAC 50Hz Accessories - At least 50 disposable tubing sets for fluid/blood
17.	Coagulation Analyzer	- Display: 5 Inch or more - Testing Channels: 4 or more Independent Channels - Sample type: Plasma - Cuvette Incubation Position: 16 or more - Reagent Incubation Position: 2 or more - Sample Volume: <200 - Reagent Volume: min 20 µL - Wavelength: 405 nm or better - Incubation temperature: 37.0 C ± 1.0 C - Memory: 100 Results Storage or better - Built-in Thermal Printer - Power Supply: AC100-240V, 50/60Hz.
18.	Centrifuge (Bench Top)	Microprocessor controlled centrifuge machine with the following specifications. - Angle Rotor Maximum Speed 5000 rpm or more. - Timing Up To 99 Minute, Continuous. - Programmable by Keypad; 10 Program storage. - Digital Display of Program Speed, Timing, Braking. - Noise 60dB or less. - Lid Safety Interlock. - Angle Rotor, Maximum Capacity 12 X 15ml or better.
19.	Cervical and Lumbar Traction Table	Traction Unit: - Traction: Static, intermittent, cyclic traction/Harmonic - Traction force 15-900 N/1.5-90kg/ 3.4-202 Lbs - User defined Hold, Rest and treatment times. - Traction Period: 59 minutes or more with increment of 1 minute. - Store up to 10 users defined protocols - Voltage supply: 100-240 v, 50Hz Accessories: - With Mobile Traction Stand /inbuilt - Fully adjustable - Allows the Traction unit to be used with most tables - With Cervical Traction - With Lumbar Traction Table (Electrically Operated Table): - Compatible with the traction unit/built-in with traction unit - Three or more section Table. - Easy access foot switch for height adjustment - Size Tabletop: 200 x 65 cm or more - Height adjacent 55-87cm or more - Lifting capacity not less than 150 kg - Power supply: 120-230v
20.	CPAP	- The Device should have 3 levels separately for in- and expiration. - The device should have alarm system. - Pressure Range: 4 – 20 hPa (mbar).

		• Average noise level should be less than 30 dB. • Advanced data management with SD card. • Should have stand-by time, turbine running time, therapy time, filter age counters. • Simple handling. • Easy to replace filter
21.	CTG Machine	• With 7-inch LCD display or more. • Fetus heart rate: 50-240 bpm or better • Manual/auto recording Fetus movement. • Sound and color alarm for high and low fetal heart rate • Continuous 3-4 hrs. real time monitoring function, • Single, twins monitoring. • High resolution built in thermal recorder. • Built in communication port, for connecting to the central monitoring system. • Voltage AC220V, 50Hz. • Output speed: 1 cm/min, 2cm/min, 3 cm/min. • Ultrasound Probe : • Nominal frequency: 2.0MHz or better • Work frequency: 1.0MHz+- 10%. • Compatible with Two Probe (for twins). • Complete with all accessories. • Built in rechargeable battery backup: 3 hour or better
22.	Dehumidifier	• Dehumidifying capacity (at 30°C and 80% RH) : 24 L per Day or better • Water Tank Capacity: 5 Liters • Refrigerant: R290 • Effectively removes moisture, dust from the air • Humidity levels are automatically adjusted • Designed with system Auto shut-off / auto restart • 24-hour timer to set the time of operation • Electronic control Panel • Performs Continuous drainage or 5 L water tank • Supply Voltage:AC 220 V to 240 / 50 Hz
23.	Deionizer	• Automatic regeneration after manual initiation. • Constant monitoring of final water quality. • Solid-state reliability for trouble-free service. • Automatic shut-off in event of power failure. • Compact, non-corrosive components. • Convenient, modular construction. • Easy, economical installation • Conductivity of water 0-3µs/m • Flow: 20 to 30 lph
24.	Delivery table/ D&C Table	• Couch top made of 3 sections i.e. back, hip, and leg sections covered with mattress having raxine / vinyl leather cover. • Leg section removable • Up/down movement through hydraulic system. • Back seat adjustment through handles. • Removable receptacle under the hip area. • Lithotomy poles with tying strips. • Hand grips on both the sides. • Mobile on castors. • Load bearing capacity 200kg or more.

25.	Dental cabinet	• Overall dimension 2.5'(L) x 2'(W)x3' H or more • Rust-free stainless-steel structure finish rounded, edges washable and can be infected. • Push handles one end. • Five or more drawers. • Detachable waste bin with bag holder. • 02 Nos Electrical universal power outlets.
26.	Dental Unit with Chair and regulator (10 KVA)	Comprising of:- • Dental Unit Chair mounted fully motorized Electric / Hydraulic (Electrically operated). • Air turbine high speed, 3 spray system branded (model must be mentioned) • Air motor (3 in1) slow speed with contra angle attachment branded (model must be mentioned) • Triple syringe. • Built-in Scalar • Dental Light : Halogen/ LED • Automatic Cup filler • X-ray film viewer • Cotton holder • Waste receptacle • Oil free branded compressor (model must be mentioned) with tank and regulator. • Motor;1.5 HP • Output;100L/min • Pressure;5-8 Bars • Tank capacity;20 L <u>Assistant Unit:-</u> • Cuspidor bowl with flush system (spittoon) • Saliva ejector • High Power Suction system (Air operated) • Triple Syringe <u>Dental Chair:</u> • Fully automatic motorized Electric/ Hydraulic chair (Electrically Operated). • 4 or more positions, operated on 220V / 50Hz • Motorized motion to raise / lower the seat and back by electro- hydraulic System. • Automatic Back to Zero Position. • Equipped with safety cut out device • Adjustable head rest forward/ backward and up /down movements • Right arm swings in / out for patient ease. • Chair movement is smooth and silent through solenoid valves. <u>Dental Light:</u> • Day light Shadow less dental light. • The light arm is well balanced and adjustable to different heights with variable horizontal and inverse movements. <u>Doctor's Tray:</u> • Moveable over the patient through swing in / out on flexible self-supporting balance arm. • Instrument tray covered with stainless steel lid. • Availability of 4-tubings (Borden 2 holes) • Cotton holder and waist receptacle. • Water on / off Toggle switch and flow control Air / water regulator for hand pieces and triple syringe.

		• Air pressure gauge. • X-ray viewer. <u>Cuspidor unit:</u> • Water outlet services with junction / utility box. • Equipped with automatic and manual cup filler. • Single piece spittoon with solid collector • Bowl's flush automatic and manual. • Triple syringe, • Saliva ejector • High power suction (Air operated) <u>Dentist + Assistant Stool:</u> • Touch Panel Control on assistant side • Gas operated Seat with Shock absorbing. • Adjustable at any height by lever control. • Anatomically designed back rest for maximum lumber support. • Seat with back rest rotatable freely 360deg. • Mobile on 5-castor for smooth movement • With foot supporting facility.
27.	Dental X-ray with sensor	• Dental radiographic unit. • Current: 7mA intra-oral x-ray system or better. • Focal Spot: 0.7 or less • Maximum voltage: 70 KV or better. • With imported mobile stand from the same manufacturer • The Unit shall be mounted on a stand having 360° horizontal rotation. • Also, the multiplex arm has a variety of vertical movements. • Mobile on castors. • Digital dental X-ray sensor, Computer Desktop/ laptop with 17-inch monitors LCD/TFT and DVD/CD writer (optional price quoted separately) • Sensor with minimum 3 m cable or as per manufacturer connects with computer system via USB port. • Sensor (adult and child), Fully waterproof, CMOS technology, • Pixel size 20 microns or better • Active area 20X30 mm or better • Software for viewing image have post processing tools zoom, rotate, contrast adjustment etc.
28.	Portable Dental X-ray	• Dental radiographic unit. • Current: 3mA or better. • Focal Spot: 0.4 or less • Maximum voltage: 70 KV or better. • With Li-on rechargeable battery • With minimum 200 X Rays per charge
29.	Dialysis chairs	• Electrically operated Variable positioning for arm rests should have swinging out as well as up and down moving facility. • Reclining and upright body positions with a smooth shifting to any position. • Comfortable chair type with or without separate section for backrest. Should be a single upholstery unit with soft padding for cushioning and rexine cover. • It should have step less electric remote-controlled backrest & leg rest adjustment. • Adjustable arm rest for patient comfort and doctor friendly • Easily tilted to head low position • Weight bearing capacity 150 kg better • Built-in Battery backup

		• Storage Drawers/trays and back side pouches for storing consumables.
30.	Dialysis Machine	• Color TFT Touch Screen Monitor 10 inches or above. • Computerized programmable with graphic screen • Electronic control of flow rate and blood flow. • Both Bicarbonate and Acetate mode of dialysis application • Automatic control for various set bicarbonate proportions. • Variable Sodium control concentration system. • With Sodium and Ultra filtration Profiles • With bicarbonate Profiles • Variable's temperature control • Programmable Ultra filtration control system. • Ultra-filtration with diffusion • With Ultra filtration rate control, variable and visible on the screen • Balance Ultra filtration control system. • Anticoagulant Management System with bolus option intact program system. • Automatic priming system with full display system • Automatic clean and rinsing mechanism. • Display for services diagnostic and rinsing mechanism. • With automatic thermal disinfection mechanism (up to or 80°C or above) • Blood pump with variable blood flow rate which should be highlighted on the machine. • Heparin pump with automatic start, stop bolus with flow rate 0 to 10cc per hour or better on upper side. • Variable flow rate (300-800ml per min or better on either side) • With adjustable temperature control system, up to 39°C • With venous pressure monitor -50 to 400mm Hg or better on either side. • With Air bubble detector and Alarm system. • Blood leak Detector. • With conductivity control system-both for Acetate and bicarbonate solution • Blood pump capability for both adult and paed. • Real time graphical / display for dialysis treatment /Does delivery (KT/V) • TMP Monitoring • Real time show dialysate pressure. • Real time show dialysate temperature. • Real time show dialysate flow. • With Endotoxin Filter should have auto ON OFF facility. • With battery backup service: 30 minutes or better • With inbuilt integrated real time BPM system • Storage of up to ten patient records • Disinfection history. • Input power 220VAC, 50Hz. Compatible RO plant with storage tank (Rust-free) (locally assembled with imported parts) to run 4 machines at a time, model, make should be mentioned price should be quoted separately.
31.	Distillation water Assembly	• Horizontal thick wall heat resistant Glass boiler fitted with 3 KW chromium placed heater. • High efficiency coil condense ensures low temperature, high output quality • Distillate of conductivity 03 to 04µs/m. • Compact construction suitable for bench and wall mounting. • Screw threads connectors for easy fitting or removal of hose safely.

		- Built-in constant level device with Schott Ventura-Nova Valve for drainage provides easy de scaling without dismantling. - Safety thermostat - Distilled output: 10 Liters or better per 24 hours single distilled. - Power Supply: 220v, 50 Hz Single Phase.
32.	Dry Heat Sterilizer / Hot air oven	<u>Features:</u> - Dust-Free Gravity-Flow convection - For drying, conditioning, Sterilizing and quality control. - Display: Temperature control, timer, alarm. - Automatic on/ off function - Over temperature and current protection. - Leakage breaker, fan motor automatically stops when door is opens. - Rapid Heat up in 25 min up to 240°C - Digital Timer built-in Controller - Capacity: 55-60Liters - Temperature Range: Ambient 30°C to 250°C - Accuracy: +1.0°C - Uniformity: + 3.0°C at 120°C - Timer: Automatic timer 0-99 min,99hr, continuous - Material Inner Stainless Steel - Outer Steel with epoxy powder coating - Shelves: Adjustable 2 or more - Electric Supply 220 V, 50Hz
33.	ECG Machine 3 channels	03 channels ECG Machine - Should be portable and lightweight. - Voltage 220 volts, 50hz - Display 3” or more. - Simultaneous 12 leads acquisition - Must have continuous display of patient heart and rate - Must have integrated pediatric analysis. - Support the 12-lead ECG analysis program for complete ECG Analysis reports with measurement data table should be provided. - Printer: High Resolution and in-built thermal array printer. - Battery Capacity: Must be 1 hours without printing. - Can save up to 50 ECGs in internal memory or more - Complete with Patient Cable. - Reusable Electrodes Set. - ECG Rolls 20 Nos. - Gel 5 liters and Standard Accessories with each unit.
34.	ECT Machine	- Should have constant current bi-directional square wave brief pulses. - Parameters display on LCD. - Should have protection against paddle-to-paddle short circuit or open circuit conditions. - Should have stimulus current from 500mA to 800mA or better on either side. - Frequency: 20-120 Hz or better - Pulse width: 0.3ms-1.5 ms or better - Stimulation duration: 0.05- 8 sec - Power Range: 0.6 to 205 joules (or better on either side), for 220-ohm patient impedance - Should have provision of monitoring EEG before and after treatment. - Output should display in joules.

		• Shock deliver to the patients should be print on paper. • Thermal Chart Recorder provides the user with a hard copy of the self-test and treatment results automatically. Accessories: • EEG, Electrodes • Two electrodes for Electroconvulsive therapy having bush button. • Earthing Wire • Conductive Gel • Instruction Manual
35.	EEG 32 Channels	• 32 channels EEG amplifier • A/D resolution : 16-bit or better • Sampling rate : 2000Hz or more • CMRR: 100dB or more • Input noise: 2 uv or less • Input impedance: 20M ohm or more • With high pass and low pass filters • Brain mapping software (both selective and the whole data base) • Real time programmable spectral analysis. <u>Computer Desktop/ laptop (branded)</u> • CPU Core i 5 Processor: 3.2 GHz. Or better • Bit Processing: 64 Bits. • RAM: 4GB. • Graphic card latest technology • Hard disk 1TB. • DVD writer. • LED Monitor: 19 inch or better • Key board. • Mouse etc. • With associated software. • Printer: laser printer . • Input power 220VAC, 50Hz <u>Accessories</u> Complete with standard accessories including. • EEG Cap adjustable • Bridge electrode • Crocodile electrode/ disc electrode • EEG paste • Trolley/Cart from the same manufacture to accommodate the entire apparatus in addition to the accessories in a secure location. • With Compatible UPS having at least one hour back up for whole system
36.	Electric Amalgamator	• Microprocessor controlled. • Touch pad controls • LED Display • Programmable preset memories • Spring tensions, molded capsule holder • Timer 0-30seconds • Cycle speed 4000CPM or above • Sealed mix area • Accept salt types of capsules including amalgam and incomer. • Power requirements: 220 volts,50Hz
37.	Electric Autopsy	• Hand held

	Saw	• Speed: 10000 RPM or Better • Saw head can be removed and sterilizable • With Safety Switch • Input voltage: 220 VAC Accessories 1. Large Section Blade 2. Small Section Blade 3. Round Blade 4. Deep Cutting Mastoid Blade 5. Spinal Column Blade 6. Pediatric Blade
38.	Electric cautery (Dental)	• 3 different and separate operating functions: • 1-purecut 2-cut-coag • 3-pure coag • Maximum safety for the patient • The electrosurgical units supplied complete accessories: Hand piece, 10 electrodes and ground plate autoclavable. • Voltage: 220 V 50. • Power output 30W or better
39.	Electric Dermatomes	• Corded with a detachable & sterilizable lightweight hand piece power cord / battery operated • Operates on Power input 220-240V AC / battery operated. • Capable of harvesting a graft width of maximum 100mm that can further be reduced to 75mm, 50mm & 25mm by using various graft width plates. • Graft thickness varies from 0.10mm to 1.0 mm and can be adjusted by an adjusting lever with lock system & readings on a thickness scale. • On/off switch on hand piece/Foot control with automatic lock system to prevent accidental activation. • Easy and safe dermatome blade replacement. • Economical & readily available dermatome blades. Accessories: • Complete Set Dermotome • Motor Cartridge/Cable • Power Supply Control Box • Power Cord • Blade (Single Use) Qty as per standard • Graft Plate 25 mm • Graft Plate 50 mm • Graft Plate 75 mm • Graft Plate 100 mm • Sterilizing Box
40.	Electric Ripple mattress	• Alternating pressure mattress with support area of 1720mmX 850mm or more. • To contain 14 or more air cells with variable geometric section. • The material to contain an anti-bacterial agent. • To have a reinforced base sheet membrane with removable cells and protective cover. • Within built compression pumps having equalizing device to prevent over inflation. • Cycle time to be 8 minutes or more • With CPR Valve / emergency pressure release. • To have a low-pressure indicator. • To be supplied with a case having handles for easy storage.

		• Weight 150kg or more • With five spare cells.
41.	Electric surgical unit Diathermy	<u>Electro surgical unit 400 watts with the following functions</u> • PURE CUT, • BLEND(1),BLEND(2),BLEND(3) • COAG1 (spray), COAG2 (contact) and AUTO BIPOLAR, FOOT SWITCH BIPOLAR. • Microprocessor controlled. • Percentage output digital display shows on front panel. • Automatic bipolar output without using footswitch • Multi mono polar outlets, two hand control outlets and one Laparoscope outlet. • Hand or foot operated. • With bipolar output power profile to provide good resolution to permit small changes in power levels for delicate work. • Adaptive REM Monitoring: • With REM facility • Alarm enables in case of nonpolar output disables. • Technical Specifications: • Output Power - PURECUT 400W at300Ω - BLEND1 300W at300Ω - BLEND2 250W at300Ω - BLEND3 200W at300Ω - CONTACT COAG 120W at 500Ω - SPRAYCOAG 70W at 300Ω - BIPLAR COAG 80W at100Ω - BIPLAR CUT 80W at100Ω. - Operating Frequency: 300KHz $\pm$10% or better - Input Voltage: 220V, 50Hz Standard Accessories 1. Footswitch 2 pedal with cable 2. Footswitch 1 pedal with cable 3. Disposable Foot switching pencil with cable 4. Disposable 2 push button monopolar pencil with cable and electrode 5. Reusable Bipolar forceps and Cable asset 6. Reusable patient plate with cable for adult 7. Set of electrodes (6 Pieces) for reusable and disposable handle 8. Power cable 9. Locally manufactured trolley
42.	Electro Mechanical Operation Table	General Design: • The tabletop should be 100% radiolucent material & X-Ray access. • 5 sections table plate • Load capacity should be no less than 200kg • The table should be water-proof and anti-static material and can be washed by water directly. • The thickness of the mattress should be 50mm or more • It should have a battery inside the table, which can work 40-80 operations and the battery should be standard configuration. • It should have electric longitudinal shift function not less than 200mm towards foot side. • The rails and the column of the table should be made of high level of aluminum

		alloy. - Length of the table: 2000 mm or better - Width of the table with rails: 540 mm or better - The thickness of mattress: 50mm or better Electric Function: - The lowest position: 680 mm or better - The highest position: 1030 mm or better - Longitudinal shift: 200 mm or better - Lateral Turn left: 15° or better - Lateral Turn right: 15° or better - Trendelenburg position: 25° or better - Reverse Trendelenburg position: 25° or better - Back plate up position: 70° or better - Back plate down position: 40° or better - Flex position: 220° or better - Re-flex position: 110° or better - Build-in elevator: 120 mm or better - Leg plate up: 20° or better - Leg plate down: 90° or better - Leg plates spread: 180° or better - Battery operated and all positions and angles must be controlled with remote. - Head plate up: 30° or better(manual movement) - Head plate down: 45° or better(manual movement) Standard Accessories: - Mattress set, Pair of arm rest with quick dis-connectable clamps. - Adjustable head rest. - Pair of shoulder supports. - Lithotomy pole with universal swivel clamps. - Anesthesia frame 1 Nos - Infusion rod 1 Nos - Footrests 2 Nos. - Side supports 2 Nos Note: ± 10% of degrees and measurement's will not be considered as deviation.
43.	Electro-therapy unit	- Microprocessor control - Stimulation channels: 4 with independent - Current intensity. Output stage: CC current controlled. - Stimulation Type: Synchronous and Asynchronous Stimulation pulse duration: 50µs - 500µs or better - Stimulation frequency: 1Hz – 200Hzs or better. - Input power 220VAC, 50Hz - Accessories: - Adhesive and conductive electrode 45 X 50 mm (10) Adhesive and conductive electrode 50 X 90 mm (10) or better - Patient cable. - Rubber electrodes 60 X 80 mm (1 pair) - Moist pads for rubber electrodes (1 pair) - Adapters for rubber electrodes (1 pair)
44.	Semi-Automated Elisa Machine (Reader, incubator shaker and Washer)	Consisting of The Following Components. For micro plate assay. Plate Reader: Eight channel vertical light path filter photometer

	Programmable with UPS	• End point and kinetic reading modes • Software for calculation modes • Storage for up to 96 assay protocols • Range 400 to 670nm • Bandwidth up to 10nm • Accuracy $\pm 2\%$ • Precision 0.5% • Reading speed 5 secs/ plate or better • RS232 interface or USB interface Incubator / Shaker: • Digitally operated 8-speed or better shaker. • Can hold two 96 well micro plates for mixing and / or incubating • Temperature modifiable from ambient to 40°C with 0.1°C increment • With lid for light protection • Digital timer controls shaking. • With LED display Washer 8/12 channel: • Micro plate washer to deliver washer buffer and ensure complete liquid removal. • Minimum plates 96 • Programs for flat, round and V type plates. • Automatic plate detection • Auto alignment and row detection • Complete with wash, rinse, waste bottles and piping. UPS: • Branded and compatible UPS for at least 30 minutes backup. • Input Voltage: 110-260v 50Hz, Output: 220v 50 Hz. The bidder will provide kits for HCV, HBsAg, HIV patients along with the machine free of cost at the time of installation
45.	Fully Automated Elisa Machine with UPS	Benchtop Fully Automated Eliza Machine A fully automated ELISA (Enzyme-Linked Immunosorbent Assay) system that automates the entire ELISA process, from sample handling to result analysis. System Specifications • Number of Plates: 4 or more • Sample Capacity: 96 or more • Level sensor detector: Electronic • Continuous Sample Loading: Yes • Sample Tube Size: 10 mm – 16 mm diameter / 55 mm – 100 mm height or better • Liquid Level Sensing: Yes (reagents, controls and samples) • Level Sensor System: Pressure differential • Clot Detection: Yes • Dispense Anomaly Detection: Yes • Tip Detection: Yes • Electronic Signature Pipetting: Yes • Alarms: Yes • With Sample Tip Capacity • With Reagent Tip Capacity • Voltage: 220 – 240 V • Frequency: 50/60 Hz Incubator Specifications

		• Capacity: 4 independent chambers • Temperature range: 5°C above room temperature to 50°C • Accuracy: $\pm 1^\circ\text{C}$ mean of plate • Shaking: Longitudinal • Temperature monitoring: Yes Reader Specifications • Photometric Range: 0.000 – 3.000 OD or better • Spectral Range: 405 nm – 690 nm or better • Filter Slots: 5 wavelengths on board or more • Accuracy: ± 0.01 OD or 2.5% or better • Read Time: < 10 seconds and <20 seconds (single and double wavelength) Washer Specifications • Manifold Configuration: 8-way • Programmable Volumes: 200 μL – 1000 μL or better • Wash Buffer Capacity: Up to 4 wash bottles at with level-sensing • Residual Wash Volume: < 3 μL and <4 μL per well U shaped and flat-bottom plate • Dispense pressure: As per requirement • Waste Container: 8 L or more with waste full sensor System and Software • Standard specification or system recommended by OEM • CPU Core i 5 Processor: 3.2 GHz. Or better • Bit Processing: 64 Bits. • RAM: 4GB. • Graphic card latest technology • Hard disk 1TB. • DVD writer. • LED Monitor: 19 inch or better • Key board. • Mouse etc. • With associated software. • Printer: laser printer . • Operating Software: Windows XP • Work Protocols (Assays): Unlimited (as per capacity) • Data Processing: Quantitative and qualitative UPS: • Branded and compatible online UPS for the system for at least 30 minutes backup. • Input Voltage : 110-260v 50Hz, Output : 220v 50 Hz. The bidder will provide kits for HCV, HBsAg, HIV patients along with the machine free of cost at the time of installation
46.	EMG 4 Channels	EMG/ NCS, NCV and EP along with complete accessories. EMG • A/D conversion resolution: 12 Bits or better • Input Impedance: > 1000M OHM • Sensitivity: 1μV-10mV/Grid or better • Common-mode rejection ratio (CMRR): ≥ 100 dB • Low Cut Filter-frequency: 0.1Hz or better • High Cut Filter-frequency: 20kHz or better • Notch Filter 50Hz/60Hz

		• With Junction Box • Stimulated Single Fiber with graphic analysis • QEMG NCV • Motor NCS • Sensory NCS • Advanced Repetitive Stimulation Analysis (RNS) • F-Wave study • H-Reflex study • Blink Reflex study • Sympathetic Skin Response • Heart Rate Variability Evoked Potentials (EP) • Auditory Evoked Potentials (AEPs) • Somatosensory Evoked Potentials (SEPs) • Dermatomeal SEP (DSEP) • Visual Evoked Potentials (VEPs) • Electroretinogram (ERG) Computer Desktop (branded) / Manufacturer recommended system • CPU Core i 5 Processor: 3.2 GHz. Or better • Bit Processing: 64 Bits. • RAM: 4GB. • Graphic card latest technology • Hard disk 500 GB. • DVD writer. • Printer: laser printer. • Genuine anti virus • FHD Monitor 19 inch or better. • Key board. • Mouse Accessories: • EMG Interface / Junction Box 01 • NCV and EP Along with accessories • 26G Concentrate Needles 25 • Needle Holder 01 • NCS Cable Reusable 01 • Ring Electrode 03 • Surface Electrode 50 • Ground Electrode 01 • Trolley/Cart from the same manufacture to accommodate the entire apparatus in addition to the accessories in a secure location. • With Compatible UPS having at least one hour back up.
47.	ENT workstation (Examination +treatment)	Main Unit • Durable casing, non-rusting, long lasting • Large instrument surface made of stainless steel with dividers and heating system to heat the instruments, laryngeal mirrors and endoscopes. • Device to Heat the laryngeal mirrors. • Compressed air system continuously adjustable for spray with autoclavable nozzle for cleaning. • Handle for compressed air. • Medication reservoir be made of stainless steel, should be detachable and suitable

		for all type of medications. • The system should have variable compressor inletting air. • Compressor unit should be completely separate from suction unit. • Inbuilt motor suction unit with capacity of 35 liters per minute • Should have a vacuum gauge, bacterial filters, 1.5 liters liquid container and effective device to prevent overflow. • Suction tube should have automatic on off switch and small ear rinse funnel. • Warm water rinsing Device with autoclavable stainless-steel handle with snap closure system and fine spray regulation valve. • Separate stainless steel to prevent mineral build up and heat up to 37-degree temp. • Cold water irrigation through existing water connection • Automatic liquid container discharge system should be provided. • Dispenser for cotton and paper. • Provision for attachment of microscope. • Endoscopy center with cold light source with two outlets with 150 LED/XENON/HALOGEN light bulb. • Head light with fibro-optic cable to be used with above light source for examination • Head light rest made of stainless steel • Two warming quivers for rigid endoscope-should be removable for autoclaving and cleaning • Automatic on/off switch for single light outlet with light barrier • Power supply 220-240 volts/50 Hz • Mono and Bipolar cautery system with all cables & probes/forceps. RIGID ENDOSCOPES • 4mm/ 30 degree nasal endoscope ---- Qty 1 • 2.7mm/ 30 degree nasal endoscope-----Qty 1 • Magnifying 90 degree Laryngoscope with facility to focus manually----Qty1 • Ear telescope 3mm-diameter/ 6cm length/ 0 degree---Qty 1 • All above endoscopes should be autoclavable/Sterilizable and should have the facility to couple with HD camera head for record, take images and transmit the same monitor for better visualization. ENT EXAMINATION MICROSCOPE: • The ENT examination microscope with integrated, fanless high transmission, high performance LED illumination in the microscope head. • Integrated, finless high performance white-light-LED • Mechanical support arm for the microscope • Expandable with scale projection at the image plane • Objective: 200 mm, (fine focusing) • Objectives with manual fine focusing Visualization: • ENT Microscope should have the facility to couple with HD camera head for record, take images and transmit the same monitor for better visualization. • wide-field eyepiece 5x magnification • The ENT microscope should be attached/ mounting with main ENT unit. Display and recording system. • High resolving 1/3" CCD camera easily attachable with endoscope and microscope. • It should have the facility during examination hold/pause the image • Recording of images and videos in HD digital formats. Easily transferable to External hard drives and USB pen drives/storage cards without losing resolution. • High light HD-LED monitors 21 inch or better.
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		ENT PATIENT EXAMINATION CHAIR • Should be motorized and ergonomically designed examination and treatment chair facilitating the posture of both doctor and patient • Heavy base casing • All elements of chair should be shaped according to the patient position. • Seat should have motorized lifting device • Seat should have height adjustment for children • Integrated foot switch for easy adjustment of height • Should have complete rotation 330 degree or better with locking device • Should be comfortably padded and folded back for enabling easy sitting of overweight and handicapped patient • Head rest-15cm with adjustable height or as per manufacturer • Backrest adjustable and can be made to incline backward completely to a horizontal position and can be rolled back • Movement of armrest and footrest should be synchronized with backrest movement • Power supply:220VAC V, 50H DOCTORS EXAMINATION CHAIR • Wide base, should have rolling casters for easy movement • Should have back rest • Easy height adjustment of hydraulic nature • Comfortably cushioned seat.
48.	Fracture Operation Table with Ortho Traction Attachment	General Design • Stable base construction with four castors for easy movement. • Manual base brake, lateral tilt and Trendelenburg adjusted by hand crank, base cover, side rails, accessories & clamps made of stainless steel. • Table Top • Divided into 5 sections including head plate, back plate, seat plate and split leg plates. Table top elevation controlled by hydraulic system, with sliding table top 30 cm or more for unrestricted image intensifier access with 360-degree rotation. With side rails for the insertion of X-Ray cassettes (must equipped with acrylic sheet plates for X-ray radiography). • Length: 190-200 cm or better • Width: 50 cm or better • Height: 75-95 cm or better • Trendelenburg / Reverse Trendelenburg: +20°/-20° each • Lateral Tilt Left/Right: 20°/20° each • Head plate: +40°/-40° Standard Accessories: • Mattress set. Pair of arm rest with quick dis-connectable clamps. • Designed for easy installation and removal. • Adjustable head rest. Pair of shoulder supports. • Lithotomy pole with universal swivel clamps. • Anesthesia frame 1 each • Infusion rod 1 each • Foot rests 2 each • Side supports 2 each • With inbuilt Kidney Elevator Facility. <u>Attachment:</u> • Traction stopper with mattresses. • Castor with break device

		• Vertical evaluator lock handle. • Traction crank • Reaction foot boot. • The tractor range is 200 mm and elevation range 200 mm. Note: $\pm 10\%$ of degrees and measurement's will not be considered as deviation. Note: Bidders must quote the OT table and Ortho traction attachment prices separately.
49.	Fully Automated Chemistry Analyzer with UPS	Microprocessor based windows internal or external operated system • Samples / Hour: 180 or more tests, up to 220 or more tests/hr with ISE. • Sample Tray with 40 or more sample positions for primary tubes and test tubes. • Regent position 32 or more • Sample Volume: 2 μL – 30 μL • Probe Sensors: Liquid level detection and collision protection. • Probe cleaning: Automatic washing. • Wavelengths: 340nm to 670nm. • Absorbance Range: 0.0001 Abs units to 3.0 Abs. • Data Storage: 1800 or more (patient results) 50,000 or more (test results) • Port: RS-232. • 220 V, 50 Hz AC operated. • With integral or external printer (Model must be mentioned) Accessories • Sample cup's reaction cures: 2000 • User manual • Operation Software. UPS: • Branded and compatible UPS for at least 30 minutes backup. • Input Voltage: 110-260v 50Hz, Output: 220v 50 Hz. The bidder will provide kits for 100 patients along with the machine free of cost at the time of installation
50.	Fully Automated Immunoassay Analyzer with UPS	Microprocessor based windows internal or external operated system Minimum 60 or better parameters including but not limited to: Thyroid, Infectious diseases, Diabetes, Tumor markers, Bone metabolism, cardiac marker, Torch, Fertility / endocrine hormone, anemia etc. • Test / Hour: 180 or better • Sample positions 40 or more / continuous loading • Regent position 8 or more / continuous loading • Minimum Sample Volume: 10 μL • Regent Probe Sensors: Liquid level detection and collision protection. • Data Storage: 50000 or more (patient /test results) • Port: RS-232. • The machine should have the facility to connect with LIS. • 220 V, 50 Hz AC operated. • With integral or external printer (Model must be mentioned) Accessories • Sample cups qty 2000 • User manual • Operation Software. UPS: • Branded and compatible UPS for at least 30 minutes backup. • Input Voltage: 110-260v 50Hz, Output: 220v 50 Hz. The supplier will provide kits for 100 patients along with the machine at the time of

		installation
51.	Glucometer	• Glucose monitor, battery operated, hand held, complete with case. • Lancet holder with lancets and glucose monitoring strips. • The supplier to ensure the availability of strips. • To be supplied with 1000 strips • Separate price must be quoted for strips.
52.	Gynae Vacuum Suction Apparatus / vacuum extractor with trolley	• To be used in fetal vacuum extraction. • Neonatal endotracheal amniotic fluid suction. • Surgical suction during operation and uterine aspiration for abortion with super suction curettes. • 2 Suction Bottles, each 2500cc or better. • Vacuum pressure 650mmHg or more • Flow capacity: 40lit/min or above. • Automatic over flow cutoff. • Foot switch. • Tray for instruments • Rubber tube 2 meter • Curettes, large, Medium, and Small • Mains input supply: 220 volts, 50Hz
53.	High Performance Liquid Chromatography (HPLC) System	• Method: Ion Exchange High Performance Liquid Chromatography • Automatic sample entry, on board capacity of 50 samples or more with continuous loading • Barcode reader • Whole blood mode 10 µl diluted mode 150 µl or less • Sample auto mixing • Sample cycle: ≤ 150 seconds / test or less • Touch Screen Pressure, temperature and test quantity display • Direct primary tube sampling / cap-piercing • Pressure and temperature alarm • LIS data transmission • Thermal printer
54.	Head Light with Cool Illumination	• White cold light illumination LED with 30000 Lux or better • With 5500 Kelvin. • Adjustable headband with washable inner padding. • On / off switch on battery compartment. • With Charger. • Backup time 3 hrs or more.
55.	Hematology Analyzer 3 Part differential with UPS	Consisting of: • Hematology Counter with 3 Parts differential automated. • Throughout 40 Samples / Hour or better. • Minimum 19 or better parameters including Hb, WBC, RBC, MCV, Plt, and Derived values. • Flagging of results. • Micro sampling capability. • Manual / Auto Calibration Program. • Reagent level alert. • System monitoring • Automated start up and shutdown • Result storage: up to minimum 500 results. • Patient data entry and specimen recognition by Keyboard. • RS 232 Interface.

		• Internal Printer. • With inbuilt auto-sampler or external specimen mixer. • Consumables, Reagents, Calibrators, Controls for startup. • The bidder will provide kits for 500 patients along with the machine free of cost at the time of installation. UPS: • Branded and compatible UPS for at least 30 minutes backup. • Input Voltage : 110-260v 50Hz, Output : 220v 50 Hz. Note: The bidder must quote the price / test or reagents pack of 500 tests or 1000 tests price separately.
56.	Hematology Analyzer 5 Part differential with UPS	Consisting of: • Hematology Counter with 5 Parts differential automated. • Throughout 60 Samples / Hour or better. • Minimum 25 or better parameters including: WBC, LYM, MON, NEU, EOS, BAS, LYM%, MON%, NEU%, EOS%, BAS%, RBC, HCT, MCV, RDW-sd, RDW-cv, HGB, MCH, MCHC, PLT, PCT*, MPV, PDW-sd*. • Flagging of results. • Micro sampling capability. • Manual / Auto Calibration Program. • Reagent level alert. • Automated start up and shutdown • Result storage: up to minimum 20,000 results. • Patient data entry and specimen recognition by Keyboard. • RS 232 Interface. • With internal / external Printer • With inbuilt auto-sampler or external specimen mixer. • Consumables, Reagents, Calibrators, Controls for startup. • The bidder will provide kits for 500 patients tests along with the machine free of cost at the time of installation. UPS: • Branded and compatible UPS for at least 30 minutes backup. • Input Voltage: 110-260v 50Hz, Output: 220v 50 Hz. Note: The bidder must quote the price / test or reagents pack of 500 tests or 1000 tests price separately.
57.	HFNC	• Should be used for adults and peds • Paedric Mode: 2-25 l/m or better • Adult: 10-60 l/m or better • Oxygen Concentration: 21% to 93% • Should Have LCD/TFT display • With heated humidifier • Display to monitor humidity setting, flow, Fio2 and faults. • Visual and audible alarm for Tube disconnect leaks, tube blockage, hardware faults and audible failure alarm. • Supplied with heated wire patient breathing tube and nasal cannula of different sizes. • It should be compatible for use of Tracheostomy patients. Accessories: Disposable heated wire Patient breathing tube having sizes as small, medium and large Disposable Nasal cannula having sizes as small, medium and large

		Local made trolley
58.	Humidifier	- Adjustable exit steam Moisture sensors for adjusting required moisture. - Transparent water container. Easy to clean thermo steam maker parts. - Applicable to create desirable atmosphere for children. - Built-in circuit breaker to be operated in time of dry up. - Must have cool body all through the operation. - Should have thermo steamer element with Teflon resistant coating. - Easy cleaning.
59.	Hydraulic Operation Table	<u>General Design:</u> - Stable base construction with four castors for easy movement. - Manual base brake, lateral tilt and Trendelenburg adjusted by hand crank, base Cover, side rails, accessories & clamps made of stainless steel. <u>Tabletop:</u> - Divided into 5 sections including head plate, back plate, seat plate and split leg plates. Table top elevation controlled by hydraulic system, with sliding table top 30 cm or more for unrestricted image intensifier access, with side rails for the insertion of X-Ray cassettes (table top made of acrylic sheet plates for X-ray radiography). - Full set of hydraulic control system for hydraulic lock protection - Size: 2000x500x750 mm $\pm$ 10 % - Trendelenburg/ Reverse Trendelenburg 25°/25°each - Lateral Tilt Left/Right +15°/+15°each - Head plate up/down +40° / -40° <u>Standard Accessories:</u> - Mattress set, Pair of arm rest with quick dis-connectable clamps. - Adjustable head rest. Pair of shoulder supports. - Lithotomy pole with universal swivel clamps. - Anesthesia frame 1 Nos - Infusion rod 1Nos - Foot rests 2 Nos. - Side supports 2 Nos - With inbuilt Kidney Elevator Facility <u>Attachment:</u> - Traction stopper with mattresses. - Castor with break device - Vertical evaluator lock handle. - Traction crank - Reaction foot boot. - The tractor range is 200 mm and elevation range 200 mm. - Note: $\pm$ 10% of degrees and measurement's will not be considered as deviation.
60.	Indirect Ophthalmoscope	- Brightness for difficult examinations - Halogen light - With light intensity control. - Headband: Light weight and comfortable. - Single control to change aperture size and position in one movement to view through all pupil sizes. - Inbuilt IR and UV barrier. - With 20 D indirect lens
61.	Infant Warmers (Radiant Warmer)	Mobile infant warmer with integrated baby bassinet unit that accommodates use of resuscitation equipment for intensive care of neonate. <u>Technical Specification:-</u>

		• Infant warmer system to provide controlled source of radiant heat for infant. • Temperature Control (Skin). • Temperature Adjustment: 34°C-37°C • Skin Temperature measurement: 34°C ~ 37°C, • Microprocessor controlled skin servo mode operation with digital display. • LCD display for Infant Temperature • Audible and visual alarms and automatic switch off if temperature reaches at 38°C. • Built-in examination light • Built-in air/gas driven venture suction system • Tilting large bed platform suitable for x-ray cassettes, with cassette holder. • Bed with mattress • Accessible from all sides • Trolley with 2 Lockable castors or more. • Power Requirement: 220~V, 50Hz <u>Accessories</u> • Complete infant resuscitation package with mounting bracket (resuscitation module, flow meter, infant suction unit, suction regulator, suction bottle/400ml, positive pressure resuscitation, air hose, and oxygen cylinder medium size). • Skin probe reusable. • Infant face masks (Large, Medium, Small)
62.	Infra-Red Radiator Large	• Floor Stand Type • Radiators: 900 W or more (3 x 350 or 6 x 150) • Automatic cut off timer • Timer adjustment: upto 15 minutes • Mounted on 4 or more lockable casters. • Adjustable height
63.	Infra-Red Radiator Small	• Floor Stand Type • Radiators: 350 or more (1 x 350 or 3 x 150) • Automatic cut off timer • Timer adjustment: up to 15 minutes • Mounted on 4 or more lockable casters. • Adjustable height
64.	Infusion pump	• Infusion pump with visible handle, with IV Pole(imported/local). • Power requirements: AC: 100-240V; 50Hz • Modes: weight, Volume, and flow/Dose rates • Delivery / Flow rate: 0.1-999.9ml/h • Volume range 1-9999 • Occlusion Limit low, Normal, High • Facility with keep vein open rate. • Anti-Bolus function, Titration function should be available. • Volume infused display and Dynamic cannula pressure displayed on screen. • Full alarm system. • Air in line detection. • Occlusion detection capability. • Vertical stand mobile type • Built-in battery backup: 2 hours or better • Water-Proof Grade : IP34 or Equivalent • With all standard accessories.
65.	Laboratory Incubator	Microprocessor controlled Laboratory Incubator with the following specifications.

		- Stainless steel chamber with adjustable shelves and a tough ended glass inner viewing door. The outer cabinet is to be rust resistant. - Temperature control by digital display from 0-0.99.9 h or continuous - Alarm system for high and low temperature, Door close / open. - With over temperature safety cutout to be set by the user. - Fitted with circulation fan. - Temperature : Range: At least 5°C above ambient to +60°C - Control (Fan): $\pm 0.1^{\circ}\text{C}$ at +37°C - Variation (Fan): $\pm 0.25^{\circ}\text{C}$ at +37°C - Chamber Capacity: 80-100 Liters - Shelves: 2 or more
66.	Microtome Machines	Fully Automatic Microtome Machines with the following specifications: - Applications” Sectioning of Paraffin embedded specimen for routine and research histology. - Section thickness range: 0.5-60 μm or better on either side - According to manufacturer design - Specimen Retraction: 20 μm - Trimming Thickness: 1 μm to 600 μm - According to manufacture design - Displacement of blade holder Base: Vertical and horizontal direction - Vertical Cutting stroke length: 70mm or more - Electrical Requirement: AC 220V / 50Hz
67.	Mini Autoclave for dental	- Microprocessor controlled. - Mini autoclave Class B type - Capacity 18 liters or more (Bench top) - Digital display - Automatic functioning - Pre and post fractionated vacuum. - Sterilization temperature: 121°C to 134°C - With demineralizer (model and make must be mentioned)
68.	Nebulizer	- Maximum compressor pressure 2-3.0 bar or better - Nebulization rate 0.2 ml / min - Compressor air flow 10lit / min or better - Particle size(mmad) 0.5μm to 5μm - Noise level 55 db - Electrical requirement 220v/ 50Hz Nebulizer assembly and Accessories : - Tubing - Nebulizer cup - Nebulizers insert. - Nebulizer cap - An adult mask - Mouth piece - extra filters
69.	Neonatal CPAP Machine	Technical Specifications: - Maximum Adjustable output flow: 15 L/min or more - Oxygen flow capability: 10 L/min or more - Air flow capability: 10 L/min or more - Built in Oxygen concentration: 21% - 95% - Built in Air compressor

		• Pressure: 1 - 10cm H2O or more • Working noise: Not more than 55dB • Humidification: Yes • Alarms: Power failure, high & low pressure, No Flow and low oxygen concentration • Power: 220-240 VAC, 50 Hz Unit Supplied With • Different sizes Neonate bonnet x 4 • Different sizes Silicone nasal prongs x 4 • Inspiratory/Expiratory tubing x 4 • Ram Cannula (Standard Sizes) with oxygen adapter.
70.	Ophthalmoscope + Retinoscope Rechargeable	• Branded ophthalmoscope • Designed to ensure Ultimate control. • Lenses graticules and filters can all be easily changeable. • Xenon /Halogen illumination • Positive Action wheel. • Comprehensive Lens Range +29D to -25D. • Swing over Red Free Filter. • Professional Retinoscope suitable for Streak or Spot. • Interchangeable soft brow rest. • Focal illuminator, With Handles. Spare bulbs. Protective case.
71.	Orthopedic Drill Battery operated	<u>ORTHOPEDIC DRILL SYSTEM</u> • Drill and reaming handpiece with single / dual trigger (forward and reverse) operating. • Adjustable speed range : 0-200rpm or more (Reaming Mode) 0-950rpm or more (Drill Mode) • Oscillating saw hand piece with single trigger operating / Saw attachment for all-in-one hand piece. • Oscillating frequency : 12000 rpm or more • Battery operated. • Having Safety button • Stepping mode • Indicator for charging <u>Accessories:</u> • Complete with all standard accessories including. • 3 different size blades for oscillating saw. • Attachment for all hand pieces (K-wire attachment, Drill attachment, Reamer attachment large) • Specialized sterilization container for drill and autoclavable basket. • 2 batteries • Charger
72.	Oxygen Concentrator	• Micro Processor controlled. • Oxygen Flow Range: 0 to 10 litter per Minute • Noise level (<45dbA). • With filter. • With OPI (oxygen purity indicator) & Alarm at very low oxygen level. • Audio visual alarm for: Power loss, Low pressure, air leak, hardware failure, Mechanical Failure, Overheating and High Pressure. • Oxygen Percentage level:

		1-10 Ltr per Minute 95%±3% or better • With Humidifier • With Connecting Pipe • Mobile on 04 Castors
73.	Paraffin Wax Bath for Foot	• Capacity 15 liters or more • Thermostatically controlled. • Double walled • Material Stainless steel • Temperature Control 0- 90 degree C • Immersion Heater 2000 watt • with insulated boots: 02 Pairs • Input Supply 230 V AC, 50 Hz • Paraffin Embedding Wax Bath
74.	Paraffin Wax Bath for Hand	• Capacity 15 liters or more • Thermostatically controlled. • Double walled • Material Stainless steel • Temperature Control 30- 90 degree C • Immersion Heater 2000 watt • with insulated mits: 02 Pairs • Input Supply 230 V AC, 50 Hz • Paraffin Embedding Wax Bat
75.	PH Meter	PH: • PH Range Accuracy: .0 ~ 14 • Resolution: 0.01 • Calibration: User selectable 1 or 2 points. mV: • Range: ±1900mv. • Resolution: 0.01mV • Accuracy: ±1mV Temperature: • Temperature range: -5~100°c ±0.4°c. • Resolution: 0.1°c. • Accuracy: ±0.5°c Display: • Display: LED / LCD. • Power: DC Power Adaptor.
76.	Pharmacy / medicine / Vaccine Refrigerator	• Medical Grade • Capacity: 400 Liter or better • Vertical Type • Digital Temperature Recording • Glass Door • Display for easy viewing size 5 inch or better • Self-Closing with Stopper System at 90 degree or better • Safety key Lock shall be available. • Alarm for warning and error messages (Low, High Temperature, and Door Opening Alarm. • Acoustic and Visual Alram for temperature and power failure • Temperature Range: 2 to 10 ±1 degree C • Inertial Light LED Type, Adjustable Shelves.

		• With Servo controlled stabilizer.
77.	Phototherapy Unit	• Flexible positioning • LED type • Intensity: 35uW/cm2/nm at 40cm or better • Display: LCD Digit Display • Irradiation timer: 0 to 99 hr. or better • Inclination angle: Freely adjustable from horizontal to vertical • Placement: Directly on the incubator /beds. • Power requirements: 220 V, 50Hz; • Accessories: Eye Cover (100 Pieces)
78.	Plasma and Lab Deep Freezer(-40oC)/ Plasma storage cabinet	• Microprocessor control LCD display • Stainless steel interior and exterior • Upright Freezer • Temperature range down -40oC • Operating temperature range should be from -20oC to -40oC at ambient temperature and adjustable with setting accuracy of $\pm 1^{\circ}\text{C}$. • System should have CFC free refrigerants. • Capacity 400 litter or better • Key operated power switch • Acoustical and visual alarm for temperature and power failure • Alarm and temperature recording with battery backup for 48 hours in case of power failure. • Door opening alarm, high and low temperature alarm. • Controlled fan cooling to archive homogeneous • Automatic closing of front door. • Should have minimum vibrations, and noise level should not exceed 60 db. • Interface USB/RS485 • Power 220VAC 50Hz • Should be supplied with Servo controlled voltage stabilizer.
79.	Point of care Testing (POCT) analyzer (Immunofluorescence Quantitative Analyzer)	• Microprocessor control light weight portable machine • Test category: Diabetes, Thyroid Function, Cardiac, Infections Disease, COVID-19, Bone Metabolism, Kidney Function, Sex Hormone, Brain Injury, Thrombus Markers, Inflammation Markers, Tumor Markers, Allergy, Hypertension, Anemia Markers, Rheumatoid Arthritis • Easy to operate. • Auto calibration available • Measuring time should be at least 15 minutes or less • Sample type: whole blood, serum, plasma, and urine • Sample volume Less than 75μL • Color touch screen for easy operations, 8 inch or more • Patient data storage facility • With battery backup of more than 1 hour or better • Connectivity: Wifi, Ethernet port, 2 USB ports • Capable to show result one screen and built-in thermal printer available to print result on paper. • Input power 220VAC 50Hz
80.	POP cutter / Plaster Cutting Saw	• Speed: 0-11000 rpm or more • Blade Size: 7.5 mm to 2.5 mm • Voltage: 220 Volt
81.	Portable lamps AC/DC or	Operating Light with: - • Single dome

	Emergency light with single reflector AC/DC Or Examination light AC/DC	• On Balance mobile Stand • LED light source • Light intensity Max 70,000 lux or better • LED life of 50,000 hours or more • Color Correction to 4350 deg Kelvin • With intensity light control • Multi flex arm with ultimate flexibility of positioning the lamp head. <u>Electrical Supply:</u> • 220-volt 50Hz, • Reversible overload and short circuit protection • Inbuilt Backup power system with rechargeable branded dry batteries with backup time at least 03 hours
82.	Pulse Oximeter (Hand held / Desktop)	• Hand held/Desktop pulse oximeter. • Sensors: Finger clip with probe for neonatal, Paeds & adult. • Range: O2 saturation 0 -100%. • Pulse rate 25 – 250 bpm or more. • Display: Pulse waveform, SPO2 and pulse rate and O2 Saturation. • Resolution: O2 saturation 1% • Accuracy: O2 saturation 80-100% $\pm 2\%$ or better • Power requirements: AC: 220 V 50Hz • Li-ion battery 2 hours for charging, 24 hours or better continuous working.
83.	Pulse Oximeter (Fingertip)	• Fingertip pulse oximeter • SpO2 Range: 0%-100% • SpO2 Accuracy: $\pm 2\%$ • Pulse Rate Range: 30bpm-250bpm. • Pulse Rate Accuracy: ± 2bpm. • Perfusion Index: 0.1% - 10% • Display Format: 2-color OLED Display. • Batteries : AAA batteries. (2 set)
84.	Pure Tone Audiometer	• Large backlight graphical LCD display • Input voltage 220v,50Hz • True two channels include microphone, assistant phone. • Automatic data transfer to computer and data printer • Test signals: pure, pulse, warble tone, narrow band, white. • Speech masking noise. • Tone test • Speech test. • Inputs: stereo live speech microphone, external masking, patient microphone, patient response switch. • Air conduction range: 60db to 90dBHL or better on either side, include headphone. • Bone conduction range: 60db to 70/75 db or better. • Speech: 60db to 100dbHL. • Masking: Free as well as synchronized masking • High tone audiometry for AC 125 hz - 8000 Hz • High tone audiometry for BC 250 hz - 8000 Hz • Selectable range of Test frequencies. <u>Accessories:</u> • Air conduction head set. • Bone conduction head set • Patient response switch

		• Micro phone.
85.	Resuscitation Trolley / ICU Trolley / CPR Trolley	Overall dimension 2.5'(L) x 2'(W)x3' H or better • Electro-galvanized steel sheet structure / aluminum alloy/ ABS, Epoxy powdered coated, finish rounded, edges washable and can be infected. • Push handles one end. • Height adjustable IV Holder rod. • Shelf for defibrillator / ECG can be rotatable with locking facility. • Three or more drawers. • Detachable waste bin with bag holder. • CPR board. • Antistatic no skidded casters with 2 brakes. • Oxygen bottle support with fastening belts. • Catheter tubes holder. • Stainless steel / plastic bracket on back side for mounting oxygen cylinder/bracket for mounting oxygen cylinder. • 02 Nos Electrical universal power outlet and rollup power supply cable. Accessories 1. Oxygen Cylinder small size 2. Oxygen Regulator 3. Oxygen flowmeter 4. Resuscitator Set reusable and autoclavable comprising of. • Silicon Resuscitation Bag with adult face mask sizes 3, 4, 5 & Airway size 3, 4, 5 with E2 valve and fully autoclavable. • Reservoir bag volume 2 liter or more 5. Laryngoscope with 3 blades 6. Magill Forceps 7. Endotracheal Tubes set of 12 tubes. 8. Pen torch 2 qty 9. Artery forceps 2 10. Dressing scissors 2
86.	Semi-Automated Chemistry Analyzer with UPS	• Easy keypad operation with LCD Display / touch screen. • Wavelengths range is 340-670nm (± 10nm) • Analytical models include kinetic, fixed time. Bi-chromatic end point with or without reagent blank or sample blank, linear or non-linear calibration curves. • Up to 1000 test results can be stored. • Excellent QC function, 02 controls per test. Specification: - • Absorbance Range: 0.500-3.00 Abs. • Resolution: 0.001 Abs (displayed) • Light sources: Halogen lamp. • Wavelengths: 340-670 (± 10nm) • Wavelength Accuracy: ± 1nm to ± 3nm • Band Width: < 8nm. • Flow Cell: Metal – quartz flow cell. • Temperature Control: 37° C, $\pm 0.1^\circ$C and ambient • Output: Internal Printer. • Interface: Rs-232 serial cable. • Two extra Lamp. UPS: • Branded and compatible UPS for at least 30 minutes backup. • Input Voltage : 110-260v 50Hz, Output : 220v 50 Hz.

		The bidder will provide kits for 100 patients each for glucose, urea, creatinine, liver enzymes (ALT, AST, ALP), cholesterol, triglycerides along with the machine free of cost at the time of installation.
87.	Shadow less lamp (Ceiling type) or Ceiling OT light for minor OT or Ceiling OT light for post- mortem	- Shadow less light ceiling type, including single arm, 360 degrees rotary stable and suspended. - The light should be height adjustable and focused according to the size of the patient's surgical area. - Dual Dome - Intensity control available. - LED light source - Light intensity: Maximum 160,000 Lux + 160,000 or better at 1 meter distance - LED life of 50,000 hours or better - Color Correction to 4000degKelvin or better - Input power 220VAC, 50 Hz - With sterilized handle for movement. - Backup power system with dry battery (s), with backup time at least 03 hours or more. - Complete with Installation
88.	Short Wave Diathermy	- Frequency: 27.12mhz or better - Output Power: 400 W maximum in Continuous Mode; 1000W maximum Peak Power in Pulsed Mode - Output Modes: Continuous, Pulsed - Pulse Width: 20 - 400µs or better - Pulse Frequency: 20 - 200 Pulses Per Second or better - Timer: 0 - 30 minutes with termination of output & alarm at end of treatment. - Mains Supply: 100-240 Vac, 50/60Hz Accessories - Two electrode arms, - Two 100 mm capacitive electrodes with cables, - Output tester and Standard Accessories
89.	Sonic Aid Machine/Fetus Heart Detector/ Fetoscope	- Fetal Heart Beat / Sound Detection & Rate Monitoring. - Heart rate digitally displayed, - Heart beat audible through the built-in speaker (earphone). - Ultrasonic frequency/output: 2 MHz - Audible output: 0.6W (Speaker output: Max.20W) - Heart rate detection range: 50-240bpm - Power requirements: Rechargeable battery for 1 hour with AC recharging unit.
90.	Spirometer/ Pulmonary function unit	Examination of pulmonary system and to measure & display lung function parameters and must meet ATS/ERS standards It should be able to measure /do the following. - Spirometer & Flow Volume parameter - Maximum Ventilation Volume - Pre & post Broncho – dilator comparison - Lung Volumes & Sub – divisions - Feasibility of real time Flow/volume loop and volume/time curve with Pre/Post comparison. - Broncho Provocation Test. - Should incorporate Electronic Barometer & temperature - Overlaying of previous test curves for comparison.

		• The unit have 7" or better LCD/TFT screen to display real time relevant information and also have a thermal printer. • Rechargeable battery backup time at least 2 hours • Flow meter Bi-directional digital flow sensor (flow: up to 15L/s or more, accuracy: within 3%) • Dynamic Resistance : less than 1 cmH₂O /L/Sec. • Parameters should be measured with highest accuracy & reproducibility and accuracy should be least, if at all affected with High surrounding Temperature and humidity levels. • Pulmonary Filters (100 Nos), • Disposable Mouthpieces (500 Nos) • Facility to interface with computer desktop / Laptop to transfer data for analysis. <u>Computer Desktop/ laptop (branded)</u> • CPU Core i 5 Processor: 3.2 GHz. Or better • Bit Processing: 32 Bits. • RAM: 4GB. • Graphic card latest technology • Hard disk 1TB. • DVD writer. • LED Monitor: 19 inch or better • Key board. • Mouse etc. • With associated software. • Printer: laser printer • Input power 220VAC, 50Hz
91.	SS Filtration Assembly	• Autoclavable filter holder • Manifold made of stainless steel. • Two-way valve for independent control • Able to mount on filters. • Table top model • Shall come with vacuum pump preferably peristaltic type. • Suction should be capable of processing micro pore filter of 0.4 micron. • Power supply 220V single phase • Accessories • Complete with standard accessories includes:0.4-micron filter box of 200's
92.	Suction machine Heavy Duty/ Electric suction Machine	• Mobile suction pump Oil-Less along with 4 anti- static wheels with lock. • Convenient for operation, with following performance features: • Built-in Vacuum gauge with a range from: 0-650 mm Hg or more adjustable. • Flow capacity: Not less than 50 l/min or better • Explosion proof footswitch. • Capacity of two graduated suction bottle: 2500cc each or more (Autoclavable) • Heat resistant and disinfect able rubber tube for suction. • Over flow safety device. • Triple flow safety • Power requirement: 220V, 50Hz. • Complete with suction nozzle and other standard accessories
93.	Syringe Destroyer	• Surplus liquid in the needle should vaporize to avoid pollution. • No spark should eject during operation • Should work with low electric voltage to melt the needle instantly and destroy syringe body. • Working time should last for not more than 3 seconds.

		• Should work with built-in rechargeable battery. • Should destroy not less than 200 pieces of 20ml syringe. • Should destroy needle size from 18G to 34G. • Working noise level should be ≤ 50 db. • Should have superheating protection temperature 85°C
94.	Syringe pump	• Power requirements: AC: 100-240V; 50Hz • Syringe size: 5ml, 10ml, 20ml, 30ml, 50/60ml • Increment: 0.01ml/h • Modes: Volume Weight and rate/Dose rate • Delivery / Flow rate: 0.1-999.9ml/h • Volume range 1-9999ml • Occlusion Pressure: Adjustable • Full alarm system • Occlusion detection capability. • Built-in battery backup: 2 hours or better • Water-Proof Grade: IPX4 or Equivalent
95.	Temperature Controlled Bath Tub	Bathtub to be manufactured of stainless steel • Key hole shaped bathtub for more working space around the upper body. • Electric height adjustable to enable ergonomic working methods for the caregiver. • Water capacity should be 200L or more. • Bathtub must include thermostatic mixing valve set at max 43 degrees. • Bath must be designed to work with a mobile patient lift system to safely manage the entire bathing cycle. • Control panel to be manufactured in fiber glass or stainless steel. • Control panel with electronic control functions operated by push buttons or touchpad. • Digital LED thermometer for display of shower and bathtub filling water. • Bathtub must include adjustable foot support and include patient head pillow. • Bathtub must include a patient shower with hose and shower handle. CLEANING system: • Integrated disinfection cleaning system. • Disinfectant storage & Key-locked. WHIRLPOOL system: • Push button-controlled whirlpool on/off. • Single whirlpool outlet / hydro massage that can be quickly fully cleaned and disinfected. • Water and air adjustment easily adjusted via the air flow control knob. • Single suction grid. AUTOFILL system: • Autofill + with dual preset fill levels to choose from. • Push button controlled auto fill on/off. • Lighted display to show activated panel options. Dimension and load specifications: • Operating Height Range (bathtub): As per manufacturer • Length (bathtub): As per manufacturer • Length (inside bathtub) As per manufacturer • Width (bathtub): As per manufacturer • Weight Limit (patient): As per manufacturer
96.	Therapeutic Ultrasound	Microprocessor controlled Therapeutic Ultrasound with the following specifications: • Operating voltage: 100-240 V $\pm$ 10% (50 Hz)

		• Ultrasound frequencies: 1 and 3 MHz • Mode: Continuous and pulsed • Pulse frequency: 1Hz - 100 Hz • Duty cycle as per OEM • Intensity:0-3 W/cm², • Pulsed Number of US connections 2 • US applicator large 5 cm • US applicator small up to 1.5 cm Standard Accessories: • Multi frequency treatment • Holder treatment head
97.	Three Bodies Refrigerator	• Conveyor style refrigerators with individual door openings. • With Stainless Steel, 18 gauge or better Body Trays • With Telescopic Rack assembly with individual doors openings • With thermometer and easy to adjust temperature controller • Temperature range: upto 4°C • Heavy-duty chrome plated • With 4" or better foam insulation • Doors must have Magnetic Gas • With Casters
98.	Three Channel Holter monitor	• 3 Channel ECG holter system • Recorder should be cable-free / cable. • 24 hrs recording • Recorder with software should be quoted separately • Should have rechargeable battery • Water resistant • Should have Recording LED indicator • ADC resolution: 12 bits or more • Sampling rate: 105 samples/sec or better • Integrated filters and signal processing Frequency bandwidth: 0.1(0.05)Hz - 70Hz • input voltage range: < 40mV • Interfaces for data analysis and signal control (USB) • Storage capacity: up to 7 days • ECG Holter analysis software • For cable free software tools should be able to support signal viewer for Android/tablet PCs • Software Compatible PC System with UPS & printer. • With standard accessories.
99.	Transcutaneous Electrical Nerve Stimulators (Tens)/Electric Stimulator	• Channel : Dual isolated between channels • 5" LED/LCD display • Pulse rate: 2 – 150 Hz 1Hz / Stp • Pulse width : 30-300 micro sec 10 micro sec / Stp • ON time 2-90 seconds 1 sec /Stp • OFF time 0-90 seconds 1 sec / Stp • Mode 5 TENS mode : B(Burst), N(Normal), M(Modulation), SD1,SD2 • 2 EMS modes S(Synchronous), A(Alternate) • Waveform: Asymmetrical , Rectangular, Biphasic pulse • Current channels: 4, independent, fully galvanically separated • Current forms: 16 current forms or more • Pre-programmed protocols: 50 or more STANDARD ACCESSORIES : Length will be as per manufacturer

		• 2 x Strap 250x3 cm / 2x adhesive and conductive electrode • 2 x Strap 100x3 cm/ 2x adhesive and conductive electrode • 4 x Rubber electrodes 5x8 cm or more, 2 mm female, set of 4. • 2 x Moist pads for rubber electrode 6x8 cm or more, set of 4. • 4 x Patient cable 2-core & 2 mm male plug - black, with colored clips
100.	Ultra Violet Lamp Large	• Floor Stand Type • Radiators: 3 X 350 W or better • Automatic cut off timer • Timer adjustment: up to 15 minutes Mounted on 04 or more lockable casters
101.	Ultra Violet Lamp Small	• Floor Stand Type • Parabolic reflector • Radiators: 1 X 350 W or better • Automatic cut off timer • Timer adjustment: up to 15 minutes • Mounted on 04 or more lockable casters
102.	Ultrasonic Nebulizer	• Oscillation frequency 1.5MHz $\pm$5% or better • Nebulization rate 0.3 ml / min • Nebulizer cup capacity 30cc or better • Particle size(mmad) 0.5m to 6m • Electrical requirement 220v/ 50Hz • Nebulizer assembly with all Accessories including Child mask, Adult mask
103.	Urine meter	• Semi-automated urine analyzer. • Cold light source, • Auto safe data in case of power failure. • Ascorbic acid, bilirubin, blood, glucose, ketene, leucocytes, nitrite PH and more • Throughout normal mode. 60 sample / hour or more. • Display: LEDs / LCD Touch screen • Memory: 1000 sample results. • Output Built-in thermal printer.
104.	Vein Detector	• Handheld portable Vein finder / showing system. • Positive projection distance: 25cm~35cm or better. • Projection control / adjustment available. • Projection size control / adjustment available. • Brightness control / adjustment available. • Rechargeable built-in battery. • Tabletop stand / Floor stand from the same manufacture should be providing with the machine.
105.	Vortex mixer	• Touch operation or continuous mode with variable speed control 0-2400 rpm. • Can be used for various mixing application with optional adapter. • With fixed or adjustable speed. • Voltage Ranges 100-240V, Frequency Required 50/60Hz and Power 60W. • Mixing motion orbital and orbital Diameter 3.8-4mm. • Shaded Pole motor with rating input 57-58W and Rating Output 10W. • Speed Display scale must be available and weight 3-4kg. • Environment Temperature Ranges 5-45°C and permissible relative humidity =80%.
106.	Water Bath	• Microprocessor controlled. • Capacity: 6 liters or more • Digital display for temperature controlled. • Temperature Range: Ambient to 80 °C

		• Accuracy: $\pm 0.5^{\circ}\text{C}$ • Uniformity: $\pm 2.0^{\circ}\text{C}$ • Material: Bath: seamless stainless steel with lid • Case power coated steal • Safety: over temperature cut-off, Alarm • Electric supply: 220v,50Hz
107.	Incinerator Plant	• The Hospital Waste Incinerator (Waste Management & Treatment System) shall be implemented as a turn-key project which shall comprise of a hospital grade Incinerator including Dry Scrubber along with allied accessories and operational services for proper disposal of infectious solid hospital waste materials. • The incinerator be suitable for dry and wet infectious waste of the hospital, plastic, paper, textile and rubber within average calorific value of 4kW/kg. • The unit shall be of high performance, capable to operate continuously for 12 hours daily. • The primary source of fuel will be Natural Gas/ Diesel operated burner with the provision to operate on standby LPG fuel. • Continuous intervals feeding & burning capacity of 50kg/ hour or better • Calorific value of the feeding waste: 4kW/kg or better • Combustion with smokeless emissions having standby fuel arrangements of LPG as an alternate fuel source. • Automatic air distribution and regulation system should be electronically controlled. • Smokeless emission for at-least 98% of running time and emission gases in air with then prescribe limit (EPA guideline) PRIMARY CHAMBER (COMBUSTION) • The temperature should not be less than 800C. • Separate manual door for ash removal. • Blower centrifugal fans shall be provided to inject air to burn the waste and gases in combustion chamber • A see through window with protection flap for inspection of burner flame should be available. • Electrically/ electronically controlled natural gas operated burner with the provision to operate on standby LPG fuel. • Thermocouple/ sensor to monitor the temperature of the primary chamber. SECONDARY CHAMBER (COMBUSTION) • The post combustion chamber for flue gases to burn further for ensuring smokeless exhaust emissions. • Blower centrifugal fan(s) shall be provided to inject high pressure air to burn the waste and gases in post combustion chamber for ensuring proper burning of gases before exhaust. These fans will have an automatic servo controlled system for proper injection of air according to the requirements. • Electronically controlled automatic air distribution and regulation system. • The temperature should not be less than 1100°C. • Electrically/ electronically controlled natural gas operated burner with the provision to operate on standby LPG fuel. • Thermocouple/sensor to monitor the temperature of the secondary chamber. • Control Box

		• PLC based control box with sealed door. The controls should be programmable for temperature adjustment, feeding intervals etc. • It should have provision for electronic ignition burner timer, feed interval timer, shut down timer, post combustion chamber temperature controller, and controls for burner, blower fans etc. • Emergency Shutdown button for shutting it off in case of emergency at appropriate site. • Electrical requirements, Line voltage 400V, 50Hz Single/3Phase • Manual ash removal tool • Ash bin • Digital weighing scale for weighing the waste with the following specifications. • Mobile main trolley of SS (anti magnetic) with cover for transportation of hospital waste from wards to Incinerator site/room 125cmx100cmx60cm (LxWxH), 20 cm wheel size with spillage removal valve (Qty-4). • Pair of leather gloves for hospital waste handling staff (Qty-10). • Pair of long safety shoes for hospital waste handling staff (Qty-10) • Fire extinguisher 10kg (Qty 3) • Fire extinguisher 20kg (Qty 1) • LPG cylinders 45kg or above size (Qty 3) Term and condition • The proponent for EPA approval will be procuring Entity and contracting firm will extend all the required assistance throughout the process. • The supplied firm will be responsible for operating the incinerator for 12 hours on daily basis for one year. • Running cost of the incinerator will be borne by Procuring entity. • For ensuring clean environment the firm should be responsible for EPA approval before the inspection. (The firm must provide affidavit for EPA approval) • CE MDD / MDR or Regulation (EU) 2016/426 Appliances burning gaseous fuels certificate or relevant mandatory certificate
108.	Alarm Signaler with light / sound / vibration	• Works from 100 feet or better • Audible siren up to 95 db or better • 3 colors LED display • The amplified sound should be delivered up to a signal of not more than 100+dB which should increase over a period of time. For a wireless smoke/fire alarm system, the system should have enough range to cover all sections of the home or occupied space. There should be a battery back-up for the system in the event of a power failure, or if the system is unplugged from the mains, to ensure that it will be sufficiently powered for another 72 hours. An alert should be transmitted when the battery power is low and Needs to be replaced. • The Wireless Alarm Monitoring System designed to bridge the gap between existing warning devices designed for those without a hearing loss. The system provides a complete reliable source for Deaf and Hard of Hearing individuals to be alerted during emergency situations.
109.	Pre-Programmed Hearing Aids	• An electronic device that amplifies sound. Intended for people suffering from hearing loss. • Main function is the understanding of oral language and it also aids perception of

		environmental sounds. • The device must be portable and attached to the wearer's ear through an ear mold, foam insert or other coupling method. • Hearing aids vary in power and pattern of amplification, depending on the wearer's degree and type of hearing loss. • Pre-programmed hearing aids are set to specific amplification patterns, appropriate to generic types of hearing loss, prior to fitting. • With complete standard accessories.
110.	Anti HCV Antibodies, Rapid Diagnostic Testing Kits	• Sensitivity of kit/device must be more than 95% in whole blood • Specificity of kit/device must be more than 95% in whole blood • Rapid Testing Kits must be for in Vitro Human diagnostics (IVD) to detect Anti HCV Antibodies in whole blood. • Individually or jointly seal packed devices which may or may not be attached by sides. Pack Size as per Manufacturer along with buffer/reagents. • Shelf Life: 75% at the time of delivery.
111.	Hepatitis B Surface Antigen (HBsAg) Rapid Diagnostic Testing Kits	• Sensitivity of kit/device must be more than 95% in whole blood • Specificity of kit/device must be more than 95% in whole blood • Rapid Testing Kits must be for in Vitro Human diagnostics (IVD) to detect Hepatitis B Surface Antigen in whole blood. • Individually or jointly seal packed devices which may or may not be attached by sides. Pack Size as per Manufacturer along with buffer/reagents. • Shelf Life: 75% at the time of delivery.
112.	Medical Gas Pipe line system	Manual Manifold For Oxygen • Manual Manifold with imported regulator shall be provided for smooth operation of the system. • CAPACITY (2 x 10) completes with main valve and handing valve over each cylinder plus high-pressure standard pig Tail connections plus high-quality imported Regulator and pressure monitoring gauge. • Brand New tested Oxygen Cylinder 240 Cft transport safety cap shall be supplied with the cylinder with standard Color code. Oxygen Gas Outlet • Gas outlet, complete in Box/casing with BS Standard color-coding. Alarm System • Supply and installation of Alarm System for oxygen gas with both Visual as well as Audible alerts are available in system, which indicate normal and low pressure of Oxygen Gas. Hold & press for Mute / Silence. Oxygen Flow Meter • Oxygen flow meter with humidifier and probes Oxygen Flow meter complete set from 1 to 15 lpm or better with autoclavable and unbreakable humidifier bottle. Copper Piping and Fitting • Supply and installation of seamless medical graded copper pipe deoxidized and degreased along with required fitting etc., various sizes /diameter as per requirements. Gauge 18 sizes will vary from 12mm, 15mm, 22mm, 28mm,35mm, 42 mm & 54 mm includes supply of all Fittings accessories, clamps & Supports as per requirements. • Values of different sizes from 12mm, 15mm, 22mm, 28mm,35mm, 42 mm & 54 mm • Price of each size should be quoted in per foot separately Note: Bidder should quote price separately for above each item

Medical Furniture, Instruments (Sample Based)

S. No	Nomenclature	Specifications
1.	Baby Cots	• Powder coated mild steel 18 SWG tubular frames. • Lying area made of rectangular hollow pipe frame with wire mesh. • Mobile on 50 mm dia. Rubber castors. • Safety sides can be adjustable up & down easily. • Standard cushioned Rexene foam mattress with 2 inch thickness. • Laying area 55 cm x 100cm.
2.	Newborn Baby Crib (imported)	• Size: 850*500*780-980mm • The height can be adjusted by the gas spring; • Trendelenburg is adjustable by gas spring, from 0°—12° hi-low range: 980mm-780mm • High density and transparent basin with mattress three color for choice: green, pink, blue.
3.	Bed side Locker	• Overall size of locker 40cm width, 40cm depth, 80cm height. • Top made up of SS 18 SWG. • One drawer. One cabinet with space between the drawer and cabinet. • Base made of 1" round/square pipe. • FINISH: Polyester powder coated finishing
4.	Bed side steel stairs	• Mild steel frame made of hollow pipe diameter 1" Shaped for two steps. • Front and rear legs provided with steel bars. • Wooden step duly covered with rubber mat and sides dressed in aluminum/strip/Rubber.
5.	Bed with side Table and over bed trolley (local)	<u>Bed:</u> • Over all dimension (LxWxH) 195cmx 85cmx55cm (±10) • Four section beds with all welded enameled main frame constructed from rectangular section steel tube of 16SWG steel sheets. • Adjustable back rest and leg section by means of two independent cranks with square threads pitch revolving in steel nuts by means of rectangular handle, The cranks have safety features when reach maximum position. • Removable bed ends fitted with 10mm laminated plastic/backlite panels. • Platform fitted with epoxy painted steel bars of 18SWG steel. • The bed is mounted on double ball bearing, swivel castors of non-tin and weather proof rubber. Two fixed at head end and two swiveling with independent breaks at foot end. • Rubber bumpers at all four corners • Four Mattress holders (2 at each side) • With I V pole. • Structure of the platform shall be smooth and seamless. • Platform shall not contain cavities in order to avoid hideouts/safe areas for germs. • All the corners of the platform shall be round and smooth.

		• All the joints shall be made smooth. • Polyester powder coated finishing. <u>Bed side Locker:</u> • Overall size of locker 40cm width, 40cm depth, 80cm height. • Made up of SS 18 SWG. • Top made of CP galvanized steel sheet, • One drawer. One cabinet with space between the drawer and cabinet. • Base made of 1” round/square pipe. • FINISH: Polyester powder coated finishing <u>Over Bed Table:</u> • Top made of Stainless steel. • 100cm, 100cm, 40cm • Mobile on four castors. <u>Side Railing:</u> • Adjustable length allows for use at bed rail to prevent falling out of bed. Collapsible in 2 steps, Height of Rail 18” (high from the point of fixing on the structure of bed)
6.	Bed with side table over bed trolley (imported)	<u>Bed:</u> • Over all dimension (LxWxH) 195cmx 85cmx 55cm or as per standard (± 10) • The Bed must facilitate a metal constructed; mattress surface covered with 4-section steel. • Adjustable back rest and leg section by means of two independent cranks. • Mattress holders • With I V pole. • Structure of the platform shall be smooth and seamless. • Platform shall not contain cavities in order to avoid hideouts/safe areas for germs. • All the corners and joints of the platform shall be round and smooth. <u>Bed side Locker:</u> • Overall size of locker 40cm width, 40cm depth, 80cm height or standard. • Frame made of steel / abs material. • Top made of CP galvanized steel sheet / abs material. • One drawer. One cabinet <u>OVER BED TABLE:</u> • Top made of steel/ABS. • Height adjustable approx. 750mm to 1100 mm • Height may be raised or lowered by lifting release bar under the table top by hydraulic mechanism or spring. • Mobile on four castors. <u>Side Railing:</u> • Adjustable length allows for use at bed rail to prevent falling out of bed.
7.	Children Bed (Imported)	• Size: 1770*900*550mm

		• Blank space designed keep hands be nipped • Four high-grade mute casters, diagonal brake • The guardrail can be moved up and down with security designed • Manual double cranks or single crank. • High strength aluminum alloy / steel guardrail, can move up and down, more securely • Blank space designed keep hands be nipped • The crank is shaped / foldable by stainless steel • Four high grade mute casters diagonal brake
8.	Couch for Ultrasound / Examination couch	• Frame to be one piece welded mild steel powdercoated. • Headrest to have step less angle adjustment from horizontal to 75° • 2" Mattress of 2.5 lbs./cft density with water proofsterilize able cover. • Paper roll holder to be fitted at head end and suitable for paper rolls up to 510mm wide. • Size Approx. 2000mm x 500mm with standard height.
9.	Cylinder Trolley 240CFT	• Main structure made of 1" di acicular pipe. • Mobile on two castors of 8" dia • For carrying 240Cft cylinder with safety chain for holding cylinders
10.	Cylinder Trolley 48CFT	• Main structure made of 1" di acicular pipe. • Mobile on two castors of 5" dia • For carrying 48Cft cylinder • With safety chain for holding cylinders
11.	Dissection Table (small)/ Mortuary table	• Approximate dimension; 4ft X 2ft X 3ft (L x W x H) • It should made of stainless steel with a frame made of rugged torsion resistant stainless steel profile. • It should have 4 solid rubber swivels locking castors • Tabletop depth should be of approx. 15mm sloping toward the drain. • It should made of stainless steel with a frame made of rugged torsion resistant stainless steel profile. • It should have 4 solid rubber swivels locking castors Tabletop depth should be of approx. 15mm sloping toward the drain. • On drain side 15 ltr container, hole in center for drainage. Accessories: • Stainless steel Bucket 10 ltr Qty 2 • Headrest • Body support shim • Foot rest
12.	Dissection Table (large)/ Mortuary table	• Approximate dimension; 6ft X 2ft X 3ft (L x W x H) • It should made of stainless steel with a frame made of rugged torsion resistant stainless steel profile. • It should have 4 solid rubber swivels locking castors • Tabletop depth should be of approx. 15mm sloping toward the drain. • On drain side 15 ltr container, hole in center for drainage. Accessories:

		• Stainless steel Bucket 10 ltr Qty 2 • Headrest • Body support shim • Foot rest
13.	Dressing Trolley	• Constructed from stainless hollow pipe of 1 inch. • With two shelves made of stainless steel, on top and bottom with side guards. • Two stainless steel drawers under the top shelf. • Stainless steel bucket and bowl with holders. • Mobile on 100mm dia rubber castors. • Push handle for easy movement. • Size: (70 cm L*50 cm W *90 cm H)
14.	Drip stand	• Heavy Weight base mobile on 50 mm dia castors • Powder coated base and column with telescope adjustment. • 4 ports I/V rod of wire diameter 0.5 mm.
15.	Dry Clean Trolley	• White cage trolley for transporting bulk linen. • Four rubber wheels. • Dimension 720mmx960mmx850mm • Weight 15kg.
16.	Electric Cardiac Bed/ICU Bed (Imported)	<u>Motorized, battery operated Cardiac /ICU bed bed with remote controller.</u> • The Bed must facilitate a metal constructed, mattress surface covered with 4-sections • The Sub-frame under the mattress surface must be covered with steel Material. • The Bed must have fold- Away ABS side rails on both sides of the bed, controlled separately. • The bed facilitates a hand control panel and Integrated panel which must have adjustments of the following functions a) Backrest up-down b) Footrest up-down c) Bed height up-down. • The bed must have electrical Trendelenburg and reverse Trendelenburg adjustment. - Between $\pm 12^0$ or more by means of hand control unit. • Fowler, vascular, cardiac chair position and auto-contour positions by hand control unit and integrated panel. • The backrest section of the bed must be able to be adjusted between $0-70^0$ • The bed must be equipped with auto-regression system at back rest. • The footrest section must be able to be adjusted between $0-25^0$ or more. • Central brake system or lockable castors. • The bed must facilitate 4 IV pole sockets and head and foot boards sockets made of plastic, located under the head and footboards. • The bed must facilitate 4 protective bumpers on external corners to prevent damage on the contact area during bed movements and transfer. • The bed must work on 220V/ 50 Hz have rechargeable battery backup for movement control. • There must be urine bag hangers on both sides of the bed. • Gradually adjustable footrest.

		• 5-inch dia casters two of them must be lockable diagonally / total locking system. • The metal parts of the bed must be powder coated. • The bed must have a safe load bearing capacity of 230Kg or more. • The bed's height must be able to be adjusted between 40cm and 70cm. or better • Overall width 85 cm or more. • Overall length 195cm or more. • Side Railing/ side guard • The bed should have facility to take X-Ray of the patient over the bed . • Mattress should be provided with high density good quality according to the bed size, anti-bacterial, and water proof, shaped according to human body or bed position.
17.	Folding Screen	• Frame in four parts constructed from fully plastic-coated M.S. hollow tubular pipe 1" dia. • All frames fixed together with Steel universal joints for easy movement of each part. • Curtains fitted with spring loaded rods, • Mobile on eight, castors of 75 mm dia. • Curtain of wash and wear polyester cloth/ plastic cloth in variety of colors.
18.	Gynae examination couch	• Couch top made in 3 sections. • Leg section removable. • Backrest adjustable with friction clutch • With hand grips on both the sides. • Cushioned with Rexene and foam mattress. • Sliding stainless steel receptacle mounted under the hip area, • Complete with pair of Lithotomy poles and tying strips.
19.	Instrument Trolley	• Frame constructed of stainless-steel hollow pipe, • Complete with two Stainless steel trays having open space between it. • Both trays provided with reinforcement as side guards for safety. • Mobile on 50mm dia, twin wheels. • Size (60x90)cm
20.	Manual Cardiac Bed/ICU Bed	Hydraulic Hospital Bed suitable for use in intensive /coronary care units. <u>Feature:</u> • Adult Intensive Care bed with head and foot panels • Height adjustment with foot pedals 40cm to 70cm or more on either side. • The bed must have Trendelenburg and reverse Trendelenburg adjustment. Between +12 degree by means of hand control unit. • The backrest section of the bed must be able to be adjusted between 0-70 degree • The bed must be equipped with auto-regression system at back rest. • The footrest section must be able to be adjusted between 0-35

		degree or more. • Central brake system or lockable castors. • The bed should have facility to take X-Ray of the patient over the bed • Back plate and knee rise by gas shock mechanism to make a fowler position. • 5-inch Dia castors, foot operated central lock for all castors. • Two mattress holders on each side. • Structure of the platform shall be smooth and seamless. • Platform shall not contain cavities in order to avoid hideouts/safe areas for germs. • All the corners of the platform shall be round and smooth. • Size: Length 195 cm or more • Width 85 cm or more • Accessories: • Bed fitted patient lifting pole. • I.V Rod • To be provided with CPR board. <u>Side Railing:</u> • Adjustable length allows for use at bed rail to prevent falling out of bed. Collapsible in 2 steps, Height of Rail 18" (high from the point of fixing on the frame of the bed). • Mattress should be provided with high density good quality according to the bed size, anti-bacterial, and water proof, shaped according to human body or bed position
21.	Orthopedic Traction Bed	• Head & Foot Panels: Elegant High • Size: L195cm×W85cm or more • Height: 50cm to 70cm or better • Functions: Two Functions • Movements & Controls: • Back Lifting: Manual • Quality Molded Panels • Top: Four Sections • Framework: Stainless Steel Panels • Stainless Steel Balkan Beam • Frame & Pulley Attachment • and Patient Support Lifting Pole • Head & Foot Panels: Elegant High • Color: Powder Coated <u>Bed:</u> • Over all dimension (LXWXH) 195cmx 85cmx55cm • Four section beds with all welded enameled mainframe constructed from rectangular section steel tube of 16SWG steel sheets. • Adjustable back rest and leg section by means of two independent cranks with square threads pitch revolving in high carbon steel nuts by means of rectangular handle. • Removable bed ends fitted with 10mm laminated plastic panels. • Platform fitted with epoxy painted steel bars of 18 SWG

		steel. • The bed is mounted on double ball bearing, swivel castors of non- tin and weather proof rubber. Two fixed at headend and two swiveling with in dependent breaks at foot end. • Rubber bumpers at all four corners • Four Mattress holders (2 at eachside) • With I V pole. • Structure of the platform shall be smooth andseamless. • Platform shall not contain cavities in order to avoidhideouts/safe areas for germs. • All the corners of the platform shall be round andsmooth. • All the joints shall be made smooth. • With quality molded panels. • Stainless steel Balkan beam. • With frame and pulley attachment • With patient support lifting polls • Complete with all orthopedic attachments andaccessories. <u>Side Railing:</u> • Adjustable length allows for use at bed rail toprevent falling out of bed. • Collapsible in 2 steps, Height of Rail 18” (highfrom the point of fixing structure of bed)
22.	Patient electric bed(Imported)	<u>Motorized ,battery operated patient bed with remote controller.</u> • ABS head & foot boards can be removable. • Aluminum alloy side rail, 6-staff, foldable type withsafe lock • Bed sheet top made from steel, powder coated and baked finish. • Bed framework made from steel • 5-inch covered casters with brake • The bed must have a safe load bearing capacity of 200 Kg or more. • Rechargeable built-in battery with charger inputpower 220VAC, 50Hz <u>Approximate dimension</u> • Overall length 195cm or more • Overall width 85cm or more • Minimum height 45cm or more • Maximum height 70cm or more • Back section up/down:0-65° or more • Knee section up/down:0-25° or more <u>Standard accessories</u> • Head and foot board • Beside rail • Hand set • Drip hole 1 no. of IV rod • Urine hook • Mattress should be provided with high density good quality according to the bed size, anti-bacterial, and water proof, shaped according to human body or bed Position.

23.	Patient Trolley	• Single crank, • Rubber bumper guards on all sides, • Mobile on 15-23 cm dia rubber castors, • Removable tarpaulin / Rexene stretched detachable stretcher. • Provided with oxygen cylinder holder, • Utility tray • I.V pole. • Safety side guards with revolving latch for up & down adjustment. • Overall Size: length 5 ft. 4", width: 2 ft., adjustable height: maximum 2 ft. 6".
24.	Revolving steel stool	• Stool with 16 SWG stainless steel structure and seat of diameter 300mm. • Height adjustable by simple spin mechanism. • Height adjustment not less than 53cm to 68cm.
25.	Stretcher (Imported)	• Length: 6 ft or more • Width: 2 ft or more • Made of stainless steel. • 4 rubber castors having 23 cm dia. • Castors should Lockable • Top made of stainless steel
26.	Stretcher (Local)	• Length: 6 ft or more • Width: 2 ft or more • Made of stainless steel. • 4 rubber castors having 23 cm dia. • Castors should Lockable • Top made of stainless steel
27.	Surgeon revolving steel stool	• Stool with 16 SWG stainless steel structure and seat of diameter 300mm. • Height adjustable by simple spin mechanism. • Height adjustment not less than 53cm to 68cm. • Mobile on 4 castors. • Sample to be approved.
28.	Wheel Chair	• Non folding wheel chair, • 2 big wheels and 2 small wheels • Should have footrest/ Foot support. • With safety belt. • Should have backrest/ Lumber support. • Comfortably cushioned seat width 38 x 43cm, waterproof covered.
29.	Quadriceps Bench	• Fixing straps • 2 Velcro straps 5x100cm (leg) • 1 Velcro Strap 5x200cm (Chest) • Group of Weights, Painted Black • 2 units 0.5 kg • 2 units 1 kg • 2 units 2 kg • Optional Accessories

		• Additional Arm for Quadriceps Bench • QUADRICEP BENCH with 1 arm Technical Features • Dimension 120 x 88 x 87 cm.																																																
Surgical Sets																																																		
Note: All the surgical instruments must be made of stainless steel. All die made with hidden joints and leak proof.																																																		
Manufacturer’s mark must be indicated on all instruments. Selection must be subject to sample.																																																		
30.	AO Basic Set	<table><tr><td>1. Twist Drills (unmounted 2.5mmdiam.13cm)</td><td>02</td></tr><tr><td>2. Twist Drills (unmounted 3.5mmdiam13cm)</td><td>02</td></tr><tr><td>3. Howmann Bone lever small 16 length 6mm wide</td><td>03</td></tr><tr><td>4. Howmann Bone levercobratype.16cm</td><td>01</td></tr><tr><td>5. Varburg Bone holdingforceps20cm</td><td>02</td></tr><tr><td>6. Reduction clamp pointed13cm</td><td>02</td></tr><tr><td>7. Reduction clamp screw jaw withteeth15cm</td><td>02</td></tr><tr><td>8. Simmons plier17cm</td><td>01</td></tr><tr><td>9. Tap 2.7mmdiam11cm</td><td>01</td></tr><tr><td>10. Handle for screw driver +countersink</td><td>01</td></tr><tr><td>11. Counter sink 10mm diam12.5cm</td><td>01</td></tr><tr><td>12. Screw driver 2.5mm11.5cm</td><td>01</td></tr><tr><td>13. Jeffsonperosteal elevator 5mm20mm</td><td>01</td></tr><tr><td>14. Plate bender14cmRetorcedor</td><td>02</td></tr><tr><td>15. Screw sleeve 2.5mm+2.0mm</td><td>01</td></tr><tr><td>16. Screw sleeve 2.7mm+2.0mm</td><td>01</td></tr><tr><td>17. Tap sleeve 2.5mm+3.5mm</td><td>01</td></tr><tr><td>18. Venabie Screwsleeve2.0mm</td><td>01</td></tr><tr><td>19. Drill Guide</td><td>02</td></tr><tr><td>20. Bone Scaler</td><td>01</td></tr><tr><td>21. Depth gage Large</td><td>01</td></tr><tr><td>22. Screwclamps8cm</td><td>01</td></tr><tr><td>23. Screw Driver with Guide2.5mm19cm</td><td>01</td></tr><tr><td>24. Along with Container</td><td></td></tr></table>	1. Twist Drills (unmounted 2.5mmdiam.13cm)	02	2. Twist Drills (unmounted 3.5mmdiam13cm)	02	3. Howmann Bone lever small 16 length 6mm wide	03	4. Howmann Bone levercobratype.16cm	01	5. Varburg Bone holdingforceps20cm	02	6. Reduction clamp pointed13cm	02	7. Reduction clamp screw jaw withteeth15cm	02	8. Simmons plier17cm	01	9. Tap 2.7mmdiam11cm	01	10. Handle for screw driver +countersink	01	11. Counter sink 10mm diam12.5cm	01	12. Screw driver 2.5mm11.5cm	01	13. Jeffsonperosteal elevator 5mm20mm	01	14. Plate bender14cmRetorcedor	02	15. Screw sleeve 2.5mm+2.0mm	01	16. Screw sleeve 2.7mm+2.0mm	01	17. Tap sleeve 2.5mm+3.5mm	01	18. Venabie Screwsleeve2.0mm	01	19. Drill Guide	02	20. Bone Scaler	01	21. Depth gage Large	01	22. Screwclamps8cm	01	23. Screw Driver with Guide2.5mm19cm	01	24. Along with Container	
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32.	AppendectomySurgery Set	<table><tr><td>1. Mayoscissor 14cm curved TC</td><td>01</td></tr><tr><td>2. Scalpel Handle #4</td><td>02</td></tr><tr><td>3. Allis tissue forceps 15 cm</td><td>04</td></tr><tr><td>4. Bab cocks tissue forceps 16 cm</td><td>02</td></tr><tr><td>5. Plain Forcep</td><td>01</td></tr><tr><td>6. Toothed Forcep</td><td>01</td></tr><tr><td>7. Artery Forcep Curved</td><td>04</td></tr><tr><td>8. Artery Forcep Straight</td><td>02</td></tr><tr><td>9. Czernv Retractor</td><td>02</td></tr></table>	1. Mayoscissor 14cm curved TC	01	2. Scalpel Handle #4	02	3. Allis tissue forceps 15 cm	04	4. Bab cocks tissue forceps 16 cm	02	5. Plain Forcep	01	6. Toothed Forcep	01	7. Artery Forcep Curved	04	8. Artery Forcep Straight	02	9. Czernv Retractor	02																														
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		10. Needle Holder	02
		11. Suture Cutting Scissor	01
		12. Kidney Tray 500ml	01
		12. Along with container	
33.	Bone Set Large, Small and Medium	1. Complete set of Bone Cutter	01
		2. Bone Nibblers	02
		3. Chisel - osteotome,	02
		4. Hammer – Periosteum	01
		5. Elevator,	01
		6. Bone levers etc.	04
		7. Complete sets curettes	04
		8. Bone holding forceps.	04
		9. Along with container	
34.	Cataract Surgery Set	1. Wire Speculum.	01
		2. St. Clark's Self-Retraining Speculums.	01
		3. Arragua's Superior Rectus Needle Holder	01
		4. Blade Breaker.	01
		5. Micro Corneal Forceps with Suture Tying	01
		6. Universal Corneal Scissors.	01
		7. Iris Scissors Str/Cvd.	02
		8. Micro Corneal needle holder.	01
		9. Iris Repository double ended.	01
		10. Arruga's capsular forceps	01
		11. Wire Vectus.	01
		12. Cautery Point.	01
		13. Spring Scissors Straight.	01
		14. Micro Mosquito Artery Forceps Str/Cvd.	04
		15. Fixation Forceps.	01
		16. Micro Suture Tying Forceps.	01
		17. Simeco Two-way Cannula.	01
		18. Toothed dissecting forceps 7"	01
		19. Non toothed dissecting forceps 7"	01
		20. Allis forceps 8"	01
		21. Long Artery forceps 9" curved	01
		22. Long Artery forceps 9" straight	01
		23. Deaver retractors set of three 2", 2", 3"	01
		24. Volsellum forceps	01
		25. Kidney tray 1 litre	01
		26. Kidney tray 500 ml	01
		27. McPherson Forceps	01
		28. Instruments Tray 8x10"	01
		Along with Container	

35.	Cholecystectomy Set	1. Instrument container box 10"x12" 01 2. Towel clips on pin 06 3. B.P handle No4 02 4. Artery forceps6"curved 08 5. Artery forceps 6" straight 04 6. Sponge holding forceps 02 7. Metzebaum scissors 9"curved 01 8. Sim's straight scissors8" 01 9. Czerney retractors 02 10.Langenbaeck retractors 02 11.Needle holder7" 01 12.Toothed dissecting forceps7" 01 13.Non toothed dissecting forceps7" 01 14.Deaver retractors 2" wide blade 02 15.Deaver retractors 3" wide blade 02 16.Allis forceps7" 02 17.Yankauer suction cannula 01 18.Kidney tray 1litre 01
36.	Colostomy set	19.Instrument container box10"x12" 01 20.Towel clips on pin 06 21.B.P handleNo4 02 22.Artery forceps 6"curved 08 23.Artery forceps 6"straight 04 24.Sponge holding forceps 02 25.Metzebaum scissors 9"curved 01 26.Sim's straight scissors 8" 01 27.Czerney retractors 02 28.Langen baeck retractors 02 29.Needle holder7" 01 30.Toothed dissecting forceps7" 01 31.Non toothed dissecting forceps7" 01 32.Deaver retractors 2"wideblade 02 33.Deaver retractors 3"wideblade 01 34.CBR bougles set' 01 35.Lathey's forceps 01 36.Werthemneedleholder9" 01 37.Allis forceps7" (S,M & L) 06 38.Yankauer suction canola 01 39.Kidney tray1litre 01 40.Deaver retractors 3"wideblade 01 41.Kidney tray500ml 01 42.Toothed dissectingforceps9" 01 43.Non toothed dissectingforceps9" 01 44.Babcock Forcep (S,M & L) 06
37.	C-Section set	1. Instrument container box 10"x12" 01 2. Towel clips on pin 06 3. Sponge holding forceps 02 4. Non toothed dissecting forceps 7" 02 5. Toothed dissecting forceps 7" 01 6. BP handle No 4 02 7. Allis's forceps 9" 02

		8. Kidney tray 1 litre	01
		9. Artery forceps 6" curved on pin	08
		10.Artery forceps 6"	04
		11.straight Metzebaum scissors 9"	01
		12.curved Sim's straight scissors 8"	01
		13.Doyne retractors	01
		14.Gallipots 150 ml	01
		15.Wrighley's outlet forceps pair	02
		16. Needle holder 7"	02
		17.Needle holder 9"	01
		18. Baby Cord clamps	02
		19.Green armytage forceps	02
		20.Long Artery forceps 9" straight	01
		21.Long Artery forceps 9" curved	02
38.	Cutting Instrument Set	1. BP needle	01
		2. A. Forceps	01
		3. Allis Forceps	01
		4. Sponge holding	01
		5. Dissecting plain/tooth	01 Each
		6. Towel Clips	04
		7. Needle Holders	06
		8. Kidney Tray	02
		9. Bowels	02
		10.Instruments Tray	01
		11.Dissecting Box	01
		12.Suture Cutting Scissors	01
		13.C-Zarny Refractors Scissors	01
		14.Langback	01
		Along with container	
39.	D & C Set	1. Uterine Sound	01
		2. Curette Double Ended	03
		3. Volselum 10"	01
		4. Artery Clamp 10"	08
		5. Ovum Forceps.	02
		6. Dialectomy set	01
		7. Sims speculum forceps set of three	01
		8. Curved for Gynae 1 to 5	01
		9. Sate catheter (Metallic female catheter	01
		10.Instrument containerbox 10"x12"	01
		11.towel clipsonpin	04
		12.sponge holdingforceps9.5"	01
		13.non toothed dissecting forceps 8"	02
		14.Allis's forceps 9"	02
		15.Dilator set (Hegers)	01
		16.Galli Pot 150ml	02
40.	DCR Instrument Set	1. D.C.R. BonePunch (Karrison).	01
		2. D.C.R. Periosteal Elevator Double Ended	01
		3. Mosquito Artery Forceps Straight.	02
		4. Mosquito Artery Forceps Curved.	02
		5. Bowman Lacrimal Probe No.0-00.	01
		6. Bowman Lacrimal Probe No.1-2.	01
		7. Bowman Lacrimal ProbeNo.3-4.	01

		8. Wilder Lacrimal Dilator. 01 9. West Lacrimal Sac Chisel. 01 10. Towel Clips. 02 11. Straight Eye Scissors (Iris). 01 12. Stevens Tenotomy Scissors. 01 13. Stevenson Lacrimal Sac Retractor. 01 14. Knapp Lacrimal Sac Retractor. 01 15. Small Mallet. 01 16. Barraquer Needle Holder Curved. 01 17. Straight Dressing Forceps (Iris) Plain. 01 18. Nasal Speculum. 01 19. Nasal Dressing Forceps. 01 20. Suture Barker 01 21. Along with Container
41.	Dental Instrument complete Set	INSTRUMENT SET DENTAL SURGERY Basic instrument set for use in the dental surgery room. 1. Probe single ended perio CPTN 04 2. Spatula double ended No 8 02 3. Spatula double ended No 3 02 4. Spatula double ended 8 x Alginate/Plaster metal Curved 02 5. Instrument for plastics 04 6. Excavator double ended 127/128 04 7. Excavator double ended 131/132 04 8. Forceps tissue tweezer type College Fig 8 plain 06 9. Carver Ward 2 02 10. Scaler balanced grip H4 02 11. Scaler balanced grip H5 02 12. Scaler balanced grip H7 02 13. Scaler balanced grip H9 02 14. Scaler balanced grip Towner U1502 15. Scaler balanced grip Jaquette 202 16. Scaler balanced grip Jaquette 302 17. Scaler balanced grip H6/702 18. Scaler Octagonal H4 02 19. Scaler Octagonal H5 02 20. Scaler Octagonal H6 02 21. Scaler Octagonal H8 02 22. Scaler Octagonal H9 02 23. Scaler Octagonal Towner U1502 24. Scaler Octagonal Jaquette 202 25. Scaler Octagonal Jaquette 302 26. Scaler Gracey Curette double ended 1/2 02 27. Scaler Gracey Curette double ended 3/4 02 28. Scaler Gracey Curette double ended 5/6 02 29. Scaler Gracey Curette double ended 9/10 02 30. Scaler Gracey Curette double ended 13/14 02 31. Scaler MacFarlane Balanced Tip MFO/102

		32. Scaler MacFarlane Balanced Tip MF2/302 33. Scaler MacFarlane Balanced Tip MF4/502 34. Burnisher DE AM (W) 102 35. Burnisher DE AM (W) 1L02 36. Amalgam Plugger Blacks 0/102 37. Amalgam Plugger Blacks 1/202 38. Elevator Apical Straight02 39. Elevator Apical Left 02 40. Elevator Apical Right02 41. Elevator Coupland 102 42. Elevator Coupland 202 43. Elevator Coupland 302 44. Elevator Warwick James Straight02 45. Elevator Warwick James Left02 46. Elevator Warwick James Right02 47. Elevator Cryer 30 left02 48. Elevator Cryer 31 right02 49. Forceps Artery Spencer Wells 5" straight02 50. Forceps Artery Spencer Wells 5" curved02 51. Forceps Mosquito 5" straight02 52. Forceps Extraction Upper Incisor02 53. Forceps Extraction Upper Molars Right02 54. Forceps Extraction Upper Molars Left02 55. Forceps Extraction Lower Molars02 56. Forceps Extraction Lower Roots02 57. Forceps Extraction Small Lower Roots02 58. Forceps Extraction Lower Premolars02 59. Forceps Extraction Upper Roots02 60. Forceps Extraction Childrens Lower Teeth02 61. Forceps Extraction Childrens Lower Molars/General02 62. Forceps Extraction Childrens Upper Incisors/Canines02 63. Forceps Extraction Childrens Upper Molars02 64. Forceps Extraction Childrens Upper General02 65. Amalgam Plugger Blacks 0/104 66. Luxation Kit 67. Ceramicolor Probe No 606 68. Margin Trimmer 15-1103 69. Placer Calcium Hydroxide 15-9004 70. Gingival Cord Packer Yardley 15-66-603 71. Root Canal Spreader Heat Carrier Anterior02 72. Root Canal Spreader Heat Carrier Posterior02 73. Periosteal Elevator Prichard02 74. Periosteal Elevator Molt02 75. Periosteal Elevator Fine02 76. Periosteal Elevator Howard02 77. Forceps Tissue Sempkin-Taylor Straighy 12.5cm02 78. Retractor tissue Austin02 79. Retractor Tongue and Cheek University of Minnesota02 80. Needle Holder Mayo Hegar 16cm02 81. Forceps Halsted Mosquito Curved 12cm02 82. Forceps Halsted Mosquito Straight 12cm02
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		83. Tray Dental Instrument Unperforated 28 x 18 cm06 84. Mirror Handles Round Stainless Steel 10 85. Mirror Heads No 4 plane (12)06 86. Explorer single Ended EXS 602 87. Explorer Single Ended EXS 6A02 88. Matrix System Intro01 89. Scissors Straight 5" Sharp/Sharp02 90. Scissors Straight Crown Bee Bee No 1202 91. Scissors Curvedt Crown Bee Bee No 902 92. Syringe Dental Cartridge S/S 2.2 ml02 93. Amalgam Carrier 5X Hampel Complete02 94. Mortar & Pestle Glass 2 " Dia.02 95. Dappen Dish Glass Clear06 96. Glass slab 02 97. Spatula mixing filling material02 98. Mixing Pad reusable02	
42.	DHS set	1. Guide pin with thread 03 2. H H S angle guide 01 3. DHS Triple reamer 01 4. Impactor 02 5. Tap for DHS 01 6. Coupling screw for plate insertion with guide shaft 01 7. Coupling screw or screw removal 01 8. Quick coupling handle 01 9. Reverse measuring device 01 10.Centering sleeve for tap 01 11.Centering sleeve for wrench 01 12.DCS triple reamer 01 13.DCS angled guide 01	
43.	Dissecting Instrument Set	1. Artery Forceps Medium 04 2. BP Handle 02 3. Dissecting Forceps plain & tooth 02 4. Dressing Disecting Scissors (S & M) 02 5. Dressing suture Cutting Scissors 01 6. Czerny Retractor 02 7. Legenback Retractor 02 8. Needle Holder 02 Along with Container	
44.	Dissection box for post-mortum with allaccessories	1. Enterotome 02 2. Skull Chisel 02 3. Rib Cutter 02 4. Scalpel 05 5. Scalpel Blades 100 Pc 6. Tooth Forceps 05 7. Bone Saw 02 8. Amputation knife 02 9. Postmortem Hammer 01 10.Postmortems Chisel 02 11.Postmortem Spine Wrench 01 12.Postmortem Hook Knife 01 13.Blowpipe 01 14.Scissor 02 15.Along with container	

45.	Dressing Set for Ward	1. Dressing scissors(Plastic Handle) 01 2. Stitch Scissors fine 02 3. No Toothed Forceps. 01 4. Toothed Forceps. 01 5. Artery forceps. 01 6. Suture forceps. 01 7. Small Kidney Tray. 01 8. Bowl 01 9. Kocher Forceps 01 10. Along with Container
46.	E & C Set	1. Instrument container box 10"x12" 01 2. Towel clips on pin 04 3. Sponge holding forceps 01 4. non toothed dissecting forceps 7" 06 5. Allis's forceps 9" 02 6. Dilator set 04 7. Sims speculum set 04 8. Duck speculum set 04 9. Uterine Sound 01 10. Volselum set 04 11. Uterine curette set of three 02 12. Kidney tray 1 liter 01 13. Kidney tray 500ml 01 14. Flushing curette set of three 01 15. Gallipots 150 ml 01 16. Manual Vacuum Aspirator 01
47.	Ear Surgery Instrument Set	1. Plaster first incision Knife 01 2. Rotary First incision Knife 01 3. Sickle Knife 01 4. Myringotomes 01 5. Aural Crocodile forceps Tilley's 01 6. Cawthorne Crocodile Scissors Straight 01 7. Cawthorne Crocodile Scissors Right 01 8. Cawthorne Crocodile Scissors Left 01 9. Frazier Suction Nozzles Nos. 6, 7, 8 03 10. Micro Suction Nozzle 02 11. Cawthorne Hooks. Different Angles 03 12. Granulation Forceps Straight 01 13. Micro Ear Instruments Different 05 14. (Mobilizer, Measuring Rode, Curette, Elevator Rt, Lt Micro Hartmann Crocodile Forceps Straight 01 15. Micro Hartmann Crocodile Forceps Right 01 16. Micro Hartmann Crocodile Forceps Left 01 17. Mollison Mastoid Retractor Adult 02 18. Mollison Mastoid Retractor Child 01 19. Micro Granulation Forceps Straight 01 20. Micro Granulation Forceps Right 01 21. Micro Granulation Forceps Left 01 22. Plaster Jenson Retractor Right 01 23. Plaster Jenson Retractor Left 01 24. Tumarkin Metal Ear Speculum Slotted 04 25. Cawthorne Periosteal Elevator 01 26. King Vein Graft Pressing Forceps 01

		27. Instruments Tray 12"x14"	01
		28. Needles Box	01
		29. Mastoid Chisel	01
		30. Along with Container	
48.	Electric Foreign Body Set	1. Beccock	02
		2. knife handle	01
		3. Small artery forceps	03
		4. plane dissecting forceps	01
		5. tooth dissecting forceps	01
		6. needle holder	01
		7. Scissor	02
		8. Small Allis's	02
		9. Retractors	02
		10. Along with Container	
49.	General Instrument Set	1. Instrument Tray 10x12	01
		2. Towel clips	04
		3. BP handle No. 4,3	02
		4. Artery forceps 6" curved	06
		5. Artery forceps 6" straight	02
		6. Sponge Holding forceps	02
		7. Metzebaum scissors 7.5" curved	01
		8. Metzebaum straight scissors 7.5"	01
		9. Czerney retractors	02
		10. Langenbeck Retractors	02
		11. Needle holder 7"	01
		12. Toothed dissecting forceps: 7"	01
		13. Non-toothed dissecting forceps 7"	01
		14. Allis' forceps 8"	04
		15. kidney tray litter	01
		16. kidney tray 500ml	01
		17. Along with Container	
50.	Glaucoma Set	1. Blade Braker	01
		2. B.P Handle No. 3	01
		3. Wire Speculum	01
		4. Mosquito Artery Forceps Str/Cvd	02
		5. Corneal Scissors Right.	01
		6. Corneal Scissors Left.	01
		7. Corneal Scissors Curved of flat.	01
		8. Barahuer Needle Holder Curved	01
		9. A/I Cannula	01
		10. Along with Container	
51.	Haemorrhoidectomy set	1. Instrument container box 10"x 12"	01
		2. Towel clips on pin	06
		3. Artery forceps 6" curved	08
		4. Artery forceps 6" straight	04
		5. Sponge holding forceps	02
		6. Metzebaum scissors 9" curved	01
		7. Sim's straight scissors 8"	01
		8. Needle holder 7"	01
		9. Toothed dissecting forceps 7"	01
		10. Non toothed dissecting forceps 7"	01
		11. Kidney tray 1 litre	01

52.	IMN Set	1. Awl 01 2. Cortical Awl 01 3. Tissue Protecort 01 4. Impactor Large, Medium and Small 01 5. GuidePin3.5mm 01 6. Extractor 01 7. Bio-Locking Femur 03 8. 10/12/14x360/380/400/420/440/460 9. Femur proximal locking screw 03 10.60/65/70/80/90/100 11. Tibia/femoral blocking screw 03 25/30/35/40/45/50/55/60/65 12. Bio-locking Tibia03 13. Bio-locking humerus 03 14. Proximal locking screw 15. End Stem 16. Reamer with T-Handle 6mm to 17mm 01 each 17. Along with Container
53.	Inter locking Nail set(Full instruments)	1. Universal socket wrench 01 2. Hex driver for 4.5 mm & 5mm screw 01 3. Hex driver for 6.4mm screw 01 4. Tracer for 5mm screw 01 5. Guide wire 2.0mm x 900mm Long 01 6. Guide wire 3.0 mm x 900mm Long 01 7. Guide wire 2.0 mm x 900mm Long with Tip 01 8. Open End Wrench 01 9. Supine Driver 01 10.T- Handle 01 11. Driver/ Extractor 01 12. Skin Protector 01 13. Bone AWL 01 14. Tapered Reamer 01 15. Proximal Drill Guide for Femoral Nails 01 16. Slide Hammer 01 17. Drill Sleeve (Long) 8.0mm DIA 01 18. Drill Sleeve (Short) 8.0mm DIA 01 19. Trocar for Drill Sleeve 01 20. Drill Bit 305mm Long 3.2mm 01 21. Drill Bit 305mm Long 4.8mm 01
54.	Kidney StoneRemoval Set	1. Dijorden Forceps 01 2. BoleocksRt angled long dissecting 01 3. Long scissors forceps 01 4. Long needle holders 02 5. Suction nozzles with guard 01 6. Morrison's refractor 01 7. Along with container
55.	Laminectomy Sets	1. Carrison's Rangour (up-cut) 02 2. 1mm, 2mm, 3mm,4mm 3. Pituitary Rangour 04 4. 1mm, 2mm, 3mm(Strait) 5. 2mm Forward - 01 6. 2 mm Backward – 01 7. Watson chain Dissector 01

		8. Adson's retractor – root retractor 01 9. Mastoid retractor- 02 10. Deep Mastoid retractor (Cervical) 02 11. Hemi-retractor – (Right 01) (Left 01) 12. Chisel – 01 13. Suction nozzles – small, medium, large 01 Each 14. BP knife handle – long 01 15. Cutting se: fine / assistant Scissors 02 16. Needle holders 17. Dissecting forceps- Plain and tooth 02 18. Artery forceps 04 19. Towel clamps sponge holding 01 20. Kidney trays 02 21. Instrument's tray (Large) 01 22. Along with container
56.	Laparotomy set	1. Instrument container box 10"x12" 01 2. Towel clips on pin 06 3. B.P handle No 4 02 4. Artery forceps 6" curved 08 5. Artery forceps 6" straight 04 6. Sponge holding forceps 02 7. Metzebaum scissors 9" curved 01 8. Sim's straight scissors 8" 01 9. Czerney retractors 02 10. Langenbaeck retractors 02 11. Needleholder 7" 01 12. Toothed dissecting forceps 7" 01 13. Non toothed dissecting forceps 7" 01 14. Deaver retractors 2" wide blade 02 15. Deaver retractors 3" wide blade 01 16. Kirschner self-retaining retractor with 4 blades 01 17. Non crushing intestinal clamps curved 02 18. Non crushing clamps straight 02 19. Artery clamps 9" curved 01 20. Lathey's forceps 01 21. Debaky Forcep 01 22. Toothed dissecting forceps 9" 01 23. Non toothed dissecting forceps 9" 01 24. Allis forceps 7" 02 25. Yankauer suction cannula 01 26. Kidney tray 1 litre 01 27. Kidney tray 500ml 01 28. Needleholder 9 01 29. Daithemy Monopolar 01 30. Self-Retaining Retractor 01
57.	Large Fragment Set	1. Drill Bit % 3.5 01 2. Drill Bits % 2.5 01 3. Small counter sink 01 4. Small Hexagonal screw driver W/Holding sleeve 01 5. Small hexagonal screw driver W/End coupling fit 01 6. Insert sleeves 3.5mm/2.5mm 02 7. Periosteal elevator small straight edge 01

		8. Bone tap 3.5mm/1.25mm pitch cortex 01 9. Bone tap 4.0mm/1.75mm pitch cancellous 01 10. Drill guide and drill sleeve for 2.0mm bit 01 11. Tap sleeve 3.5mm and drill sleeve 2.5mm 01 12. Tap sleeve 3.5mm and drill sleeve 2.7mm 01 13. Neutral and loaded drill guide 3.5mm 01 14. Small Hoffman retractor 6mm 01 15. Small Hoffman retractor 8mm 01 16. Self-centering bone holding forceps 02 17. Reduction forcep 02 18. Bending plier 01 19. Hoffman retractor w/broad shank 01 20. Depth gage for 2.7-4.0mm screws 01 21. Sharp hook 01 22. Bending template 7H,9H 02 23. Plate bender small 01 24. Tap handle quick or coupling 01
58.	Myringoplasty Set	27. Plaster first incision knife 28. Rotary first incision knife 29. Sickle knife 30. Myringotomes 31. Aural crocodile forceps Tilley's 32. Cawthorne crocodile scissors straight 33. Cawthorne crocodile scissors right 34. Cawthorne crocodile scissors left 35. Frazier suction nozzles nos. 6, 7, 8. 10. Micro suction nozzle 11. Cawthorne hook. Different angles 12. Granulation forceps straight 36. Micro ear instruments different (Mobilizer, Measuring rod, Curette , elevator Rt, Lt 37. Micro Hartmann crocodile forceps straight 15. Micro Hartmann crocodile forceps right 16. Micro Hartmann crocodile forceps left 17. Mollison mastoid retractor adult 18. Mollison mastoid retractor child 19. Micro granulation forceps straight 20. Micro granulation forceps right 21. Micro granulation forceps left 22. Plaster Jenson retractor right 23. Plaster Jenson retractor left 24. Crocodile forceps fine tips 3" 25. Tumarkin metal ear speculum slotted 26. Ear speculums 38. Cawthorne periosteal elevator 39. King vein graft pressing forceps 40. Instruments tray 12" X 14" 41. Needles box 42. Mastoid chisel
59.	Normal Delivery set	1. Stainless steel imported/Local made 2. Bowl lotion 150 mm 01 3. Kidney Tray 10" 03 4. Mucus Extractor Reusable Rubber 02 5. Catheter used with mucus Extractor 02 6. Artery Forceps Kocher 8" straight. 04

		7. Dissecting Forceps 6" toothed.	04
		8. Needle holder mayo 6.5	01
		9. Outlet Forceps large size.	02
		10. Episiotomy Scissors 6"	02
		11. Scissors B/B	06
		12. Card Clamp.	01
		13. Sims Speculum	01
		14. Along with Container	
60.	Obs/ General Gynaeset	1. Instrument container box 10"x12"	01
		2. Towel clips on pin	01
		3. Sponge holding forceps	01
		4. Non toothed dissecting forceps 7"	01
		5. Toothed dissecting forceps 7"	01
		6. BP handle No 4	01
		7. Allis's forceps 8"	01
		8. Kidney tray 1 litre	01
		9. Artery forceps 6" curved on pin	01
		10. Artery forceps 6" straight	01
		11. Metzebaum scissors 9" curved	01
		12. Sim's straight scissors 8"	01
		13. Kidney tray 500ml	01
		14. Deaver retractors set of three	01
		15. Gallipots 150ml	01
		16. Bowl 8 litre	01
		17. Needle holder 7"	01
		18. Needle holder 9"	01
		19. Self-retaining retractor (Balfon 3 blades)	01
		20. Volsellum forceps	01
		21. Long Artery forceps 9" straight	01
		22. Long Artery forceps 9" curved	01
		23. 27. Viginal Retractor	01
61.	Obstetric surgery set minor and major	1. Metzenbaum's scissors curved 7"	01
		2. Ditto 5/4"	01
		3. Scissor straight sharp/blunt 5 1/2"	01
		4. Mayo's scissor straight 6 1/2"	01
		5. Ditto curved 5 1/2"	01
		6. Ditto curved 6 1/2"	01
		7. Littauer's stitch scissor, hook end 5"	01
		8. Wire cutting scissors	01
		9. Dissecting forceps serrated points 5"	01
		10. Ditto 8"	01
		11. Maingot's Dissecting forceps serrated points 11"	01
		12. Treves Dissecting forceps 1x2 teeth 5"	01
		13. Waugh's Dissecting forceps fine 1x2 teeth 8"	01
		14. Mayo's tissue grasping forceps 9"	01
		15. Crile artery forceps straight 5/8"	18
		16. Ditto curved 5/4"	24
		17. Pean's artery forceps curved 6 1/2"	18
		18. Ochsner's artery forceps tenaculum points 6 1/2"	12
		19. Backhaus towel clips 5"	12
		20. Foerster's sponge forceps straight 9 1/2"	06
		21. Ditto curved 9 1/2"	06
		22. Balfour's abdominal retractor, 7" opening, 2 1/2" deep lateral blade x	

		1 3/4"centre blade	01
		23.Set(of 5 sizes)deaver's retractor	01
		24.Walton's malleable cooper retractor 11/2"x 12"	01
		25.25.Ditto 2"x12"	01
		26.Morris retractors,blade 2"deep x 2 1/2"wide	01
		27.Richardson's retractor,blade 3/4"x13/4"	02
		28.Volkman's retractor,4 prong blunt	02
		29.Ditto,4 prong sharp	02
		26. Pair parker's double ended retractors, small 5/8"wide x 5"	01
		27. Durham's retractor,blade 5/8"wide,	01
		28. Dupuytren's aneurysm needle and ligature carrier, curved toright	01
		29. Ditto curved to left	01
		30. Allis tissue forceps,5x6 teeth,6"	12
		31. Babcock's tissue forceps 6 1/4"	06
		32. Probe, with eve silver 6"	03
		33. Ochsner's Trocar 6mm diam	01
		34. Poole's abdominal suction tube	01
		35. Crile-woods needleholder,6", with diamond jaws	02
		36. Hagar's needleholders,7", with diamond jaws	02
		37. Ditto 8", with diamond jaws	02
		38. Graves Specula Small Size	02
		39. Ditto medium size	02
		40. Ditto large size	02
		41. Jayle's self-retaining retractor	02
		42. Auvard's vaginal speculum weighted	01
		43. Sims duckbill speculum, double ended, medium size	01
		44. Doyens flat retractor, blade 4"x1 1/8"	02
		45. Doyens rectangular retractor, medium size	02
		46. Golpe's Vulva retractor	01
		47. Bozemann's uterine dressing forceps 9/2"	02
		48. Foerster's sponge holding forceps 9 1/2"	06
		49. Heywood smith's Ovum forceps	02
		50. Wilson's Vulsellum forceps,1x1 teeth,9/2"	06
		51. Teale's Vulsellum forceps,straight 3x3 teeth,9"	02
		52. Uterine Vulsellum forceps,2x2 teeth,10"	02
		53. Doyen's myoma screw	01
		58..Simpson's uterine sound,graduates in inches	01
		59. Randall's endometrial biopsy curette,luer-cone	01
		60. Van doren's uterine biopsy forceps,10 1/2"	01
		61. Leech-Wilkinson's uterine biopsy forceps,8"	01
		62. B.P Scalpel handle No.4	02
		63. Scissor straight sharp/blunt 5 1/2"	02
		64. Mayo's scissor straight 6 1/2"	01
		65. Ditto curved 6 1/2"	01
		66. Wire cutting scissor 5"	01
		67. Dissection forceps,serrated points 5"	02
		68. Vaginal Dissection forceps,with finger groove,serrated Ends9 1/2"	01
		69. Ditto,tenaculum points,8 1/2"	01
		70. Millin's dissection forceps,3x4 teeth,9"	01
		71. Backhaus towel clips 5"	06
62.	Prostatectomy Set	1. Instrument container box 10"x12"	01

		2. Towel clips on pin 06 3. B.P handle No4 02 4. Artery forceps 6"curved 08 5. Artery forceps 6" straight 04 6. Sponge holding forceps 02 7. Metzebaum scissors 9"curved 01 8. Sim's straight scissors8" 01 9. Czerney retractors 02 10.Needle holder7" 01 11.Toothed dissecting forceps7" 01 12.Non toothed dissecting forceps7" 01 13.Suprapubic retractor 01 14.Allis forceps7" 01 15.Yankauer suction cannula 01 16.Kidney tray 1litre 01 17.Kidney tray 500ml 01 18.Prostectomy Retractor 01
63.	Rhinoplasty Set	1. Nasal Speculum 01 2. Alfrights Nasal Retractor 01 3. Straight S/w Artery forceps 01 4. Scissors Angle don flat 01 5. Ballinger Swivel knife 01 6. Septum nasal forceps right and left Valselum 02 7. Septum forceps Str. (Ash) 01 8. Metzenboum Scissors Cvdonflat8" 01 9. Stoz nasal saws rightandleft 02 10.Padgett nasal rasp fine and heavy 03 11.Joseph nasal Respectory 01 12.Joseph skin hooks 03 13.Kilner Alae retractor 02 14.Heath Mallet. 01 15.Set f McIandoeChisels5,7,9,11,15mm 01 16.Tillys Nasal Forceps 01 17.McIndoe Non ToothedForceps6" 01 18.Mastarde'sToothedForceps6" 01 19.Adson Toothed Forceps Fine 01 20.Adson Toothed Forceps Medium 01 21.American pattern suction cannula 01 22.Valkmann curette 01 23.Towel Clips 08 24.Marking pen 01 25.Inkpot 01 26.Along with Container
64.	Small Fragment Set	1. Drill Bit 3.2mm 01 2. Drill Bits 4.5mm 01 3. Bone Tap 6.5mm 01 4. Bone Tap 4.5mm 01 5. Tap Sleeve 3.5mm 01 6. Tap Sleeve 4.5mm 01 7. Drill sleeve for round hole plate 01 8. Tap handling coupling 01 9. Counter sink 4.5mm 01 10.Neutral and loaded Drill Guide 3.2/4.5mm 01

		11.Insert sleeve 4.5/3mm	02
		12.Pointed Drill guide	01
		13.Socket Wrench 11mm	01
		14.Malleolar counter sink coupling	01
		15.Hexagonal screw driver 4.5mm	01
		16.Hexagonal screw driver shaft 4.5mm	01
		17.Combination wrench 11mm	01
		18.Death gauge for 4.5mm and 6.5mm screws	01
		19.Sharp hook	01
		20.Screw holding forceps	01
		21.Bending template 5H,7H,9H	03
		22.Compression device 8mm	01
		23.Plate bender large	01
		Pin wrench	01
65.	SMR Set	1. Freer Elevator	02
		2. Killian Nasal Gouge V-Shape angled	02
		3. Killian Nasal Gouge V-Shape straight	02
		4. Lucus Nasal chisel	02
		5. Hammer SS	01
		6. Frazier Suction Nozzle No 9,10,12	03
		7. Tilley's Nasal Dressing Forceps	01
		8. Luc Turbinate Forceps Small	01
		9. Luc Turbinate Forceps Medium	01
		10.Hartmann crocodile forceps	01
		11.Killian NasalSpeculum2"	01
		12.Killian NasalSpeculum2.5"	01
		13.Killian NasalSpeculum3"	01
		14.Hayman's Turbinectomy Scissors	01
		15.Thudicum nasal speculums	03
		16.Tilley's Trocar &CannulaNo7	02
		17.Tilley's Trocar &CannulaNo8	01
		18.Walsham Septum Forceps straint 2	01
		19.Double action bone nibbler Jenson. Middleton	01
		20.Walsham septum forceps right	01
		21.walsham septum forceps left	01
		22.Yankaur suction nozzal	01
		23.Kidney tray 1000ml	01
		24.Along with Container	
66.	Squint Surgical Set	1. Micro Needle holder	01
		2. Needle Holder Large	01
		3. Conjunctival Scissors	01
		4. Corneal Toothed Large	01
		5. Artery Forceps	06
		6. Bulldog Clamps	02
		7. Squint Hook	02
		8. V. Calipers.	01
		9. Bowel SS 4"	01
		10.Kidney Tray	01
		11.Along with Container	
67.	Thoracotomy set	1. Instrument container box10"x12"	01
		2. Towel clips on pin	06
		3. B.P handleNo4	02
		4. Artery forceps 6"curved	08
		5. Artery forceps 6"straight	04

		6. Sponge holding forceps 02 7. Metzebaumscissors9"curved 01 8. Sim's straightscissors8" 01 9. Czerney retractors 02 10. Langenbaeck retractors 02 11. Needleholder7" 01 12. Toothed dissectingforceps7" 01 13. Non toothed dissectingforceps7" 01 14. Allis forceps7" 01 15. Rib spreader 01 16. Doyenribra spactories set 01 17. Yankauer suction cannula 01 18. Lung retractors 02 19. Kidney tray1litre 01 20. Kidney tray500ml 01 22. Needleholder9" 01
68.	Thyroidectomy Set	1. Joll's Retractor 01 2. Towel clip on pin 06 3. BP handleNo4 02 4. Artery forceps 6"curved 08 5. Artery forceps 6" straight 04 6. Sponge holding forceps 02 7. Meta-Baum scissors9"curved 01 8. Sim's s straightscissor8" 01 9. Czerny retractor 02 10. Langeback retractor 02 11. NeedleHolder7" 01 12. Toothed dissectingforceps7" 01 13. Non toothed dissectingforceps7" 01 14. Thyroidre 01 15. Alliesforceps7" 01 16. Kidney tray1liter 01 17. Kidney tray500ml 01 18. Along with Container
69.	Tonsillectomy Set	1. Boyle Davis Mouth Gag Set. (Set of 5 Blades). 01 Set 2. Suspension Rods. 01Pair 3. Suspension Plate. 01 4. Gwynne Evans Tonsil Dissector. 01 5. Mollison Anterior Pillar Retractor. 01 6. Waugh Tonsil Dissecting Forceps 1X2 Tooth 8". 01 7. Waugh Tonsil Dissecting ForcepsPlain8". 01 8. Tonsil Artery ForcepsFineStraight. 01 9. Negus Tonsil Artery Forceps Short Curve. 01 10. Negus Tonsil Artery Forceps Long Curve. 01 11. Tonsil Scissors Curved 7.5". 01 12. Tonsil Scissors Fine Point Curved 7". 01 13. Eve's Tonsil Snare. 01 14. Tonsil Snare Wire Packet. (Packet of 15Pes) 01 Pkt. 15. St. Clair Thomson Adenoid Curette With guard Small. 01 16. St. Clair Thomson Adenoid Curette With guard Large01 17. Negus Pusher. 01 18. Denis Brown Tonsil Holding Forceps. 01

		19.B.P. HandleNo.7.	01
		20. Yankaur Suction Nozzle.	01
		21. Instruments Tray	01
70.	Urethral Dilator set	1. Complete Set of Autoclavable Dilators 2. Sizes; 2-32 3. Along with container	
71.	Vaginal HysterectomySet	1. Instrument container box10"x12" 2. Towel clipson pin 3. B.P handleNo 4 4. Artery forceps 6"curved 5. Artery forceps 6"straight 6. Sponge holding forceps 7. Metzbaumscissors9"curved 8. Sim's straightscissors8" 9. Czerney retractors 10. Langenbaeck retractors 11. Needleholder7" 12. Needleholder8" 13. Toothed dissectingforceps7" 14. Non toothed dissectingforceps7" 15. Alliesforceps7" 16. Sim's speculum set 17. Gallipots150ml 18. Uterine sound 19. Kidney tray1litre 20. Kidney tray500ml 21. Volsellum forceps 22. Viginal Retractor	01 06 02 08 04 02 01 01 02 02 01 01 01 01 06 01 02 01 01 01 02 01
72.	Varicose Vein set	1. Instrument container box 10"x 12" 2. Towel clips on pin 3. B.P handle No 4 4. Artery forceps 6" curved 5. Artery forceps 6" straight 6. Sponge holding forceps 7. Czerney retractors 8. Langenbaeck retractors 9. Needle holder 7" 10. Toothed dissecting forceps 7" 11. Non toothed dissecting forceps 7" 12. Artery clamps 9" curved 13. Lathey's forceps 14. Toothed dissecting forceps 9" 15. Non toothed dissecting forceps 9" 16. Allis forceps 7"	01 06 02 08 04 02 02 02 01 01 01 01 01 01 01 01 01
73.	Vascular set	1. Instrument container box10"x12" 2. Towel clips on pin 3. B.P handleNo4 4. Artery forceps 6"curved 5. Artery forceps 6"straight 6. Sponge holding forceps 7. Metzbaumscissors9"curved 8. Sim's straightscissors8"	01 06 02 08 04 02 01 01

		9. Czerney retractors	02
		10. Langenbaeck retractors	02
		11. Needleholder 7"	01
		12. Toothed dissecting forceps 7"	01
		13. Non toothed dissecting forceps 7"	01
		14. Allis forceps 7"	04
		15. Vascular Clamp	02
74.	VP Shunt	1. Sulemans subcutaneous shunt passer	01
		2. Adult Size	04
		3. Paeds Size	04
		4. Hudson Brace –perforator	01
		5. Burn bole(Various sizes)	01 Each
		6. Brain Cannula -	01
		7. Adson's Dissector	02
		8. Mastoid Refractor – Small, Medium, Large sizes	01 Each
		9. Peritoneal trocar	01
		10. Cutting set –scissor-fine/assistant	01
		11. Needle holder- fine large	01
		12. Artery forceps – all size	04
		13. Dissecting forceps- plain, tooth	01 Each
		14. Sponge holder	01
		15. Kidney tray	01
		16. Instrument tray- large size	01
		17. Bowl(sponge)	01
		18. Suction- nozzles- medium, small sizes	01 Each
		Along with container	
75.	Broken Screw Removal Set	1. Hollow reamer 5mm	
		2. Hollow reamer 6.5mm	
		3. Hollow reamer 10mm	
		4. Spinal monoaxial pedicle screw driver	
		5. Hollow reamer 3.0	
		6. Hollow reamer 2.7	
		7. Extraction bolt 6.5mm	
		8. Extraction bolt 6.0mm	
		9. Extraction bolt 4.5mm	
		10. Extraction bolt 3.5mm	
		11. Extraction screw hexagonal 4.0mm conical	
		12. Extraction screw hexagonal 3.5mm conical	
		13. Extraction screw hexagonal 2.5mm conical	
		14. Slotted screwdriver small	
		15. Slotted screwdriver large	
		16. Phillips screw driver	
		17. Square screw driver SW 1.5	
		18. Square screw driver SW 1.2	
		19. Square screw driver SW 1.1	
		20. Star screw driver T5.5	
		21. Star screw driver T5.0	
		22. Star screw driver T4.4	
		23. Star screw driver T3.8	
		24. Star screw driver T3.3	
		25. Star screw driver T2.7	
		26. Star screw driver T2.2	

		27.Hexagonal screw driver SW5.5 28.Hexagonal screw driver SW5.0 29.Hexagonal screw driver SW4.5 30.Hexagonal screw driver SW4.0 31.Hexagonal screw driver SW3.5 32.Hexagonal screw driver SW3.0 33.Hexagonal screw driver SW2.5 34. Hexagonal screw driver SW2.0 35.Hexagonal screw driver SW1.5 36.Pliers for screw removal 37.T shaped handle quick coupling 38.Round gouge 8mm 39.Straight handle quick coupling 40.Screw extractor 41.High speed drill bit 8*36*75mm 42.High speed drill bit 6*36*75mm 43.High speed drill bit 4*36*75mm 44.Sharp hook 45.Tip screw driver 46.Screw extractor 3.5mm 47.Aluminum box Note: Each instrument must be included quantity 1 Each
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General Hospital Supplies (Sample Based)

S. No	Nomenclature	Specifications
1.	Adult Weighing Scale	- Scale to have low level platform finished with non- slip cover, measuring Dial to be fitted at waist height steel yard arm. - Capacity: 0 kg -150kg or better. - Fitted with imperial and metric height measuring rod.
2.	Ambo Bag Adult	- Silicon Resuscitation Bag with adult face mask sizes 3, 4, 5 & Airway size 3, 4, 5 with E2 valve and fully autoclavable. - Reservoir Bag volume 2Liter or more. - Oxygen Reservoir Volume approximately 2500 ml for adult. - Tidal maximum volume: approximately 1000ml for adult. - Resuscitation bag to be manually operable and able to be connected to an oxygen source up to 100% for ventilation through a mask or an endotracheal tube. - To be able to connect to an oxygen source up to 100%. Unit to be supplied with a carrying case. - Re-usable and must be autoclavable
3.	Ambo Bag Paeds	- Silicon Resuscitation Bag with infant / child face mask sizes 00, 0, 1, 2 & airway size 0, 1, 2 with E2 valve and fully autoclavable. - The resuscitator to meet with all requirements lay down by international standards. - Reservoir Bag volume approx. 600ml. - Oxygen Reservoir Volume approx. 2500ml for adult and child - Tidal maximum volume: approx. 200ml for infant - Unit to operate in all climatic conditions and not to be dependent upon a power supply. - To be able to connect to an oxygen supply up to 100%.

		• The resuscitator must be able to ventilate through a mask and/or endo tracheal tube. • Re-usable and must be autoclavable.
4.	Attendant Bench	• Benches without back support Wood Work: • Top Strips 06 Nos of size 1200mm x 50mm x 20mm • Strips made of solid shesham wood with 8 to 10 % moisture with termite treatment. • Complete high-quality polish and lacquers for a long lasting shine. • Shesham finished with 30 % gloss with 1 base 1 top coat. • Steel Frame Structure • Steel frame made of 18 gauge mild steel square pipe structure consist of 2 Nos top long rails. • Frame size 1175mm x 25mm x 25 mm. • Legs 04 Nos size 450mm x 25 mm x 25mm • Center support rail 01 of size 1175 mm x 25 mm x 25 mm • Rubber shoes 04 of best quality.
5.	Baby Weighing Scale	• Scales to be highly accurate and stable. • Splash proof key board. • Removable baby weighing pan. • Automatic hold, slow and tare controls. • Capacity: 0 kg to 20 kg or better.
6.	BP Apparatus With Stand	• Constructed from shatter resistant materials fully protected plastic manometer tube with clear reading scale, range 0 to 300 mm Hg. • Integral mercury reservoir. • Spring coil tube with bulb. (Pump). • Pediatric and adult cloth cuff with Velcro fastening cuff holder. • Unit mounted on stable 4 to 5 castor mild steel base.
7.	BP Mercury Desktop With Paeds And Adult Cuff	• Sphygmomanometer in lightweight case. • Recessed plastic manometer tube range 0-300mm Hg with shatter proof reservoir. • Velcro fastening cuff for adult and Paeds. • Provision for storage for bulb, valve tubing and cuffs.
8.	BP Set Wall Mounted	• Sphygmomanometer Mercurial Wall Mounted • Sphygmomanometer constructed from shatter proof materials. • Fully protected plastic manometer with clear reading scale, range 0-300mmHg to be mounted on wall. • Integral mercury reservoir, spring coil tube, bulb, valve, Velcro fastening cuff adult & Pediatric.
9.	Digital Blood Pressure Monitor	• Device type: Fully Automatic Upper- arm Blood Pressure Monitor • Display type: LCD Digital Display • Measurement range: Pressure: 0 to 299 mmHg or better, Pulse: 40 to 200 beats/min or better • Accuracy: Pressure: ± 3 mmHg; Pulse: $\pm 5\%$ of reading • Power Source: batteries and AC adapter • Must be USFDA approved Each set of devices must include: • Blood Pressure Monitor 01 unit • Cuff: 03 unit (S,M,L) • Batteries set • AC adapter: 01 unit • Storage Bag: 01 unit

10.	Box For Disposal Of Sharps	• Material: Plastic • Capacity: 15 Litter or more • Semi translucent lid • Suitable for hazardous items such as syringes, broken blades, hooks, bottles and glass shards
11.	Containers for sputum	• Sample based
12.	Containers for Urine	• Sample based
13.	Culture Plates	• Sample based
14.	Digital Thermometer	• Best quality
15.	Cupboard Steel Large	• 16-gauge steel powder coated with shelves on one side and hanging unit on one side. • Size 4 ftx 6 ftx 1.5 ft(W x H x D) • Sample to be approved
16.	ENT Diagnostic Set(Adult And Paeds)	• Adult & Paeds Diagnostic set comprising with 3 standard specula. • With ophthalmoscope head. • Battery Handle with chargeable batteries • Nasal speculum, • Laryngeal stem to take tongue depressor, • Laryngeal or post nasal mirror • Antrum sheath. • Large handle and two spare lamps. • All to be supplied complete in plastic covered case.
17.	Fire extinguisher 4 Kg	Dry Chemical fire extinguishers extinguish the fire primarily by interrupting the chemical reaction of the firetriangle. • Type: Wall mounted type. • Size: 4kg. • Dry chemical fire extinguishers that is effectiveon Class A, B, and C fires. • Class A fires are fires in ordinary combustiblesuch as wood, paper, cloth, rubber, and many plastics. • Class B fires are fires in flammable liquids such as gasoline, petroleum greases, tars, oils, oil-basedpaints, solvents, alcohols. Class B fires also include flammable gases such as propane and butane. • Class C fires are fires involving energized electrical equipment such as computers, servers, Motors, transformers, and appliances.
18.	Fire extinguisher 6 Kg	Dry Chemical fire extinguishers extinguish the fire primarily by interrupting the chemical reaction of the firetriangle. • Type: Wall mounted type. • Size: 6kg. • Dry chemical fire extinguishers that is effectiveon Class A, B, and C fires. • Class A fires are fires in ordinary combustiblesuch as wood, paper, cloth, rubber, and many plastics. • Class B fires are fires in flammable liquids such as gasoline, petroleum greases, tars, oils, oil-basedpaints, solvents, alcohols. Class B fires also include flammable gases such as propane and

		butane. Class C fires are fires involving energized electrical equipment such as computers, servers, Motors, transformers, and appliances.
19.	Fire extinguisher 9 Kg	Dry Chemical fire extinguishers extinguish the fire primarily by interrupting the chemical reaction of the firetriangle. - Type: Wall mounted type. - Size: 9kg. - Dry chemical fire extinguishers that is effective on Class A, B, and C fires. - Class A fires are fires in ordinary combustibles such as wood, paper, cloth, rubber, and many plastics. - Class B fires are fires in flammable liquids such as gasoline, petroleum greases, tars, oils, oil-based paints, solvents, alcohols. Class B fires also include flammable gases such as propane and butane. - Class C fires are fires involving energized electrical equipment such as computers, servers, motors, transformers, and appliances.
20.	Jester (1 To 10 Ul) Adjustable	- Branded - Good Quality
21.	Jester (10 To 100ul) Adjustable	- Branded - Good Quality
22.	Jester (100 To 1000ul) Adjustable	- Branded - Good Quality
23.	Jester Fix 1000ul	- Branded - Good Quality
24.	Jester Fix 100ul	- Branded - Good Quality
25.	Jester Fix 10ul	- Branded - Good quality
26.	Jester Fix 20ul	- Branded - Good Quality
27.	Jester Fix 500ul	- Branded - Good Quality
28.	Jester Fix 50ul	- Branded - Good Quality
29.	Jester Fix 5ul	- Branded - Good Quality
30.	Lead Apron	- Best quality, imported. - Flexible lead rubber in tear resistant plastic cover - Sleeveless, half-length at back - Fastening with crossed elastic straps with Velcro end. 0.5mm lead thickness for small, medium and large sizes
31.	Lead Glass Shield	3 part X-Ray protection screen with metal frame. Size of each part should be 7'x2.5' covered with lead sheet of 0.2mm - Easily moveable to all sides on at least 2 castors on each part. - Lead glass size 200x200mm, thickness 2mm.
32.	Lead Gloves	- Best quality, imported. - Flexible lead rubber in tear resistant plastic cover 0.2mm lead thickness inside gloves.

33.	Mattress Foam With Raxine Cover Medical Grade	• Size: 6 ½' x 3' x 4'' with Raxine cover, Medical Grade good quality Branded • Adjustable according to the bed position.
34.	Mattress Foam With Rexine Cover	• Size: 6 ½' x 3' x 4'' with Raxine cover, good quality Branded
35.	Medicine (Iron Rack) 6x4x2	• Frame: 18 gauge steel powder coated with four shelves. • Size 6 ftx 4 ftx 2 ft (H x W x D) • Sample to be approved
36.	OPD Chairs S.S	• 3-seater chairs (Steel) fixed / removable. • With seating area approximately 51 cm x 50 cm. • With silver enameled finished. • The structure may be able to be fixed on the floor / replaceable. • Imported, Good Quality. • Minimum weight of OPD chair must be 30 kg or better.
37.	Oxygen Flow Meter With Humidifier	• Direct fitted to the Outlet BOC/Equivalent, included with the Humidifier. • Nickel-plated brass base and body • Clear shroud • Expanded lower scale 0-5Lpm
38.	Steel Almirah For Medicines	• 18-gauge steel, powder coated. • With 4 shelves (Five Compartment). • Size 4ft x 6ft x 1.5ft (WxHxD) • 02 doors having transparent glass with heavy duty lock mechanism and best quality handle.
39.	Steel File Cabinet	• 18-gauge steel, filing cabinet with three drawers each 450mm height with railing handles, locks and 100mm high pedestal. • Including power coating with good surface finish • Size 400 x 750mm x 1400mm
40.	Stethoscope	• Lightweight aluminum/ S S adult chest piece construction. • Adjustable chrome binaural. • Flexible one piece molded 'Y' PVC tubing. • Ergonomic plastic ear tips.
41.	Stethoscope Nursery	• Lightweight aluminum/S S Pediatric chest piece construction. • Adjustable chrome binaural. • Flexible one piece molded 'Y' PVC tubing. • Ergonomic plastic ear tips.
42.	Thermal Gun	• Medical Grade thermal gun • This advanced non-contact infrared thermometer uses an infrared detector to detect body temperature from the temple for adults & children and can be used both at home and hospitals. • Touchless thermometer for adults and kids adopts LCD digital display. • Temperature measurement in centigrade C and Fahrenheit F.
43.	Vision testing drum	• Testing box to be wall mounted must be supplied with the following panels. • English Alphabets 1No • Illiterate “E” 1No • Illiterate “C” 1No • Children’s 1No • To be manually rotated.

44.	Waste bin sets (Comprising 3 bins of White, Yellow and Red Color each measuring)	• Material: Polyvinyl chloride (PVC) • Foot operated lid, open top wards. • Volume: 45 liters. • PVC molded to be used for lid hinges. • Every bin will be labeled in legible writing “ Only for Hospital waste and / or additional text. • Waste bin Yellow. • Waste bin Red. • Waste bin White.
45.	X-Ray Illuminator Double Table Top/ X- Ray Viewer / X-Ray Viewing Box	• X-Ray Film Viewer with following features. • Table Top • Housing made of epoxy-coated steel. • Viewing area for two 14”x17”film. • Light intensity more than 6000 Lux or more. • With light intensity control. • Suitable for wall mounted and table use. • Film clamps and hooks for holding wet films. • Power requirements 220V,50Hz.
46.	Air 240 CftCylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
47.	Air 48 CftCylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
48.	CO2 240 Cft Cylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
49.	CO2 48 Cft Cylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
50.	Nitrous Oxide 240Cft cylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
51.	Nitrous Oxide 48 Cftcylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
52.	Oxygen 240 Cftcylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose

		authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
53.	Oxygen 48 Cftcylinder	• The cylinder must be brand new standard quality. • During sample evaluation the bidder must provide the evidence that the sample provided is from the same manufacture whose authorization is attached with submitted bid. • BOC/Equivalent testing certificate must be provided
54.	Bed Sheet	• Size: 60x100" Quality: 60x60 / 16x16 • Weight 190 GSM, Nature of Dye Hydro Bleach, Color: White (100% Cotton)
55.	Blanket	• (Fleece) 100% Polyster • Size 60"x90", Thickness 7mm, • Color Camel / Red / Grey
56.	Draw Sheet	• 100% Cotton) • Sizes 60"x39", Quality 60x60/16x16, Dye Vat, • GSM 190, Color Hospital Green
57.	EYE Operation Towel	• (100 % Cotton) • Sizes 60"x100", Quality 60x60/16x16, Dye Vat, • GSM 190, Color Hospital Green
58.	Lithotomy Sheet	• (100 % Cotton) • Quality 60x60/16x16, Dye Vat, • GSM 190, Color Hospital Green
59.	Abdominal Sheet	• (100 % Cotton) • Sizes 60"x70", Quality 60x60/16x16, Dye Vat, • GSM 190, Color Hospital Green
60.	Pillow With Cover	• (Polyester) • Quality Fiber Ball Material, Weight 1000Grm. • (100% Cotton) Cover 6" Fold from one side • Sizes 20"x30", Quality 60x60/16x16, Dye Hydro Bleach, Color: White
61.	OT Mask	• (100% Cotton) • Quality 60x60/16x16, Dye VAT, • Color Blue, Green, White, Khaki
62.	Towel	• Size 24"x30", Weight 500Grm Color White as per sample
63.	Surgeon Suit Male/Female	• (100% Cotton) • Sizes S, M, L, XL, XXL, Quality 60x60/16x16, Dye Vat, • GSM 190, Colour Hospital Green
64.	Nurse Suit With Wasket	• White KT with Maroon or Green Waistcoat • Dopatta and Magzi
65.	Gloves	• As per sample approved
66.	OT Caps	• Quality 60x60/16x16, Dye VAT, • Color Blue, Green, White, Khaki
67.	OT GOWN	• Quality 60x60/16x16, Dye VAT, • Color Sky Blue, Green
68.	Table Cover large	• Made of best quality, Size: 54" x 72"
69.	OT Sheet	• Made of best quality , Color: Green
70.	Pneumatic Tourniquet (Small, Large)	• The Pneumatic Tourniquet System shall be designed for temporary occlusion of blood .

		The system shall include both Large and Small cuffs, with compatible hoses and connectors.
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Electrical, Electronics and Information Technology

S.No	Nomenclature	Specifications
1.	Shoe Covering machine	- Case material: stainless steel/ABS plastic - Stainless steel handlebar for extra stability - Powder-coated metallic colored handlebars - Refills: holds up to 200 shoe covers or more - Power source: 220VAC
2.	Ergometer Cycle	- Display: 10 inch or better - Resistance: 0-1400-Watt constant - Electronic variation of effort - Electronic system of resistance speed independent - Speed: 3-130 Rpm - Effort increasing: 1 Wat - Chain traction - Computer-controlled eddy current brake with torque measurement speed independent or dependent by RPM - Saddle height continuous adjustment for patients between 120 cm and 210 cm tall - Max weight 180 kg or better - USB port - RS232 port - Provision of connectivity with compatible telemetry system - Accessories - Chest belt for cardio rate recording 360° adjustable handlebar 180° swiveling console
3.	Treadmill	- Display: 5 inch or better - Forward / reverse speed - Forward speed 0.1 / 25.0 km/h - Reverse speed 0.1 / 5.0 km/h - Speed Increment 0.1 km/h - Inclination Max 30% - Inclination Min 0% - Inclination increment 0.5 / 1% - Working load capacity 220 kg or better - Noise level: < 30 DB or less - Emergency stop button
4.	2 Ton air conditioners (Cabinet Type)	- Heat and Cold - Runs on Low Voltage - Auto Restart - Heat and Cool Function - Stabilizer Not Required - Installation Kit 100% Copper

		• Zero Ozone Depletion Potential • Refrigerant Gas R410A • Blue Fins Condenser • Twin Rotary DC Inverter Compressor • High Density Filter • Long Installation Pipe • Long Distance Air Throw • With complete installation
5.	4 Ton air conditioners (Cabinet Type)	• Heat and Cold • Runs on Low Voltage • Auto Restart • Heat and Cool Function • Stabilizer Not Required • Installation Kit 100% Copper • Zero Ozone Depletion Potential • Refrigerant Gas R410A • Blue Fins Condenser • Twin Rotary DC Inverter Compressor • High Density Filter • Long Installation Pipe • Long Distance Air Throw • With complete installation
6.	LED TV 50"	• Screen Size: 50" • Type: DLED • Smart TV: Android 9.0 • Resolutions: 3840*2160 • Refresh Rate: 60Hz • HDMI: 4 • USB: 2 • Tuner Input: 2 • Head Phone: 1 • Wireless Wifi Access: YES
7.	Refrigerator with double Glass-door	• Total Capacity (Net): 728 Liters or better • Temperature Range (°C): 0 to 10 • Ambient Temperature Level (°C): 16 to 38 • Temperature Control: Electronic • Refrigerant: R290 • Shelves Included: 4 • Rollers: 4 • Defrost: Automatic • Voltage/Frequency: 220v/240v/50Hz • Length of Cable: 150cm or better • Noise Level: 60dBA or better
8.	Refrigerator with Glass Single-door	• Total Capacity (Net): 410 Liters or better • Temperature Range (°C): 0 to 10 • Ambient Temperature Level (°C): 16 to 38 • Temperature Control: Electronic • Refrigerant: R290

		• Shelves Included: 4 • Rollers: 4 • Defrost: Automatic • Voltage/Frequency: 220v/240v/50Hz • Length of Cable: 150cm or better • Noise Level: 60dBA or better
9.	Ceiling Fans 56"	• Sweep Size: 56" • Rated Voltage: 230+-10V • Rated Frequency: 50Hz • Power: 75W • Speed: 330rpm • Air Delivery: 280m3/m • Service Value: 3.73m3/min/watt • Insulation Class: 155" • Energy efficient Electrical Steel Sheet • Winding: 99.99% Pure Copper Wire • Aerodynamic Blades Design for better Air
10.	Bracket Fans 18"	• SIZE: 18" • 65W • VOLTS:220 / 230 • Jerk Free Oscillation • 3 Speed Options and 90 Degree Horizontal Oscillation • Winding: 99.99% Pure Copper Wire • High Quality Paint for Superior Finishing • Aerodynamic Blades Design for better Air
11.	AC 1 tone Split unit inverter type	• AC 1 tone Split unit inverter type • Airflow: 4-Way Air • Cooling effect: Heat and Cool Function • Energy efficiency class: 60% Electricity saving. • Noise level: Ultra Low Noise Control • Type: Wall Mounted • Gold fin Evaporator and condenser • Auto clean • R410 Eco friendly refrigerant • With Complete Installation
12.	AC 1.5 tone Split unit inverter type	• AC 1.5 tones Split unit inverter type • Airflow: 4-Way Air • Cooling effect: Heat and Cool Function • Energy efficiency class: 60% Electricity saving. • Noise level: Ultra Low Noise Control • Type: Wall Mounted • Gold fin Evaporator and condenser • Auto clean • R410 Eco friendly refrigerant • With Complete Installation
13.	AC 2 tones Split unit inverter type	• AC 2 tones Split unit inverter type • Airflow: 4-Way Air • Cooling effect: Heat and Cool Function

		• Energy efficiency class: 60% Electricity saving. • Noise level: Ultra Low Noise Control • Type: Wall Mounted • Gold fin Evaporator and condenser • Auto clean • R410 Eco friendly refrigerant • With Complete Installation
14.	Biometric Machine	• LCD/LED Display • Language: English • Communication: USB/TCP/IP/WIFI • Fingerprint: 1000 user or better • Face recognition: 1000 user or better • Card User: 1000 or better • Password User: 1000 or better • Verification Mode: Finger print, ID Card, Face recognition, Password & Combo Finger Print Sensor • Data Backup Support: USB • Report: Direct from USB • Build in battery backup of 4 hour or better • Voltage 220VAC, 50 Hz
15.	CCTV System	• CCTV System for video surveillance for security purpose. • High Quality imaging camera with 5 MP, 3840x2160 Resolution water proof - Day & Nigh Vision CCTV Cameras with the ability to fix on wall, roof etc. • Bright Night imaging: Up to 30m or better IR distance • 16 Channel Automated Digital Video Recorder • Play back listed footage with date and time • View live picture / video anywhere • 1TB or better Hard Disk Drive • Number of USB Ports 2 & Number of HDMI Ports 2 • Able to display the live picture / video of all cameras on one screen • 40 inch or better branded led screen • Power requirement 220VAC, 50 Hz • A complete system with 4 cameras, screen and DVR with complete installation must be quoted. • Per Feet copper wire with BNC connectors price must be quoted • Extra camera price must be quoted
16.	Door Air Curtain	• Power Supply: 220 ~ 230 / 50 Hz • Airflow volume: 1200l/s or better • Airflow velocity: 14m/s or better • Max install Hight: 3.0 m • Sound Level: ≤61db • With complete installation
17.	Electric Geysers 10 Gallons	• Branded Electric Geyser 10 Gallon or more • Storage Type • Thermostat for Temperature Control • Brand and Model Must be mentioned. • With Complete Installation
18.	Electric Geysers 15	• Electric Geyser 15 Gallon or more

	Gallons	• Storage Type • Thermostat for Temperature Control • Brand and Model Must be mentioned. • With Complete Installation
19.	Electric and Gas Geyser 35 Gallon	• Branded Electric and Gas Geyser 35 Gallons or more with cone • With thick glass wool to keep water Hot • Powder Putting Paint • With complete installation
20.	Electric and Gas Geyser 55 Gallon	• Branded Electric and Gas Geyser 55 Gallons or more with cone • With thick glass wool to keep water Hot • Powder Putting Paint • With complete installation
21.	Electric Water Cooler 40 Litters with Filter	• Branded Electric Water Cooler 40 Litters or more • Stainless Steel Tank • To be installed with 3-part Filtration unit • With Complete Installation
22.	Electric Water Cooler 60 Litters with Filter	• Branded Electric Water Cooler 60 Litters or more • Stainless Steel Tank • To be installed with 3-part Filtration unit • With Complete Installation
23.	Electric Water Cooler 80 Litters with Filter	• Branded Electric Water Cooler 80 Litters or more • Stainless Steel Tank • To be installed with 3-part Filtration unit • With Complete Installation
24.	Water Dispenser	• Branded water dispenser Top Loading • Taps 2: Hot and Cold water • Refrigerator Cabinet Refrigerator • Compressor Cooling Yes • Water Tank Material Rust-Proof Stainless-Steel Tank • Voltage 220-240V 50/60Hz
25.	ILR/Deep Freezer	• Branded 16Cft, Double Door (Freezer & Fridge) with Racks and Baskets
26.	Refrigerator 12 CFT	• Branded Double door,12 Cft Refrigerator. • With Complete Installation
27.	Refrigerator 14CFT	• Branded Double door,14 Cft Refrigerator. • With Complete Installation
28.	Refrigerator 18 CFT	• Branded Double door,18 Cft Refrigerator. • With Complete Installation
29.	Printer (Copy + Scan + Print)	Desktop type machine A3/A5 • Display: TFT/LCD display • Resolution Scan: 600x600 dpi • Resolution Print: 600 dpi • All in one function: Print, Scan, Photocopy • With zoom • Speed: 20 ppm or better • Paper capacity: 250 sheets tray • Continuous copies countdown • Number of papers tray: 2 trays + 1 by pass • Warm up time: 14 second or less for warm up the machine

		• With built-in memory • Power: 200-240 v • One extra toner Stabilizer: • With Servo motor stabilizer.
30.	Heavy Duty Photocopier Machine	Photocopier machine A3/A5 • Display: 10 inch or better TFT/LCD display • Resolution Scan: 600x600 dpi • Resolution Print: 600 dpi • All in one function: Print, Scan, Photocopy • With zoom • Speed: 45 ppm or better • Paper capacity: 500 sheets or better tray 100 sheets or better multi bypass feeder. • Continuous copies countdown • Number of papers tray: 2 trays + 1 by pass • Warm up time: 12 second or less for warm up the machine • Built-in duplexing • Document feeder: RADF/DADF/AFD • Memory: 1 GB or above • Power: 200-240 v • Connectivity: LAN / USB / Wifi • One extra tuner Stabilizer: • With Servo motor stabilizer.
31.	Printer	• Print Quality: 1200 x 1200 or higher. • Print Speed: 40 ppm or higher. • Print Technology: LaserJet • Processer: 1 GHz or higher • Input Tray Capacity: 350 sheets or higher • Output Tray Capacity: 100 sheets or higher • Media Support: A4, A4-R, etc. • Connectivity: Built in LAN, USB and Wifi
32.	Scanner	• Resolution: 600x600 dpi (ADF) • Automatic document feeder capacity: 50 sheets • Duplex ADF Scanning: Yes • Scan Size: 8.5" x 14: or higher • Scan Speed: 30 ppm or higher
33.	Computer	Branded Computer CPU: • Branded CPU • CPU Core i 7 Processor: 3.4 GHz (11th generation) or latest • Bit Processing: 64 Bits • Cache L1-L2: 8MB • CD/DD/Super Drive Support Installed Processor Core i7 • Hard Disk: 1 TB SSD • Memory Ram type: DDR3 • Number of memory /Ram Slots: 2 Slots • Memory Ram Size: 8 Giga Byte, supported up to 16 Giga Byte. • USB: 06 USB Ports or better

		- Wifi and ethernet connectivity Monitor: - Branded LED 18 inch or more monitor - FHD (1920x1080) Accessories: - With all standard power cables. - Key board, Mouse, VGA cables etc - Antivirus: Kaspersky internet security or equivalent licensed for one year. - With genuine windows
34.	Laptop	- Branded Laptop - Processor: Core i7 (13th Generation) or latest - Ram: 16GB or higher - Hard Disk: 1TB or higher - Display Size: 13.3" or higher - Resolution: 2560 x 1600 or higher - Graphics: Intl Iris Plus or better - Wifi: 802.11ac wireless networking or equivalent - Bluetooth: 5.0 or higher - Antivirus: Kaspersky internet security or equivalent licensed for one year. - With genuine windows/ Licensed - With best quality bag
35.	Multimedia Projector	- Projection Technology: DLP Chip/LCD - Native Resolution: XGA or higher - Brightness (Lumens): 3500 or higher - Contrast Ratio 10000:1 or higher - Lens Shift Vertical Positive (%): 52 or higher - Lens Shift Vertical Negative (%): 52 or higher - Lens Shift Horizontal Positive (%): 18 or higher - Lens Shift Horizontal Negative (%): 18 or higher - Keystone Horizontal Negative (degrees) 38 or higher - Keystone Horizontal Positive (degrees) 28 or higher - Keystone Vertical Negative (degrees) 13 or higher - Keystone Vertical Positive (degrees) 13 or higher - Connectivity: HDMI x1, SDI IN x 1, DVI-D x 1, RGB 1 IN: 4 or higher - RGB 2 IN: x1 - SERIAL IN: 1 - SERIAL OUT: 1 - REMOTE IN/OUT: 2/1 - RJ45 For Control/Monitoring: 1 - Other Accessories: 1 x Ceiling mount and projector plate and stand (Adjustable) 2 x HDMI cables (High quality shielded) extra length 45 feet (Noise Free Video) 1 x Power cable 45 feet (Flexible 3 core (Pakistan Cable) or equivalent) 1 x Projection screen with stand or wall mount (As per requirement) - Operationalization of Multimedia Projector System's all components as well as end to end installation is included.
36.	Color Printer	- Speed A4 33PPM or better - Panel 4 Inch or better display - Paper capacity 250 Sheets or better - Memory 256 MB or better - Network Hi-Speed Device USB

		• Print Resolution 1200 x 1200 or better
37.	Smart Board/Interactive Display	• 75 inch or better • 4K UHD (3840 × 2160) or better • Brightness Level: 300 cd/m² or better • 20 Point Multi-Touch or better • 178 ° viewing angle • Wireless Connectivity (Compatible with Windows and Android TM operating systems Requires wireless LAN access points to connect Display and devices) • Network RJ45/RS232 • Wireless (2.4GHz / 5GHz) • Bluetooth
38.	R.O water purification plant for dialysis machine	RO Water Purification System to operate 10-12 Dialysis Machines through store tank, with imported parts locally manufactured. • The system should comprise of pretreatment modules such as Pre RO micron filter for Bacterial protection Sand filter, activated carbon filter, water softener, 5-micron particulate filter, before the reverse osmosis unit and post R.O UV light Disinfection and Bacterial Filters. • The entire unit should have adequate monitoring permeate water conductivity, feed water pressure and permeate and rejection flow rate. • The water distribution loop, booster pump and storage water tank should be rust free. Storage water tank should have capacity of at least 500 liters. • Feed Pump Type centrifugal, horizontal, Material of construction Stainless Steel. input power 220VAC, 50Hz, single phase • The filtered water will be pumped by means of a high-pressure pump through the R O Module consists of 2 nos. of SS Pressure tubes & 2 nos. of membranes Size of Membrane 4" Dia x 40" Long. Around 50 % of the feed water will be available as permeate or product water and balance 50 % will be reject stream which will be the effluent from RO plant. • High Pressure Pump Type Vertical Multistage, Material of construction Stainless Steel input power 220VAC, 50Hz, single phase • Should not have noise level more than 65 db. • Should have TDS meter to monitor feed water conductivity and R.O water conductivity. • It should be sensor to stop the feed pump when storage tank full, restarts it when RO water level goes down in the tank.
39.	Lead Lining for Radiology Room	• Lead sheet of having thickness 1.5mm or better • Exterior: Lead sheet should be covered with weather / waterproof sheet. • Interior: Lead sheets to be fixed on strong material / seasoned wood. • Lead sheet related / associated work i.e., Electricity etc. if needed to be carried out by the bidder. • Lead glass provision and fixing will be responsibility of the bidder if needed. • The firm should be registered with PNRA (Mandatory) • Fixing all the things according to PNRA rules and guidelines should be considered. • Per square feet price should be quoted for finished item.

Power Generation, Regulatory Equipment

S.No	Nomenclature	Specifications
1.	Generator 20 KVA	<u>Genset Rating: (Model, Make and country of origin must be mentioned)</u> • Prime rating: 20KVA/32KW • Output Voltage (Single phase/Three Phase) : 220-240/400-440 • Frequency: 50Hz • Power Factor: 0.8 or better • Generator neutral shall be solidly earthed. <u>Engine Specifications:</u> (Model, Make and country of origin must be mentioned) • Fuel: Diesel • Governor Type: Mechanical • Fuel Tank Capacity: 40L or better <u>Alternator:</u> (Model, Make and country of origin must be mentioned) • Type: 4 poles brushless • Insulation: Class H • Voltage Regulation No Load to Full Load: $\pm 1\%$ or better. • Winding Pitch: 2/3 <u>Protections:</u> • <u>Alternator Protection:</u> 1. Overload and Short Circuit Protection. 2. Generator Phase Sequence Protection. 3. Over/Under Voltage Protection. 4. Over/Under Frequency Protection. 5. Over current Protection. • <u>Engine Protection:</u> 1. Low Lube oil Pressure 2. High/Low Coolant Temperature 3. Engine over & under Speed 4. Emergency Stop 5. Low Fuel Level <u>Display:</u> • Voltage, Current, KW, Power factor, Frequency. • Engine Oil Pressure • Engine RPM • Total Running Hours • Coolant Temperature (Digital) • Fuel level indication • Palate Earthing The following items must be included with diesel generator. 1. ATS panel (Local with imported components). 2. 10-meter Power cable will be provided with generator. 3. Providing, installation and testing of the unit and earthing network for generator set. 4. Construction of foundation pad. 5. Weather and sound proof canopy (Local). 6. Separate price for Power cable (per mete), must be quoted. 7. The supplier will be responsible for complete installation/ functionalization of the generator.
2.	Generator 40 KVA	<u>Genset Rating:</u> (Model, Make and country of origin must be mentioned) • Prime rating: 40KVA/32KW • Output Voltage (Single phase/Three Phase) : 220-240/400-440

		• Frequency: 50Hz • Power Factor: 0.8 or better • RPM: 1500 or Better • Generator neutral shall be solidly earthed. <u>Engine Specification:</u> (Model, Make and country of origin must be mentioned) • Fuel: Diesel • Engine Rating in HP : 48 HP or better • No of Cylinders: 4 Inline • Compression ratio: 18:1 or better • Displacement: 2.86L or better • Governor Type: Mechanical • Fuel Tank Capacity: 90 L or better • Lubricant Oil Sump Capacity: 7.5L or better • Ambient Temperature at Rated Load: 50°C • Radiator Capacity (L): 13 L or better <u>Alternator:</u> (Model, Make and country of origin must be mentioned) • Type: 4 poles brushless • Insulation: Class H • Voltage Regulation No Load to Full Load: $\pm 1\%$ or better. • Winding Pitch: 2/3 <u>Protections:</u> • <u>Alternator Protection:</u> 1. Overload and Short Circuit Protection. 2. Generator Phase Sequence Protection. 3. Over/Under Voltage Protection. 4. Over/Under Frequency Protection. 5. Over current Protection. • <u>Engine Protection:</u> 1. Low Lube oil Pressure 2. High/Low Coolant Temperature 3. Engine over & under Speed 4. Emergency Stop 5. Low Fuel Level <u>Display:</u> • Voltage, Current, KW, Power factor, Frequency. • Engine Oil Pressure • Engine RPM • Total Running Hours • Coolant Temperature (Digital) • Fuel level indication • Palate Earthing The following items must be included with diesel generator. 1. ATS panel (Local with imported components). 2. 10-meter Power cable will be provided with generator. 3. Providing, installation and testing of the unit and earthing network for generator set. 4. Construction of foundation pad. 5. Weather and sound proof canopy (Local/Imported). 6. Separate price for Power cable (per mete), must be quoted. 7. The supplier will be responsible for complete installation/ functionalization of the generator.
3.	Generator 50 KVA	<u>Genset Rating:</u> (Model, Make and country of origin must be mentioned)

		• Prime rating: 50KVA/40KW • Output Voltage (Single phase/Three Phase) : 220-240/400-440 • Frequency: 50Hz • Power Factor: 0.8 or better • RPM: 1500 or Better <u>Engine Specification:</u> (Model, Make and country of origin must be mentioned) • Fuel: Diesel • Engine Rating in HP : 60 HP or better • No of Cylinders: 4 Inline • Compression ratio: 18:1 or better • Displacement: 3.3L or better • Governor Type: Mechanical • Fuel Tank Capacity: 150L or better • Lubricant Oil Sump Capacity: 8L or better • Ambient Temperature at Rated Load: 50°C • Radiator Capacity (Ltr): 15 L or better <u>Alternator:</u> (Model, Make and country of origin must be mentioned) • Type: 4 poles brushless • Insulation: Class H • Voltage Regulation No Load to Full Load: $\pm 1\%$ or better. • Winding Pitch: 2/3 <u>Protections:</u> <u>Alternator Protection:</u> 1. Overload and Short Circuit Protection. 2. Generator Phase Sequence Protection. 3. Over/Under Voltage Protection. 4. Over/Under Frequency Protection. 5. Over current Protection. <u>Engine Protection:</u> 1. Low Lube oil Pressure 2. High/Low Coolant Temperature 3. Engine over & under Speed 4. Emergency Stop 5. Low Fuel Level <u>Display:</u> • Voltage, Current, KW, Power factor, Frequency, KWh • Engine Oil Pressure • Coolant Temperature (Digital) • Fuel level indication • Engine RPM • Total Running Hours • Palate Earthing The following items must be included with diesel generator. 1. ATS panel (Local with imported components). 2. 10-meter Power cable will be provided with generator. 3. Providing, installation and testing of the unit and earthing network for generator set. 4. Construction of foundation pad. 5. Weather and sound proof canopy (Local/Imported). 6. Separate price for Power cable (per meter), must be quoted. 7. The supplier will be responsible for complete installation/ functionalization of the generator.
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4.	Generator 100KVA	<u>Genset Rating:</u> (Model, Make and country of origin must be mentioned) • Prime rating: 100KVA/80KW • Output Voltage (Single phase/Three Phase) : 220-240/400-440 • Frequency: 50Hz • Power Factor: 0.8 or better • RPM: 1500 or Better <u>Engine Specification:</u> (Model, Make and country of origin must be mentioned) • Fuel: Diesel • Engine Rating in HP : 115 HP or better • No of Cylinders: 4 Inline or better • Compression ratio: 18:1 or better • Displacement: 4.4L or better • Governor Type: Electronic • Fuel Tank Capacity: 250L or better • Lubricant Oil Sump Capacity: 8L or better • Ambient Temperature at Rated Load: 50°C • Radiator Capacity (Ltr): 17 L or better <u>Alternator:</u> (Model, Make and country of origin must be mentioned) • Type: 4 poles brushless • Insulation: Class H • Voltage Regulation No Load to Full Load: $\pm 1\%$ or better. • Winding Pitch: 2/3 <u>Protections:</u> <u>Alternator Protection:</u> 1. Overload and Short Circuit Protection. 2. Generator Phase Sequence Protection. 3. Over/Under Voltage Protection. 4. Over/Under Frequency Protection. 5. Over current Protection. <u>Engine Protection:</u> 1. Low Lube oil Pressure 2. High/Low Coolant Temperature 3. Engine over & under Speed 4. Emergency Stop 5. Low Fuel Level <u>Display:</u> • Voltage, Current, KW, Power factor, Frequency. • Engine Oil Pressure • Coolant Temperature (Digital) • Fuel level indication • Engine RPM • Total Running Hours • Palate Earthing The following items must be included with diesel generator. 1. ATS panel (Local with imported components). 2. 10-meter Power cable will be provided with generator. 3. Providing, installation and testing of the unit and earthing network for generator set. 4. Construction of foundation pad. 5. Weather and sound proof canopy (Local/Imported). 6. Separate price for Power cable (per meter), must be quoted. 7. The supplier will be responsible for complete installation/ functionalization of
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		the generator.
5.	Generator 200KVA	<u>Genset Rating:</u> (Model, Make and country of origin must be mentioned) • Prime rating: 200KVA/160KW • Output Voltage (Single phase/Three Phase) : 220-240/400-440 • Frequency: 50Hz • Power Factor: 0.8 or better • RPM: 1500 or Better <u>Engine Specification:</u> (Model, Make and country of origin must be mentioned) • Fuel: Diesel • Engine Rating in HP : 240 HP or better • No of Cylinders: 6 Inline or better • Compression ratio: 16.0:1 or better • Displacement: 7.0L or better • Governor Type: Electronic • Fuel Tank Capacity: 280L or better • Lubricant Oil Sump Capacity: 16L or better • Ambient Temperature at Rated Load: 50°C • Radiator Capacity (L): 25 L or better <u>Alternator:</u> (Model, Make and country of origin must be mentioned) • Type: 4 poles brushless • Insulation: Class H • Voltage Regulation No Load to Full Load: $\pm 1\%$ or better. • Winding Pitch: 2/3 <u>Protections:</u> <u>Alternator Protection:</u> • Overload and Short Circuit Protection. • Generator Phase Sequence Protection. • Over/Under Voltage Protection. • Over/Under Frequency Protection. • Over current Protection. <u>Engine Protection:</u> 1. Low Lube oil Pressure 2. High/Low Coolant Temperature 3. Engine over & under Speed 4. Emergency Stop 5. Low Fuel Level <u>Display:</u> • Voltage, Current, KW, Power factor, Frequency. • Engine Oil Pressure • Coolant Temperature (Digital) • Fuel level indication • Engine RPM • Total Running Hours • Palate Earthing The following items must be included with diesel generator. 1. ATS panel (Local with imported components). 2. 10-meter Power cable will be provided with generator. 3. Providing, installation and testing of the unit and earthing network for generator set. 4. Construction of foundation pad. 5. Weather and sound proof canopy (Local/Imported).

		6. Separate price for Power cable (per meter), must be quoted. 7. The supplier will be responsible for complete installation/ functionalization of the generator.
6.	5KVA Solar Off Grid Hybrid Inverter	• 5000 Watts (5 KVA) 48 Volts DC, 220 Volt AC Single Phase Output, MPPT 80 Ampere Charge Controller with Hybrid charging, and electronic protections complete in all respect. • One 48 Volt, 100 AH Lithium-Ion Batteries of minimum 6000 cycles • 5000-Watt Solar Panel (Mono-Crystalline) PV Module with 25 Years Power Output Warranty, • Solar Panel Mounting Structure ,made of Hot Dipped Galvanized Steel Structure (Angle Iron). • 16mm (sq) flexible cable 99.9% copper • Transportation / Installation Charges to be barred by the firm. • Firm must be registered with PEC (Pakistan Engineering Council) in category EE11.
7.	10 KVA Solar Off Grid Hybrid Inverter	• 10000 Watts (10 KVA) hybrid inverter with Dual MPPT. • Output Voltage (Single phase and Three Phase) : 220-240 and 400-440 frequency: 50Hz • The inverter should have load sharing or parallel operation function. • Solar panel of 10000 Watts mono crystalline technology with 25 years power output warranty. • Lithium-ion battery 100Ah, 48V of minimum 6000 cycles 2 Qty • Mounting structure for 10000 Watts solar panel galvanized structure. • Supplier will be responsible for complete installation, distribution of power and commissioning of the solar system. • The supplier will be responsible for complete cabling as per required load. • Firm must be registered with PEC (Pakistan Engineering Council) in category EE11.
8.	20 KVA Solar Off Grid Hybrid Inverter	• 2x10000 Watts (20 KVA) off Grid inverter with Dual MPPT. • Output Voltage (Single phase and Three Phase) : 220-240 and 400-440 frequency: 50Hz • The inverter should have load sharing or parallel operation function. • Solar panel of 20000 Watts mono crystalline technology with 25 years power output warranty. • Lithium-ion battery 100Ah, 48V of minimum 6000 cycles 4 Qty • Mounting structure for 20000 Watts solar panel galvanized structure. • Supplier will be responsible for complete installation, distribution of power and commissioning of the solar system. • The supplier will be responsible for complete cabling as per required load. • Firm must be registered with PEC (Pakistan Engineering Council) in category EE11.
9.	60KVA three phase Automatic voltage regulator	• Digital micro control type servo motor drive 60KVA three phase automatic voltage regulator. • Input Line Voltage Range: 260VAC to 470 VAC, 4 Wire • Output Line Voltage Range: 4 wire system (220 to 230 VAC neutral to phase) (380 VAC to 440VAC phase to phase $\pm 3\%$) • Winding 99% copper • Power factor 0.9 or better • No wave form distortion • Response time not greater than 10 ms no overshooting or hunting during automatic operation. • Air cooling type

		• Ambient temperature: -10 to 40°C or better • AVR should have Overload/High/Low input voltage alarm • AVR should have overload, Spike and surge protection. The AVR should have to display the following. • Input Phase to Neutral • Input phase to phase • Output phase to neutral • Output phase to phase • Load Current in all the phases • Frequency • Overall system should have protection casing and wheels (lockable) for movement. • The supplier will be responsible for complete installation/ functionalization of the unit.
10.	30 KVA single phase Automatic voltage regulator	• Digital micro control type servo motor drive 30KVA single phase automatic voltage regulator. • Input Line Voltage Range: 130VAC to 270VAC • Output Line Voltage Range: 220VAC to 230VAC • Winding 99% copper • No wave form distortion • Air cooling type • Ambient temperature: -10 to 40°C or better • Response time not greater than 10 ms no overshooting or hunting during automatic operation. • AVR should have overload, Spike and surge protection. • The AVR should have to display the input voltage, output voltage and load current. • The supplier will be responsible for complete installation/ functionalization of the unit.
11.	5 KVA UPS	• Topology: Double conversion online • Nominal output voltage: Configurable for 220 : 230 or 240 nominal output voltage • Efficiency at full load: Up to 92% with at least 40 minutes backup • Output frequency(sync to mains):50/60 Hz +/- 3 Hz user adjustable • Output power capacity: 4500W or better • Output connections: (8) IEC 320 C13; (2) IEC 320 C19 • Nominal input voltage:230 V • Input frequency:45 – 65 Hz (auto sensing) • Input connections: Hardwire 3-wire(1PH + N + G) • Bypass: Automatic and Manual (Built-in) • Battery type: Maintenance-free sealed lead-acid battery with suspended electrolyte: leak proof • Operating Temp: 0 – 50°C (Output derated linearly to 75% of UPS capacity @>40°C) • Replacement battery: RBC44 • Interface port(s): RJ-45 10/100 Base-T, RJ-45 Serial, Smart Slot • Emergency power off(EPO):Yes • Control panel: LEDs

Technical Evaluation Criteria for High-Tech and Low-Tech Medical Equipment

S. No.	Description of Variables	Allocated Points/Marks
A	Product / Manufacturer Evaluation Parameters	
1	Compliance Sheet must be attached with the technical quotation.	No Marks
1.1	Ref. No of item in SBD Schedule of Requirement	
1.2	Name of equipment	
2	Conformance to Specification	
2.1	Fully compliance with the required specifications as per Statement of Requirement. Minor deviations may be accommodated up to 5, subject to the condition that main function and performance in any aspect would not be affected. More than 5 minor deviations will be considered as major deviation and the bidder will be considered as non-responsive for the quoted item. (One mark for each deviation will be deducted).	25
3	Product International Certification	Mandatory 4
3.1	Certificate of US Food and Drug Administration (USFDA) for the quoted model. 1. Registration if the quoted product belongs to class I. 2. USFDA 510K if the quoted product belongs to class II. 3. Pre-Market approval (PMA) if the quoted product belongs to class III.	Two certificates are mandatory for High-Tech and One for Low-Tech Medical Equipment having no marks; while producing other certificate will get 4 marks for High-Tech and 2 marks each for Low-Tech Medical Equipment.
3.2	Certificate of European community (93/42/EEC Medical devices, 98/79/EC In vitro diagnostic medical devices (Full Quality Assurance or Product Quality Assurance) or Regulation (EU) 2017/745 on medical devices, Regulation (EU) 2017/746 on in vitro diagnostic medical devices for the quoted product / manufacturer. The certificate must be issued from the European Commission notify bodies.	
3.3	Certificate of Ministry of health labor and welfare Japan (MHLW) for the quoted model. (Translated English Version)	
4	Manufacturer Performance	
4.1	Valid ISO 13485 Medical Devices Quality Management Systems certificate of manufacturer from International Accreditation Forum (IAF) Accredited Bodies or from Pakistan National Accreditation Council (PNAC) accredited bodies for local manufacturer.	Mandatory
4.2	Valid ISO 9001 Quality Management Systems certificate of the manufacturer from International Accreditation Forum (IAF) Accredited Bodies or from Pakistan National Accreditation Council (PNAC) accredited bodies for local manufacturer.	3
4.3	Valid ISO 45001 Occupational Health & Safety Certificate of manufacturer from International Accreditation Forum (IAF) Accredited Bodies or from Pakistan National Accreditation Council (PNAC) accredited bodies for local manufacturer.	3
4.4	Local Pakistani Original Manufacturers duly registered with DRAP or Marks will be awarded to the bidder offers three (03) years extended warranty, inclusive of services and parts to the items mentioned in Clause 40.	5
5	After Sale Product Local Performance	
5.1	One mark for each after sale satisfactory performance certificate (verifiable) of the firm / bidder in last six years on letter head, signed and stamped letter for the quoted model or previous / upgraded model of equipment from the public sector medical institution of	5

	Pakistan. Performance certificate shall be coupled with supply order / purchase order from public sector medical institution.	
5.2	One mark for each after sale satisfactory performance certificate (verifiable) of the firm / bidder in last six years on letter head for the quoted model or previous / upgraded model of equipment from the teaching level private sector medical institution of Pakistan. The hospital must be recognized from Pakistan Medical and Dental Council (PMDC) / research institute. The satisfactory performance certificate of non-recognized institution from PMDC will not be considered. Performance certificate shall be coupled with supply order / purchase order from teaching level private sector medical institution.	3
6	Warranty	
6.1	Warranty Period of three years both with spare parts and services & Next two-year services only without spare parts from the date of Installation / Commissioning.	Mandatory
A	Total score of the Product / Manufacturer Evaluation Parameters	48
B	Firm / bidder Evaluation Parameters (The marks will be awarded after the premises inspection and verification of Human Resource, Workshop facility, Financial Strength and Registrations)	
1	Personnel/Human Resource	
1.1	Diploma of Associate Engineer (DAE) in electrical / electronic / biomedical / mechatronics / mechanical / industrial. DAE certificate must be submitted. (1 mark for each certificate)	2
1.2	Graduate Engineer with PEC Registration in electrical / electronics, biomedical / mechatronics / mechanical / industrial. PEC registration card of the engineer must be submitted. (2 marks for each Engineer)	6
2	Workshop facility Testing/ Calibration tools of Equipment	
2.1	Availability of workshop in Khyber Pakhtunkhwa to be verified with Ownership / Rent Agreement with Owner / Rent Agreement with Company Name.	Mandatory
2.2	List of related tools available at workshop. Details shall be submitted with technical bid.	3
2.3	List of Testing and Calibration tools for the quoted items available at workshop. Details shall be submitted with technical bid.	5
2.4	Detail of Spare parts availability at workshop for the quoted items. Details shall be submitted with technical bid.	5
2.5	Factory trained staff for the quoted Products. (To be verified from the visa and passport).	1
3	Firm / bidder Financial Strength	
3.1	Last two years Audited Balance Sheet Duly attested by Chartered Accountant (1 mark for each year). Marks will be allocated on the basis revenue annual turnover, 100 M or above will be awarded 2 marks in last 2 years. Rs.50 to Rs.99.9 M will be awarded 1 mark in last 2 years. Less than Rs.50M will be awarded 0 mark coupled with Income Tax Returns.	2
4	Firm / bidder Registration	
4.1	Firm / bidder registered with DRAP (Drug Regularity Authority of Pakistan) or PEC (Pakistan Engineering Council) in code ME06.	Mandatory
4.2	Valid ISO 9001 Quality Management Certificate of the firm / bidder from Pakistan National Accreditation Council (PNAC) accredited bodies.	2
B	Total Score of the Firm / bidder Evaluation Parameters	26
A+B	Total Score (A + B)	(44+26) = 70

Technical Evaluation Criteria for Medical Furniture and Instruments (Sample Based)

S. No.	Description of Variables		Allocated Points
1	Product Evaluation Parameters		
1.1	Name of equipment		
2	Conformance to the specification subject to the clearance on Sample test		
2.1	Total compliance with specification given in statement of Requirement subject to the clearance on sample test by the Inspection Committee. Excellent Sample		40
2.2	Total compliance with specification given in statement of Requirement subject to the clearance on sample test by the Inspection Committee. Good Sample		30
2.3	Total compliance with specification given in statement of Requirement subject to the clearance on sample test by the Inspection Committee. Satisfactory Sample		20
2.4	Sample rejected by inspection committee or low-quality sample provided, the firm / bidder will be considered as non-responsive for the quoted item and no marks will be awarded.		0
3	Manufacturer Performance		
3.1	Valid ISO 9001 Quality Management System certificate from Pakistan National Accreditation Council (PNAC) accredited bodies or from International Accreditation Forum (IAF) Accredited Bodies for imported products.		3
3.2	Valid ISO 14001 Environmental certificate from Pakistan National Accreditation Council (PNAC) accredited bodies or from International Accreditation Forum (IAF) Accredited Bodies for imported products.		3
3.3	Valid ISO 45001 Occupational Health & Safety Certificate from Pakistan National Accreditation Council (PNAC) accredited bodies or from International Accreditation Forum (IAF) Accredited Bodies for imported products.		3
4	Inspection of Local Manufacturer	For imported Items	
4.1	CO ₂ welding, Powder coating room etc.	Good manufacturing practice (cGMP) certificate	3
4.2	Power and Backup service (Transformer and backup)	Valid CE certificate	3
4.3	Raw material store, Inventory store	Valid USFDA registration or relevant certificate	3
4.4	HR and skilled labor (10 or more) with registration with EOBI	Valid JIS / PMDA / MHLW certificate	3
5	After Sale Past Performance		
5.1	One mark for each after sale satisfactory performance certificate (verifiable) of the firm / bidder on letter head, signed and stamped from the public sector medical institution / hospital for the quoted item. Performance certificate shall be coupled with supply order / purchase order from public sector medical institution.		5
5.2	One mark for each after sale satisfactory performance certificate (verifiable) of the firm / bidder on letter head for the quoted item from the teaching level private sector medical institution of Pakistan. The hospital must be recognized from Pakistan Medical and Dental Council (PMDC) / research institute. Performance		2

	certificate shall be coupled with supply order / purchase order from teaching level private sector medical institution.	
6	Warranty	
6.1	One year warranty for instruments, beds & other hospital supplies with replacement / repair of product.	Mandatory
7	Firm / bidder Evaluation Parameters	
7.1	The bidder will have to give valid proof of being manufacturer / importer.	Mandatory
8	Firm / bidder Financial Strength	
8.1	Last two years Audited Balance Sheet Duly attested by Chartered Accountant (1 mark for each year). Marks will be allocated on the basis revenue annual turnover, 100 M or above will be awarded 2 marks in last 2 years. Rs.50 to Rs.99.9 M will be awarded 1 mark in last 2 years. Less than Rs.50M will be awarded 0 mark coupled with Income Tax Returns.	2
9	Office / Workshop facility	
9.1	Availability of office/workshop in Khyber Pakhtunkhwa to be verified with Ownership / Rent Agreement with Owner/ Rent Agreement with Company Name.	Mandatory
Total Score		70

Technical Evaluation Criteria for Other Hospital Supplies for FY 2025-26

S. No.	Description of Variables	Allocated Points
1	Product Evaluation Parameters	
1.1	Name of equipment	
2	Conformance to the specification subject to the clearance on Sample test	
2.1	Total compliance with specification given in statement of Requirement subject to the clearance on sample test by the Inspection Committee. Excellent Sample	50
2.2	Total compliance with specification given in statement of Requirement subject to the clearance on sample test by the Inspection Committee. Good Sample	30
2.4	Sample rejected by inspection committee or low-quality sample provided, the firm / bidder will be considered as non-responsive for the quoted item and no marks will be awarded.	0
3	After Sale Past Performance	
3.1	One mark for each after sale satisfactory performance certificate (verifiable) of the firm / bidder on letter head, signed and stamped from the public sector medical institution / hospital for the quoted item.	10
3.2	One mark for each after sale satisfactory performance certificate (verifiable) of the firm / bidder on letter head for the quoted item from the private sector organization / medical institution of Pakistan.	5
4	Warranty	
4.1	One year warranty with replacement / repair of product.	Mandatory
5	Firm / bidder Evaluation Parameters	
5.1	The bidder will have to give valid proof of being manufacturer / importer / authorized dealer.	Mandatory
6	Firm / bidder Financial Strength / Certificate	
6.1	Last two years Audited Balance Sheet Duly attested by Chartered Accountant. (1 mark for each year).	2 (6)
6.2	Valid ISO 9001 Quality Management Certificate of the firm / bidder from Pakistan National Accreditation Council (PNAC) accredited bodies.	3 (8)
7	Office / Workshop facility	
7.1	Availability of office/workshop in Khyber Pakhtunkhwa to be verified with Ownership / Rent Agreement with Owner/ Rent Agreement with Company Name.	Mandatory
Total Score		70

Technical Evaluation Criteria for Electrical, Electronics and Information Technology items for FY 2025-26

S. No.	Description of Variables	Allocated Points
A	Product Evaluation Parameters	
1.1	Ref. No of item in SBD Schedule of Requirement	
1.2	Name of equipment	
2	Conformance to the specification	
2.1	Fully compliance with the required specifications as per Statement of Requirement. Minor deviations may be accommodated up to 4, subject to the condition that main function and performance in any aspect would not be affected. More than 4 minor deviations will be considered as major deviation and the bidder will be considered as non-responsive for the quoted item. (One mark for each deviation will be deducted).	30
3	Manufacturer Performance	
3.1	Valid ISO 9001 Quality Management Certificate of the manufacturer.	3
3.2	Valid ISO 14001 Environmental Certificate (The certificate must be issued to the manufacturer plant).	3
4	After Sale Past Performance	
4.1	One mark for each satisfactory performance certificate (verifiable) of the firm / bidder on letter head or signed and stamped from the public institution / hospital for the quoted item/brand supported by Supply order/Purchase order.	10
4.2	One mark for each satisfactory performance certificate (verifiable) of the firm / bidder on letter head of private institution / hospital for the quoted item/brand supported by Supply order/Purchase order.	6
5	Warranty	
5.1	Warranty Period of three years both with spare parts and services. Compressor warranty must be ten years.	Mandatory
A	Total score of the Product Evaluation	52
B	Firm / bidder Evaluation Parameters	
1	The bidder will have to give valid proof of being manufacturer / importer / authorized dealer.	Mandatory
2	Firm / bidder Financial Strength / Certificate	
2.1	Last two years Audited Balance Sheet Duly attested by Chartered Accountant. (1 mark for each year).	2
2.2	Valid ISO 9001 Quality Management Certificate of the firm / bidder from Pakistan National Accreditation Council (PNAC) accredited body.	3
3	Human Resources	
3.1	Sample technician with a certificate / diploma. (1 mark for each certificate)	2
3.2	Diploma of Associate Engineer (DAE) in electrical / electronic / mechatronics or relevant field. DAE certificate must be submitted. (One mark for each certificate)	3
3.3	Graduate Engineer with PEC Registration in electrical / electronics, biomedical / mechatronics / mechanical / industrial or equivalent. PEC registration card of the engineer must be submitted. (2 marks for each).	4
4	Office / Workshop facility	
4.1	Availability of office/workshop in Khyber Pakhtunkhwa to be verified with	Mandatory

	Ownership / Rent Agreement with Owner/ Rent Agreement with Company Name.	
B	Total Score of the Firm / bidder Evaluation Parameters	18
A+B	Total Score (A+B)	(52+18) = 70

Technical Evaluation Criteria for Power Generation, Regulatory Equipment for FY 2025-26

S. No.	Description of Variables	Total points
A	Product Evaluation Parameters	
1	Product General Information	
1.1	Ref. No of item in SBD Schedule of Requirement	
1.2	Name of equipment	
2	Conformance to Specification	
2.1	Fully compliance with the required specifications as per Statement of Requirement. Minor deviations may be accommodated up to 4, subject to the condition that main function and performance in any aspect would not be affected. More than 4 minor deviations will be considered as major deviation and the bidder will be considered as non-responsive for the quoted item. (One mark for each deviation will be deducted with due justification by scrutiny committee).	30
3	Product Certification / Manufacturer Performance	
3.1	The bidder will have to give valid proof of being manufacturer / importer / authorized dealer.	Mandatory
3.2	Valid ISO 14001 Environmental Certificate of the manufacturer.	3
3.3	Valid ISO 9001 Quality management Certificate of the manufacturer.	3
3.4	CE certificate of the quoted model.	3
4	After Sale Product Local Performance	
4.1	One mark for each satisfactory performance certificate (verifiable) of the firm / bidder on letter head, signed and stamped from the public sector organization for the quoted model or previous / upgraded provided model with copies of supply orders/contract agreements etc. Supply Order / Purchase Order. Delivery challan will not be considered as satisfactory	5
4.2	One mark for each satisfactory performance certificate (verifiable) of the firm / bidder on letter head of private organization for the quoted model or previous / upgraded provided model with copies of supply orders/contract. Supply Order / Purchase Order. Delivery challan will not be considered as satisfactory performance certificate.	3
5	Warranty	
5.1	Comprehensive Warranty of 36 months (irrespective of running hours) with parts and services from date of commissioning for generator, three years both with spare parts and services & Next two-year services only without spare parts from the date of Installation / Commissioning for other items.	Mandatory
A	Total score of the Product Evaluation Parameters	47
B	Firm / bidder Evaluation Parameters	
1	Firm / bidder Certifications	
1.2	Valid ISO 9001 Quality Management Certificate of the firm / bidder from Pakistan National Accreditation Council (PNAC) accredited body.	3
2	Personnel/Human Resource	
2.1	Diploma of Associate Engineer (DAE) in electrical / electronic / mechatronics / mechanical / industrial or equivalent. (1 mark for each DAE)	3

2.2	Graduate Engineer with PEC Registration in electrical / electronic / mechatronics / mechanical / industrial or equivalent. (2 marks for each engineer)	6
2	Workshop facility / Mobile van / Training	
2.1	Availability of workshop in Khyber Pakhtunkhwa to be verified with Ownership / Rent Agreement with Owner / Rent Agreement with Company Name.	Mandatory
2.2	List of related tools available at workshop. Details shall be submitted with technical bid.	3
2.3	List of Testing and Calibration tools for the quoted items available at workshop. Details shall be submitted with technical bid.	3
2.4	Detail of Spare parts availability at workshop for the quoted items. Details shall be submitted with technical bid.	3
3	Firm / bidder Financial Strength	
3.1	Last two-year Audited Balance Sheet Duly attested by Chartered Accountant. (1 mark for each year)	2
B	Total Score of the Firm / bidder Evaluation Parameters	23
A+B	Total Technical Score	(47+23) = 70

Section V. Technical Specifications (Continued)

Financial Evaluation and Scoring System for Bids

(Maximum Allocable Marks Score = 30 marks)

The financial bids of technically qualified bidders will be opened publicly at the time to be announced by the Procuring Entity and the financial bids found technically non responsive shall be returned un-opened to the respective Bidders.

Total Allocable marks for Technical Proposal = 70

Total Allocable marks in Financial Proposal= 30

Total Combined Allocable Score for individual bids = Marks obtained in Technical Evaluation + Marks obtained in Financial Evaluation = 100

Scoring Methodology:

Contract will be awarded to the best evaluated fair and responsive bidder whose product ranks highest in the Combined Evaluation scoring calculated through the Marks awarded to Technical Proposal and Financial Proposal as stated in the Bid Data Sheet of these Bid Solicitation Documents.

The Evaluation Methodology is a combination of non-price factors (in Technical Criteria) and price factor (in Financial Criteria); and each having points as elaborated in the evaluation preforms provided in these BSDs.

Procedure for the Marks Scoring: Marks will be awarded or otherwise for various technical parameters to each quoted product based on the prescribed Technical and Financial criteria. The total combined marks will determine the highest-ranking product in each product category for contract award.

The formula to calculate the marks for the price by the bidders other than lowest bidder is given below:

Financial Evaluation Score of individual quoted Product:

= [Lowest quoted Price of the item ÷ Next higher proposed Price of the competing item] x Total allocable financial score

Solved Example of Financial Scoring:

If the lowest quoted price of an item is Rs. 86/-, the same lowest bidder will obtain score as below:

= $[86 \div 86] \times 30 = 30$ marks, being the lowest bidder for the quoted item.

If the next higher quoted price of the same item is Rs. 105/-, the marks obtained will be:

= $[86 \div 105] \times 30 = 24.57$ Marks

If the next higher quoted price of the same item is Rs. 130/-, the marks obtained will be:

= $[86 \div 130] \times 30 = 19.84$ Marks and so on.

Section VI. Sample Forms

MANDATORY STANDARD FORMS (1 TO 5)

BID FORM 1: BID COVER SHEET

BID FORM 2: LETTER OF INTENTION

BID FORM 3: AFFIDAVIT

BID FORM 4: PRICE SCHEDULE FORMAT FOR FINANCIAL BID
(To be submitted in separate sealed envelope)

BID FORM 5: INTEGRALITY PACTS

BID FORM 6: CONTRACT AGREEMENT
(Template for information only, shall be signed with the successful Bidders only)

BID FORM 7: BANK GUARANTEE (Specimen)

Bid Form 1

BID COVER SHEET

Mandatory General Information of Applicant Firm NOTE: Complete filling of this form along with the provision of all requisite information is mandatory. Missing or not providing any of the requisite information may lead to dis-qualification of the bidder/s from the bidding competition without any case.

S. No	Name of Bidding Firm	Details
1	Please indicate whether the firm is: a. Manufacturer, or b. Importer c. Manufacturer and / or Importer and / or Authorized dealer	
2	Please indicate the category/ies under which the Firm is applying for bidding 1. High-Tech Medical Equipment 2. Low-Tech Medical Equipment 3. Medical Furniture, Instruments (Sample Based) 4. General Hospital Supplies (Sample Based) 5. Electrical, Electronics and Information Technology 6. Power Generation, Regulatory Equipment	
3	Please provide names, attested copies of CNICs, two recent attested photographs, valid street addresses in Pakistan, all landline and mobile phone numbers of: a. Owner/Proprietor of the Firm. b. Managing Director / CEO of the Firm; c. Focal person officially made responsible and authorized by the Firm for day-to-day official Correspondence with Procurement cell DGHS. (Please provide clear, legible and visible attested photocopies of all the requisite items mentioned items)	
4	Please provide the following valid information Regarding applicant Firm: Complete Street address of the: a. Head Office b. Main warehouse; and c. Valid & working official Landline Phone and d. Fax Numbers; and e. Mobile phone numbers of the Focal Person registered against his /her CNIC No. And name; and f. Valid and functional Email address; g. Official Website address /es .	
5	a. Please provide in original the bid security instrument along with the Financial Proposal in the sealed envelope in the form of valid Call Deposit Receipt / Bank Draft / Bank Guarantee of the requisite amount from a scheduled Bank of Pakistan in the name of Director General Health Services, Peshawar. Non- provision of bid Security shall render the bid as non -responsive. b. However, please provide an affidavit on judicial stamp paper of appropriate face value in the sealed Envelope of the technical proposal to the effect that the bid security of the required amount (without mentioning the amount of bid security) has been inside the sealed envelope of the financial bid except where flat rates in bid security have been demanded by the Directorate General Office.	

6	Please provide attested copies of the following Tax related mandatory documents: - National Tax Number (NTN) of the Firm (FTN) for Income Tax - Last year Income Tax Return of the Firm; - Sales Tax Registration Certificate of the Firm; and - Certificate of Professional Tax
7	In case of being manufacturer, the Firm should provide attested copies of the following mandatory documents also: Duly attested copy of valid Certificate from Chamber of Commerce of the respective country
8	In case of being importers, the Firm should provide attested copies of the following mandatory document/s also: Valid Embassy Attested Authorization Certificate or apostille for the quoted items of category Low-Tech and High-Tech medical equipment, Medical Furniture and Instruments.
9	The bidding Firm shall also provide an Affidavit on Judicial Stamp Paper of the value of at least Rs. 100/- (Rs. One Hundred Only) for the following undertaking: - I / We have carefully read the whole set of Bid solicitation Documents for this bidding competition and that I / We have fully understood and agree to all the provisions (including, but not limited to, those provided under ITB 11.5, 16.1 and 29.1 of the Bid Data Sheet), terms and conditions, evaluation criteria, mechanism of evaluation & selection of items for which the Firm has applied for competition; and - I / We fully understand and agree that the bidding competition for which I / We have applied to enter in, shall be based on merit-based scoring system for the evaluation of technical bids which has inverse relationship with the rates quoted by the bidders in their financial bids submitted; and that in this situation, the lowest financial bid/s may or may not win the bidding competition; and - I / we guarantee that the quoted items are, and shall be, freely available in the market of Pakistan; and particularly in the market of Khyber Pakhtunkhwa province and/or available in public and private sector health facility (ies); and - I / We shall provide to the inspection team/s of expert/s authorized for the purpose by the Directorate General Health Services Khyber Pakhtunkhwa; an uninterrupted and free access to all relevant documents, sections of the manufacturing facilities / unit, storage and warehousing facilities as well as any other area relevant, as deemed appropriate by the above-mentioned team for their purpose of visit/s. - In case of any collusive, coercive, corrupt, obstructive, fraudulent practices and/or any act of misconduct by the bidding firm/focal person, in this bidding competition in relation to the decision making by the procuring entity, shall be liable to be proceeded under KPPRA Act 2012, Rules framed thereunder, Departmental Debarment/Blacklisting Guidelines Notified vide Letter No. 2440-2500/Proc. Cell, Dated: 30-08-2018, and/or forfeiture of the bid security/performance guarantee of the bidding firm, and / or any other lawful action as deemed appropriate by the Government of Khyber Pakhtunkhwa, including that to be taken up with the DRAP or any other body / entity of the Federal Government; and - I / We have fully understood that the medical devices and items in the categories including other non-drug items shall be evaluated and examined by experts / consultants / end-users nominated by the Selection & Rate Contracting Committee or Technical Evaluation Committee of the Government of the Health Department, Khyber Pakhtunkhwa at its sole discretion; and that the Firm shall fully agree and abide by the decision / opinion, whatsoever, of the said expert/s regarding the selection, or otherwise, of the quoted item/s for purchase / rate contracting. - I / We also undertake that submission of any false/bogus/fake/forged/ fabricated/tampered document shall lead to disqualification of our firm from this bidding competition as well as to other lawful action/s to be taken by the concerned authorities. - I / We have fully understood that no such documents shall be entertained by the Procuring Entity, which is issued after due date of Bid opening.
10	I certify and affirm that I have attached /provided all the requisite mandatory documents / information including Bids Security with this Bid and that I fully understand that any document if not provided / missing shall result in the disqualification and declaring my bid as ineligible and thus non-responsive. Signatures: Name: CNIC No. Designation: Address:

Bid Form 2

Letter of Intention

Bid Ref No.

Date of the Opening of Bids

Name of the Contract: {Add name. e.g., Supply of machinery & equipment, instruments and other hospital supplies, etc.}

To:

[Name and address of Procuring Entity]

Dear Sir/Madam,

Having examined the Bid Solicitation Documents, including Addenda Nos. *[insert numbers & Date of individual Addendum]*, the receipt of which is hereby acknowledged, we, the undersigned, offer to supply and deliver the Goods under the above-named Contract in full conformity with the said Bid Solicitation Documents and at the rates/unit prices described in the financial bid are not more than a trade price & the prices are not more than the market rates.

We undertake, if our bid is accepted, to deliver the Goods in accordance with terms and condition of contract agreement

We agree to abide by this bid, for the Bid Validity Period specified in the Bid Data Sheet and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period. Until the formal final Contract is prepared and executed between us, this bid, together with your written acceptance of the bid and your notification of award, shall constitute a binding Contract between us.

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

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in Pakistan.

Dated this *[insert: number]* day of *[insert: month]*, *[insert: year]*.

Signed:

In the capacity of *[insert: title or position]*

Duly authorized to sign this bid for and on behalf of *[insert: name of Bidder]*

Bid Form 3

AFFIDAVIT *(on Judicial Stamp Paper of minimum Rs. 100)*

I/We, the undersigned [**Name of the Supplier**] hereby solemnly declare and undertake that:

1. We have read the contents of the Bidding Document and have fully understood it.
2. The Bid being submitted by the undersigned complies with the requirements enunciated in the Bid Solicitation Documents.
3. The Goods that we propose to supply under this contract are eligible goods within the meaning of this SBD/BSD.
4. The undersigned are also eligible Bidders within the meaning of the bid solicitation documents.
5. The undersigned are solvent and competent to undertake the subject contract under the Laws of Pakistan. Furthermore, neither our principle/Manufacture is/are insolvent nor blacklisted.
6. The undersigned have not paid nor have agreed to pay, any Commissions or Gratuities to any official or agent related to this bid or award or contract.
7. The undersigned are not blacklisted or facing debarment from any Government, or its organization or project.
8. That undersigned has not employed any child labor in the organization/unit.
9. The undersigned has successfully completed all contracts assigned and has not violated the previous contract agreement with this department.
10. We understand that the Selection and Rate Contracting Committee of the Procuring Entity is not bound to accept the lowest or any other bid they may receive.
11. If the undersigned is successful bidder, we shall provide complete technical manual and operation manual (soft and hard) to the XEN central workshop Peshawar, Procurement Cell and all regional workshops

We affirm that the contents of this affidavit are correct to the best of our knowledge and belief.

Signatures with Stamp: _____

Designation: _____

CNIC No. _____

For, Messer. [*Name of Supplier*]

Bid Form 4

Note: Financial Bid must be submitted separate in EPADS

rice Schedule format for Financial Bid of Selection and Rate Contracting of Medical Equipment, Medical Furniture, Instruments and other hospital supplies for the Financial Year 2025-26

S. No	Serial No. of quoted item in Statement of Requirement of the BSDs 2025-26	Name of the item	Price offered per unit in PKR Inclusive of all taxes in figures	Rate offered per unit in PKR Inclusive of all taxes in words

In case of difference in price in figures and words the prices quoted in words will be considered.

Bid Form 5

INTEGRITY PACT (on Judicial Stamp Paper of minimum Rs. 100)

Declaration of Fees, Commission and Brokerage etc Payable by Manufacturers, Importers for the supply of Medical Equipment, Medical Furniture, Instruments and other Hospital supplies for the FY 2025-26.

In response to advertisement related to the bidding process / competition regarding Selection and Rate Contracting of Medical Equipment, Medical Furniture, Instruments and other hospital supplies for the Financial Year 2025-26 for the health facilities /institutions through Procurement Cell, DGHS I, Mr. _____ s/o _____ bearing CNIC No. _____, And having the Designation of _____ In Messrs. (M/S) [Name of Supplier] do hereby solemnly Affirm, declare and certify on behalf of M/S [Name of Supplier] that:

1. [Name of Supplier] has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Khyber Pakhtunkhwa (GoKP) or any administrative subdivision or Entity thereof or any other entity owned or controlled by GoKP through any corrupt business practice; and
2. That without limiting the generality of the foregoing, [Name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fees etc. Paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoKP, except that which has been expressly declared pursuant hereto; and
3. That [Name of Supplier] has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoKP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty; and
4. That [Name of Supplier] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoKP under any law, contract or other instrument, be voidable at the option of GoKP; and
5. That notwithstanding any rights and remedies exercised by GoKP in this regard, [Name of Supplier] agrees to indemnify GoKP for any loss or damage incurred by it on account of Its corrupt business practices and further pay compensation to GoKP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoKP.

Signature with stamp:

Name:

Designation:

CNIC No:

Messer. [Name of Supplier]

Witness No. 1

Witness No. 2

(Signatures, name, father's name, CNIC & address of each Witness)

Bid Form 6

RATE CONTRACT AGREEMENT (Template)

(For successful bidders on Judicial Stamp Paper of minimum Rs. 1000)

THIS RATE CONTRACT AGREEMENT is made and agreed today on day of [day], [Month], 2025-26 between the Government of Khyber Pakhtunkhwa Health Department through Director General Health Services (hereinafter referred to as the Procuring Entity or the first party, which expression shall, where the context admits, be deemed to include the assignee/s of the provincial Government of Khyber Pakhtunkhwa); and **Messrs.** [Name of Bidder] through Mr. **Designation** _____ **CNIC No.** _____ (hereinafter referred to as the Supplier / Bidder or the second party or he/his, which expression, unless repugnant to the context, means and includes their legal heir/s, successors-in-interest, assignee/s and legal representative/s) that: WHEREAS the Procuring Entity has made a bidding competition for selection and rate contracting for supply of (**Name of equipment, Country of origin along with model at Rs.**) machinery & equipment, instruments and other hospital supplies (hereinafter referred to as goods) for actual purchases of the selected and rate contracted goods to be made by the offices / officers of the Health Department, Government of Khyber Pakhtunkhwa (hereinafter called the Purchasing Entity or Purchasing Agencies where the context so admits); and

WHEREAS the Supplier declares that he is not a broker, middle-man, distributor but himself a Manufacturer and / or direct Importer of goods / or Authorized dealer of manufacturer and Importer for which he has won the bidding competition for supply of goods to the Procuring Entity throughout the province of Khyber Pakhtunkhwa (hereinafter referred to as the Province) to the Purchasing Agencies; and WHEREAS both the parties have agreed that the Purchasing Agencies in the Province shall purchase all or some or none of the goods, as of details given in the approved list of the items of this Contract Agreement, from the Supplier at the sole discretion of the individual Purchasing Agencies; and

WHEREAS the Supplier shall supply all the goods ordered by the Purchasing Entity to the latter in the quantity as mentioned in the supply order to be issued by the Purchasing Entity within the timeframe as mentioned in Bid Solicitation Documents i.e., within 90 days from the date of issuance of supply order by the Purchasing Entity for items to be imported items while 60 days for locally manufactured items; Now, therefore, both the parties mutually agree to enter into this contract agreement as under:

1. The Supplier agrees to take full responsibility of the validity and implications, that may arise in future, of declaration submitted by him in the form of affidavit on judicial stamp paper and also that in case of any kind of breach of the said declaration, the Supplier shall be liable to be proceeded against by the Procuring Entity in accordance with the clauses of this rate contract agreement as well as relevant laws, rules and regulations of the Government of Khyber Pakhtunkhwa, as amended from time to time, to govern the situation/s.
2. The Supplier shall supply the ordered goods to the Purchasing Entity exactly at the address of the official premises situated within the district of the official jurisdiction of the latter as given in the supply order issued to the former.
3. The Supplier shall be solely responsible for transportation, loading and / or unloading and staking of the supplied items till and at the time of delivery to the destination indicated by the Purchasing Entity including any damage or untoward incidence, maintenance of required temperature and protection from light and other environmental conditions as well as other hazards that may possibly or potentially affect the safety, quality and efficacy of the supplied items.

4. The Supplier shall NOT claim or charge transportation, loading / unloading, labor or any other Charges related to or in the name of logistics, accidents, insurance, freight, etc.
5. The Procuring Entity shall arrange to obtain sample/s from each supplier before Finalization of award with the successful bidder in each category.
6. The Supplier will arrange demo for the physical inspection to the Procuring Entity and shall bear the associated cost.
7. The Supplier will make necessary arrangements including on job training to the end user before release of final payment or damage liability period is over.
8. The Supplier will provide Service Manual, Circuit diagram and error logbook and operational Manual for the supplied goods. The successful bidders shall provide complete service manual and operation manual to the in charge of central workshop Peshawar and all regional workshops.
9. In case of non-supply or delayed supply of items the Supplier shall be proceeded against under the relevant law of the land i.e., Procurement regime and associated country laws.
10. The Purchasing Entity shall recommend to the Procuring Entity for taking legal / lawful action against the Supplier regarding non-supply, short supply, substituted supply, delayed supply or any other unlawful action / shortcoming, on the part of Supplier during the execution of this contract agreement. The Procuring Entity shall take lawful / legal action against the Supplier in accordance with the clauses of this contract agreement as well as relevant laws, rules and regulations of the Government of Khyber Pakhtunkhwa, as amended from time to time, to govern such like situation/s, which may include, but not limited to, blacklisting, forfeiture of earnest money and performance guarantee, etc.
11. The Supplier agrees to the following conditions related to packing, packaging and labeling of the goods to be supplied to Purchasing Agencies under this contract agreement:
12. The Procuring Entity or its representative shall have the right to inspect the manufacturing facility, premises, warehouse, godowns, laboratories etc. at any time during the financial year 2025-26 and/or till the execution of supply orders given under this contract agreement by Purchasing Agencies Khyber Pakhtunkhwa.
13. RATE VALIDITY: The Supplier agrees that the approved price of all individual items quoted in the financial bids shall remain valid till and up to **30th June 2025**.
14. PERFORMANCE GUARANTEE: Upon receipt of supply order from the Purchasing Entity, the Supplier shall submit Performance Guarantee to the former, amounting to ten per cent (10%) of the total value of each individual supply order, which shall be returned to the Supplier upon request after the successful finalization of the process of procurement by the Purchasing Agencies till warranty period.
15. WARRANTY: The supplier shall provide warranty on prescribed form in Bid Solicitation Documents to the Purchasing Entity for each item supplied in response to supply orders. In order to safeguard the smooth running of the equipment, a second stage handing and taking over of the equipment will be mandatory after the expiry of the standard warranty mention in the bidding document. Also, they will hand the repair manuals/circuit, and any other i.e software and CD's/key required for the repair and maintenance of the equipment. During this second stage handed and taking over the workshop technical personal and end user must be present.
16. PAYMENT SCHEDULE: Bill for payment in triplicate along with all other relevant and required documents shall be submitted by the Supplier, to the Procuring Entity immediately after complete supply of stock. The Supplier shall be bound to pay all sort of government taxes, duties and stamp duties, imposed earlier or during the financial year by the Government of Pakistan or by the Provincial Government of Khyber Pakhtunkhwa on any supplied / purchased item.

17. FORCE MAJEURE:

- a. In case of the situation related to Force Majeure, the Supplier may inform the Procuring Entity and the Purchasing Entity in writing about the situation immediately without delay along with solid proof through the fastest, lawful and available means of communication, but not through the electronic mail, and request the Procuring Entity for the grant of extension in the supply Period.
- b. The Procuring Entity, in case of being fully satisfied with the genuineness of situation arising from Force Majeure for the Supplier, may extend the period of supply of good up to a maximum of not more than thirty days without penalty. However, the Procuring Entity and / or Purchasing Entity shall, in no case, be responsible or held responsible for any complications in making payments to Supplier by the Purchasing Entity that may arise from the closure of financial year and lapse / surrender of public funds vis-à-vis the normal financial management procedures in public sector.

18. PENALTIES:

The Supplier shall complete the supply of the ordered goods under this agreement within the stipulated period as laid down in the SBDs. In case of delay in supplies reaching to the Purchasing Entity, except in situation/s covered under clause 17 above, the following penalties shall be imposed by the Purchasing Entity upon the Supplier: For delay in supply from one day up to fifteen days, a lump sum penalty amounting to three percent (03%) of the total bid price of the total number of item/s supplied late shall be levied through deducting the total amount of penalty from the total pre-tax payable billed amount by the Purchasing Entity. For delay in supply from sixteen days up to thirty days, a lump sum total penalty amounting to seven per cent (07%) of the total bid price of the total number of item/s supplied late shall be levied through deducting the total amount of penalty from the total pre-tax payable billed amount by the Purchasing Entity. Upon delay in supply more than thirty days, the supply contract shall stand cancelled and the ten percent performance guarantee shall stand forfeited and Procuring Entity shall have the right, duty and authority to impose any or all of the below mentioned penalties; that is

- (ii) Forfeiting the performance guarantee of the Supplier related to this contract agreement;
 - (iii) Immediately debarring the Supplier from future participation and business for at least next three (03) calendar years with the Procurement Cell or any other health institution, project and / or Program directly or indirectly run or implemented by or through the provincial Health Department or autonomous Medical Teaching Institutions or district governments in Khyber Pakhtunkhwa;
 - (iv) Initiating the process for and recommending for blacklisting of the Supplier under the rules with the Agencies; and Proceeding for de-registration of the winning bidder under the relevant laws as well as further judicial proceedings, if the situation so warrants in the opinion of Procuring Entity.
19. INDEMNITY: Notwithstanding any rights, duties and / or remedial measures and / or managerial actions taken and / or to be taken and / or any powers exercised and / or to be exercised by the Procuring Entity and / or Purchasing Entity with regard to the execution of this contract agreement, the Supplier agrees to indemnify them for any loss or damage incurred or inflicted upon by them in individual or official capacity upon the Supplier whether through any of their actions and / or practices and / or otherwise. The Supplier further agrees to pay compensation to the Government of Khyber Pakhtunkhwa of an amount equivalent to ten times the sum of any commission, gratification, bribe or kickback and / or finder's fee given by the Supplier for the purpose of obtaining and / or inducing the Procurement of

any contract, right, interest, privilege or other obligation/s or benefit in whatsoever form, from the Procuring Entity or any of the Purchasing Agencies.

20. **RESOLUTION OF DISPUTES:** The Purchasing Entity and the Supplier shall make every effort to resolve amicably by direct negotiation any disagreement or dispute arising between them under or in connection with the contract / supplies. Despite such negotiation if the Purchasing Entity & Supplier have been unable to resolve amicably a contract dispute, either party may refer the case to Dispute Resolution Committee under the chairmanship of Secretary Health Khyber Pakhtunkhwa with Director General Health Services, Khyber Pakhtunkhwa and Additional Secretary Health (Development) Khyber Pakhtunkhwa as members. The decision of the Dispute Resolution Committee shall be final and binding upon both the parties and will not be challengeable in any court of law.

Signature: Director General Health Services Khyber Pakhtunkhwa For and on behalf of Health Department, Government of Khyber Pakhtunkhwa, Peshawar	Signature: Name: Designation: CNIC No. Stamp: For and on behalf of the Bidder
WITNESS NO. 1 Deputy Director Procurement Director General Health Services Khyber Pakhtunkhwa Health Department, Government of Khyber Pakhtunkhwa, Peshawar	WITNESS NO. 2 Signature: Name: Father's Name: Address: CNIC No

Schedule -1

**DIRECTORATE GENERAL OF HEALTH SERVICES, HEALTH DEPARTMENT GOVERNMENT OF
KHYBER PAKHTUNKHWA, PESHAWAR**

**APPROVED LIST OF MEDICAL EQUIPMENT, MEDICAL FURNITURE, INSTRUMENT AND OTHER
HOSPITAL SUPPLIES FOR THE FINANCIAL YEAR 2025-26**

S.No	Name of Equipment / Item	Unit Price Inclusive of all taxes	Successful Bidder	Address and Contact Information
1				
2				
3				
4				
5				

Bid Form 7

BANK GUARANTEE (Specimen)

Guarantee No. _____
Initial Date of Issue: _____
Amount of Guarantee PKR: _____
Date of expire of Guarantee: 31.07.2026 (Extendable)
Claim Lodgment Date: 31.07.2026 or later as decided by the procuring entity.

From: (Bank Name and complete address)

**To: Director General Health Services,
Health Department,
Government of Khyber Pakhtunkhwa,
Peshawar.**

We “(Bank Name)” having its place of business at (Address of the Bank) and Head office (Address of the head office) (Hereinafter referred to as the Guarantor), understand that Name and Address of the Bidder (hereinafter referred to as the Customer/Bidder) as per requirement of Bid Solicitation Document (BSDs) for Selection and Rate Contracting of Medical Equipment, Medical Furniture, Instruments and other hospital supplies for the Financial Year 2025-26, required to furnish a Bank Guarantee in respect of said BSDs for an amount of Rs. In figure /- (PKR in words) for (Name of the Customer/Bidder).

Now therefore in consideration of the above, we the Guarantor, guarantee unconditionally the due payment to you unconditionally upon demand of such sum or sums not exceeding Rs. In figures /- (PKR in words) in the event that Customer/Bidder fail to perform or fulfill any of the terms and conditions of the BSDs at the time or during the period specified in the guarantee, provided that any such demand here under is received in writing at this office within the validity of this Guarantee period accompanied by your written declaration to us that the Customer/Bidder has failed to comply with the terms of the conditions/Regulations and such declaration shall be accepted by us as conclusive proof that the amount claimed is due to you and we shall pay you the amount under this Guarantee. Our liability under this guarantee shall not be affected by any dispute or difference between you and the Customer/Bidder or by forbearance or indulgence granted by you to the Customer/Bidder or by any other security held by you from the Customer/Bidder relating to the above-mentioned Regulations or any violation in the Regulations or any other manner or thing which might affect our liability hereunder.

Notwithstanding anything contrary contained herein above, our maximum liability under this guarantee shall not in any case exceed Rs. In figures /- (PKR in words). This guarantee shall remain valid up to 31.07.2026 (or later as may be decided by the procuring entity). Any claims under this guarantee must be received in writing along with the original bank guarantee and all the amendments if any, on or before expiry of this guarantee i.e., 31.07.2026. After which date this guarantee will become automatically void and bank will be absolved of its liability under this guarantee whether or not the original is returned to us for cancellation. This agreement shall be governed by and construed in accordance with the laws of Pakistan.

For and on behalf of (Bank Name)

Authorized Person Signature with Stamp/Seal