



BIDDING DOCUMENT

Single Stage - Two Envelope Bidding Procedure

**PROCUREMENT OF RADIOLOGY EQUIPMENT /
INSTRUMENTS AND ANCILLARIES
FOR DOW INSTITUTE OF RADIOLOGY**

**NIT No. DUHS/DP/2018/-31-32 Dated 18 January 2018
(Ref. No. DUHS/DP/2018/- 32)**

TABLE OF CONTENTS		
A.	INSTRUCTIONS TO BIDDERS (ITB)	2
1.	INTRODUCTION	2
2.	THE BIDDING PROCEDURE	3
3.	THE BIDDING DOCUMENTS	3
4.	PREPARATION OF BIDS	4
5.	SUBMISSION OF BIDS	8
6.	OPENING AND EVALUATION OF BIDS	9
7.	AWARD OF CONTRACT	14
B.	GENERAL CONDITIONS OF CONTRACT (GCC)	17
1.	DEFINITIONS	17
2.	APPLICATION	17
3.	STANDARDS	18
4.	USE OF CONTRACT DOCUMENTS AND INFORMATION	18
5.	PATENT RIGHTS	18
6.	ENSURING STORAGE ARRANGEMENTS	18
7.	INSPECTIONS, TESTS AND TRAINING	18
8.	DELIVERY AND DOCUMENTS	19
9.	INSURANCE	19
10.	TRANSPORTATION	19
11.	INCIDENTAL SERVICES	19
12.	WARRANTY / GUARANTEE	19
13.	PAYMENT	20
14.	ASSIGNMENT	20
15.	DELAYS IN THE BIDDER'S PERFORMANCE	20
16.	PENALTIES/ LIQUIDATED DAMAGES	21
17.	TERMINATION FOR DEFAULT	21
18.	FORCE MAJEURE	21
19.	TERMINATION FOR INSOLVENCY	21
20.	ARBITRATION AND RESOLUTION OF DISPUTES	22
21.	PACKING	22
22.	GOVERNING LANGUAGE	22
23.	APPLICABLE LAW	22
C:	INVITATION FOR BIDS (IFB)	23
D:	BID DATA SHEET	24
E:	SPECIAL CONDITIONS OF CONTRACT (SCC)	26
F:	SCHEDULE OF REQUIREMENTS	31
G:	TECHNICAL SPECIFICATIONS	32
H:	SAMPLE FORMS	56
1.	PERFORMANCE GUARANTEE/SECURITY FORM	56
2.	MANUFACTURER'S AUTHORIZATION FORM	57
3.	CONTRACT FORM	58
I:	BID FORM & PRICE SCHEDULE	59
1.	BID FORM	59
2.	PRICE SCHEDULES	60 & 61

A: Instructions to Bidders. (ITB)

1. INTRODUCTION

1. GENERAL

1.1 Dow University of Health Sciences (DUHS), Karachi has allocated fund towards the cost of **“Procurement of Radiology Equipment / Instruments and Ancillaries for Dow Institute of Radiology”**. It is intended that part of the proceeds of this fund will be applied to eligible payments under the contract for the Procurement of goods.

2. ELIGIBLE BIDDERS

2.1. This Invitation for Bids is open to all original Manufacturers, within Pakistan and abroad, and their Authorized Agents / Importers / Bidders / Distributors.

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 University 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 may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Federal Govt. or Provincial Govt.

2.4. Bidder should 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 sub **clause 35.1**.

3. ELIGIBLE GOODS

3.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries and all expenditures made under the contract shall be limited to such goods and services. For this purpose, the term “Goods” includes any Goods that are the subject of this Invitation for Bids and the term “Services” shall include related services such as transportation, insurance etc. **The “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 through manufacturing or processing, or substantial and major assembly of ingredients / components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

2. THE BIDDING PROCEDURE

4. Single Stage - Two Envelope Procedure

- (a) Bid shall comprise a single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal;
- (b) Envelopes shall be marked as “FINANCIAL PROPOSAL” and TECHNICAL PROPOSAL” in bold and legible letters to avoid confusion;
- (c) Initially, only the envelope marked “TECHNICAL PROPOSAL” shall be opened;
- (d) Envelope marked as “FINANCIAL PROPOSAL” shall be retained in the custody of the procuring agency without being opened;
- (e) Procuring agency shall evaluate the technical proposal in a manner prescribed in advance, without reference to the price and reject any proposal which does not conform to the specified requirements;
- (f) No amendments in the technical proposal shall be permitted during the technical evaluation;
- (g) Financial proposals of technically qualified bids shall be opened publicly at a time, date and venue announced and communicated to the bidders in advance;
- (h) Financial proposal of bids found technically non-responsive shall be returned un-opened to the respective bidders; and
- (j) Bid found to be the lowest evaluated or best evaluated bid shall be accepted.

4.2 The bids shall be opened in the presence of bidders or their authorized representative at the prescribed time, date and venue.

3. THE BIDDING DOCUMENTS

5. CONTENTS OF BIDDING DOCUMENTS

5.1 The Bidding Documents:

In addition to the Invitation for Bids (IFB) / Tender Notice, the bidding documents include:

- i. Instructions to Bidders (ITB);
- ii. General Conditions of Contract (GCC);
- iii. Special Conditions of Contract (SCC);
- iv. Schedule of Requirements;
- v. Technical Specifications;
- vi. Contract Form;
- vii. Manufacturer's Authorization Form;
- viii. Performance Guarantee Form;
- ix. Bid Form; and
- x. Price Schedules.

5.2 In case of discrepancies between the Invitation for Bids (IFB) / Tender Notice and the Bidding Documents, the Bidding Documents shall take precedence.

5.3 The bidders are expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish complete

information required in the bidding documents or to submit a bid not substantially responsive to the bidding documents may result in rejection.

6. AMENDMENT OF BIDDING DOCUMENTS

- 6.1 At any time prior to the deadline for submission of bids, the Procuring Agency may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the bidding documents by amendment.
- 6.2 All prospective bidders that have received the bidding documents will be notified the amendment(s) in writing, which will be binding on them.
- 6.3 In order to allow prospective bidders reasonable time to take the amendment(s) into account in preparing their bids, the Procuring Agency may, at its discretion, extend the deadline for submission of the bids.

4. PREPARATION OF BIDS

7. LANGUAGE OF BID

- 7.1 Preparation of Bids
The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the bidder and the Procuring Agency shall be in English. Supporting documents and printed literature furnished by the bidder may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case for purposes of interpretation of the Bid, the translated version shall prevail.

8. DOCUMENTS COMPRISING THE BID

- 8.1 The bid prepared by the Bidder shall comprise the following:
 - (a) Bid Form;
 - (b) Price Schedule;
 - (c) Documentary evidence to the effect that the Bidder is eligible to bid and is qualified to perform the Contract if its bid is accepted;
 - (d) Documentary evidence to the effect that the goods to be supplied by the Bidder are eligible goods and related services as defined in clause-3 and conform to the bidding documents; and
 - (e) Bid Security.

9. BID PRICES

- 9.1 The prices and discounts quoted by the Bidder in the Bid Form and in the Price Schedules shall conform to the requirements specified below.
- 9.2 All items in the Schedule of Supply must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their

prices shall be assumed to be included in the prices of other items. Items not listed in the Price Schedule shall be assumed not to be included in the Bid.

- 9.3 The price to be quoted in the Bid Form shall be the total price of the Bid excluding any discounts offered.
- 9.4 The Bidder shall quote any unconditional discounts and the methodology for their application in the Bid Form.
- 9.5 Prices proposed in the Price Schedule Forms for Goods, shall be disaggregated, when appropriate. This disaggregation shall be solely for the purpose of facilitating the comparison of Bids by the Procuring Agency. This shall not in any way limit the Procuring Agency's right to contract on any of the terms offered:
- (a) Price Schedule For Goods offered from within the Procuring Agency's country:
 - (i) Detailed Specification of Stores
 - (ii) Model / Cat No.
 - (iii) Name of Manufacturer.
 - (iv) Country of Origin
 - (v) Quantity of Stores
 - (vi) Unit
 - (vii) the unit price of the goods quoted on delivered duty paid (DDP) basis, including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of goods, or on the previously imported goods of foreign origin;
 - (viii) If there is no mention of taxes, the offered/quoted price will be considered as inclusive of all prevailing taxes/duties. The benefit of exemption from or reduction in the GST or other taxes during the contract period shall be passed on to the Procuring Agency; and
 - (ix) the total price for the item.
 - (b) Price Schedule For Goods offered from outside the Procuring Agency's country:
 - (i) Detailed Specification of Stores
 - (ii) Model / Cat No.
 - (iii) Name of Manufacturer.
 - (iv) Country of Origin
 - (v) Quantity of Stores
 - (vi) Unit
 - (vii) Currency of Bid

- (viii) the unit price of the goods quoted on CFR / C&F basis (Karachi Port), in the Procuring Agency's country;
- (ix) the total price for the item in foreign currency.

9.6 Final Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A Bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected.

9.7 If it was proved during the contract period that bidder has supplied the contracted item(s) to any other purchasing agency in Pakistan at the prices lower than the contracted prices, the balance amount will be deducted from the bill and / or security deposit of the bidder.

10. BID CURRENCIES

10.1 Prices shall be quoted in Pakistani Rupees for goods offered within the Procuring Agency's country on delivered duty paid (DDP).

10.2 Price shall be quoted in foreign currency for goods offered outside the Procuring Agency's country on CFR / C&F Basis.

11. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION

11.1 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Procuring Agency'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 Agency'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 Agency'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 Bidder'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 evaluation & qualification criteria of bidding document.

12. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS

12.1 Pursuant to ITB Clause 8, the Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding

documents of all goods and services which the Bidder proposes to supply under the contract.

- 12.2 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.
- 12.3 The documentary evidence of conformity of the goods and services to the bidding 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; and
 - (b) an item-by-item commentary on the Procuring Agency'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.
- 12.4 For purposes of the commentary to be furnished pursuant to ITB Clause 12.3(b) 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 Agency 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 Agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

13. BID SECURITY

- 13.1 The Bidder shall furnish, as part of its proposal, a Bid Security in the amount and currency specified in the Bid Data Sheet and SCC. Unsuccessful bidders' Bid Security will be returned soon after approval of the successful Bidder. The successful Bidder's Bid Security will be discharged upon signing of contract and furnishing the Performance Security bond, duly guaranteed by a scheduled bank.
- 13.2 The Bid Security shall remain valid for a period of 28 days beyond the bid validity period.
- 13.2 The Bid Security is required to protect the Procuring Agency against the risk of Bidder's conduct, which would warrant the Security's forfeiture;
- 13.3 The Bid Security may be forfeited:
 - (a) if a Bidder withdraws its bid during the period of bid validity; or
 - (b) in the case of a successful Bidder, the Bidder fails:
 - (i) to sign the Contract; or
 - (ii) to complete the supplies in accordance with the General Conditions of Contract.

14. BID VALIDITY

14.1 Bids shall remain valid for 90 days from the date of its opening. A bid valid for a shorter period shall be treated as non-responsive and rejected.

14.2 The Procuring Agency shall ordinarily be under an obligation to process and evaluate the bids within the stipulated bid validity period. However, for any reasons to be recorded in writing, if an extension is considered necessary, all those who have submitted their bids shall be asked to extend their respective bid validity period.

15. ALTERNATIVE BIDS

15.1 If any bidder elects to submit alternative proposal(s), complete information on the alternative items including all data relating to technical specifications shall be given as per following table.

Sr. No.	Description of Stores	Statement of Variation from Specifications	Reasons for Variations

5. SUBMISSION OF BIDS

16. SEALING AND MARKING OF BIDS

16.1 The envelopes shall:

- (a) bear the name and address of the Bidder;
- (b) bear the specific identification Name and Number of this bidding process indicated in the Bid Data Sheet; and
- (c) bear the Procuring Agency's name and address i.e. Dow University of Health Sciences (Ojha Campus), Procurement Directorate, Prof. Masood Hameed Khan Library Building, SUPARCO Road, off Main University Road, Gulzar-e-Hijri, Scheme No. 33, Karachi and a statement: "DO NOT OPEN BEFORE," the time and date specified in the Bid Data Sheet.

16.2 If all envelopes are not sealed and marked as required, the Procuring Agency will assume no responsibility for the misplacement or premature opening of the bid.

17. DEADLINE FOR SUBMISSION OF BIDS

17.1 Bids must be submitted by the bidders and received by the Procuring Agency at the specified address not later than the time and date specified in the Bid Data Sheet.

17.2 The Procuring Agency may, at its convenience, extend this deadline for submission of bids by amending the bidding documents in which case all rights and obligations of the Procuring Agency and the Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

18. LATE BID

18.1 Any bid received by the Procuring Agency after the deadline for submission of bids prescribed by the Procuring Agency shall not be entertained and returned unopened to the bidder.

19. WITHDRAWAL OF BIDS

19.1 The Bidder may after its submission withdraw prior to the expiry of the deadline prescribed for submission of bids.

6. OPENING AND EVALUATION OF BIDS

20. OPENING OF BIDS BY THE PROCURING AGENCY

22.1 The Procuring Agency 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 Agency, 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 18.

22.3 Bids (and modifications sent pursuant to ITB Clause 19) 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.

21. CLARIFICATION OF BIDS

21.1 During evaluation of the bids, the Procuring Agency may, at its discretion, ask the Bidder for a clarification of its bid. The 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.

22. PRELIMINARY EXAMINATION

22.1 The Procuring Agency 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.

- 22.2 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.
- 22.3 The Procuring Agency 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.
- 22.4 Prior to the detailed evaluation, pursuant to ITB Clause 23 the Procuring Agency will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions, such as those concerning Bid Security, Applicable Law, and Taxes and Duties, will be deemed to be a material deviation. The Procuring Agency's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 22.5 If a bid is not substantially responsive, it will be rejected by the Procuring Agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

23. EVALUATION AND COMPARISON OF BIDS

- 23.1 The Procuring Agency will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 22.
- 23.2 The Procuring Agency's evaluation of a bid will be on delivered duty paid (DDP) inclusive of prevailing duties/taxes and C&F / CNF basis and will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 23.3 The Procuring Agency's evaluation of a bid will take into account, in addition to the bid price quoted, one or more of the following factors, and quantified in ITB Clause 24:
 - (a) **Incidental costs**
Incidental costs provided by the bidder will be added by Procuring Agency to the bid price at the final destination.
 - (b) **Delivery schedule offered in the bid**
The goods covered under this invitation are required to be delivered (shipped) within an acceptable range of weeks specified in the Schedule of Requirement.

- (c) **Deviations in payment schedule from that specified in the Special Conditions of Contract**
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 Agency may consider the alternative payment schedule offered by the selected Bidder.
- (d) **Cost of components, mandatory spare parts, and service**
The Procuring Agency will estimate the cost of spare parts usage in the initial period of operation, based on information furnished by each Bidder, as well as on past experience of the Procuring Agency or other procuring agencies in similar situations. Such costs shall be added to the bid price for evaluation.
- (e) **Availability of spare parts and after sales services for the equipment offered in the bid**
The cost to the Procuring Agency of establishing the minimum service facilities and parts inventories, as outlined in the Bid Data Sheet or elsewhere in the bidding documents, if quoted separately, shall be added to the bid price.
- (f) **Projected operating and maintenance costs during the life of the equipment;**
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 offered**
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 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.

24. EVALUATION / QUALIFICATION CRITERIA

- 24.1 The procuring agency reserves the right to evaluate and compare the bids on itemized basis OR on the basis of a group OR a combination of groups OR as total of groups.
- 24.2 **Merit Point System:**
The following merit point system for weighing evaluation factors/criteria will be applied for technical proposals.
- 24.3 If a bidder fails to obtain “**minimum 20 marks**” against the criteria “**Conformity to the Purchaser's Specifications**” and **unable to provide valid manufacturer Authorization**, his offer will not be considered for further evaluation and rejected.
- 24.4 Bidders achieving minimum 70 marks will be considered only for further process. Documentary evidence must be attached in support of your claim.

A. PRODUCT EVALUATION

S#	PARAMETERS	SUB-PARAMETERS	Total Marks
1	Conformity to the Purchaser's Specifications		25
		Fully compliant with the required specifications	25
		Compliant with minor deviation (up to 10% subject to main function is not effected)	20
2	Product Certification		15
		Food and Drug Administration (FDA) and European Community (CE) MDD or Japan Industrial Standard (JIS) / Japan Quality Assurance Organization (JQAO) / Certificate issued by Ministry of Health, Labour and Welfare Govt. of Japan	15
		European Community (CE) MDD and Japan Industrial Standard (JIS) / Japan Quality Assurance Organization (JQAO) / Certificate issued by Ministry of Health, Labour and Welfare Govt. of Japan	12
		Food and Drug Administration (FDA) 510K	10
		European Community (CE) MDD	08
		Japan Industrial Standard (JIS)/Japan Quality Assurance Organization (JQAO)/ Certificate issued by Ministry of Health, Labour and Welfare Govt. of Japan	08
TOTAL MARKS PRODUCT EVALUATION (A)			40

B. BIDDER EVALUATION

S#	PARAMETERS	SUB-PARAMETERS	Total Marks
3	Legal Requirement		18
		Manufacturer Authorization	10
		Bid Form (without prices)	4
		Tender Purchase Receipt	2
		Taxation Certificate (NTN and GST)	2
4	Technical Staff		12
		Diploma Engineers (minimum two)	4
		Graduate Engineers (For High Tech / Critical equipment Graduate Engineer of relevant field) (minimum two)	6
		MSc / PhD qualification of relevant field / Foreign training (minimum two)	2
5	Networking and Training		8
		Networking setup across Pakistan (1 mark for each setup upto maximum 6)	6
		Certificate to the affect that the firm will provide training in the use of equipment to the relevant technical staff. Training plan must be attached with certificate	2
6	Delivery		6
		4 to 8 Weeks or earlier	6
		9 to 12 Weeks or more	2
7	Past Experience / Performance		4
		Satisfactory performance certificate for the quoted equipment from the medical institutions within Pakistan (1 mark for each certificate upto maximum 4)	4
8	Financial Status		6
		Bank Certificate	2
		Last year verified Balance Sheet / Income Tax Return Forms	2
		Yearly turn-over of over 200 Million	2
9	Bonus points		6
		Warranty period extension free of cost (the firm offered greater period will get the marks)	2
		Comparative Running Cost (consumables / reagents / replacement parts)	2
		Post warranty maintenance contract, including service and parts, rates (companies to offer percentage (%) of the contract value in the technical bid. The lowest will get the full marks)	2
TOTAL BIDDER EVALUATION (B)			60
GRAND TOTAL (A + B)			100

- 24.2 **Litigation History**
The Bidder should not be involved in any litigation with the Procuring Agency/Govt. Deptt: (Provincial/Federal), else their bid will be rejected.

25. **CONTACTING THE PROCURING AGENCY**

- 25.1 No bidder shall contact the Procuring Agency on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. If any bidder wishes to bring additional information to the notice of the Procuring Agency, it may do so in writing.
- 25.2 Any direct or indirect effort by a bidding firm to influence the Procuring Agency during the process of selection of a bidder or award of contract may besides rejection of its bid result into its disqualification from participation in the Procuring Agency's future bids.

26. **REJECTION OF BIDS**

- 26.1 Notwithstanding anything stated here-before after the Procuring Agency may reject any or all bids at any time prior to the acceptance of a bid. The Procuring Agency may upon request, communicate to a bidder, the grounds for its rejection, but shall not be under obligation to justify those grounds.

27. **RE-BIDDING**

- 27.1 If the Procuring Agency has rejected all bids, it may move for a re-bidding or may seek any alternative method of procurement under the provisions of the prevailing Rules.

28. **ANNOUNCEMENT OF EVALUATION REPORT**

- 28.1 The Procuring Agency will announce the Evaluation Report and the resultant acceptance or rejection of bids at least seven days prior to the award of procurement contract.

25 AWARD OF CONTRACT

29. **ACCEPTANCE OF BID AND AWARD CRITERIA**

- 29.1 The bidder with lowest evaluated bid under clause 22, 23 & 24, if not in conflict with any other law, rules, regulations or policy of the Government, will be awarded the contract within the original or extended period of bid validity.

30. **PROCURING AGENCY'S RIGHT TO VARY QUANTITIES**

- 30.1 The Procuring Agency reserves the right to increase or decrease the quantity of stores originally specified in the Price Schedule and Schedule of Requirements without any change in unit price or other terms and conditions.

31. LIMITATIONS ON NEGOTIATIONS

- 31.1 The Procuring Agency reserves the right to hold negotiation of rates, delivery schedule or completion schedule for all the items or any item.
- 31.2 Negotiations will not be used to change substantially:
- i. the technical quality or details of the requirement, including the tasks or responsibilities of the bidder or the performance of the goods;
 - ii. the terms and conditions of the Contract and;
 - iii. anything affecting the crucial or deciding factors in the evaluation of the proposals / bid and / or selection of successful bidder..

32. NOTIFICATION OF AWARD

- 32.1 Prior to the expiry of the original or extended period of bid validity, the successful bidder will be informed in writing of acceptance of its bid by the Procuring Agency.

33. SIGNING OF CONTRACT

- 33.1 While conveying acceptance of bid to the successful bidder, the Procuring Agency will send the bidder Contract Form provided in the bidding documents, incorporating all points of agreement between the Parties.
- 33.2 Ten days after the official announcement of the award, both the successful Bidder and the Procuring Agency will sign and date the Contract on legal stamp paper valuing 0.35% of the value of contract, (cost shall be borne by the bidder). In case the successful Bidder, after completion of all codal formalities, shows inability to sign the Contract, its Bid Security shall be forfeited. The firm may also be blacklisted from taking part in any future bidding of Procuring Agency for a period upto five Years. In such a situation, the Procuring Agency may make the award to the next lowest evaluated responsive bidder or move for re-bid.

34. PERFORMANCE SECURITY

- 34.1 The successful Bidder shall furnish Performance Security. Upon submission of Performance Security the Bid Security will be returned to the Bidder. The amount of Performance Security is specified at Bid Data Sheet.
- 34.2 Failure of the successful Bidder to comply with any of the requirements specified in this document shall be considered as sufficient grounds for the annulment of the award and forfeiture of the Bid Security, in which event the Procuring Agency may make the award to the next lowest evaluated Bidder at the risk and cost of the former.

35. CORRUPT OR FRAUDULENT PRACTICES

- 35.1 (a) the Procuring Agency and the Bidders / Manufacturers / Contractors are expected to observe the highest standard of ethics during the

procurement and execution of the Contract. In pursuance of this policy, the relevant terms / phrases as may apply are defined below:

- (i) "corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in Contract execution; 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 Agency, 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 Agency of the benefits of free and open competition;
- (b) the Procuring Agency will take all possible administrative / legal measures if it is found that the Bidder recommended for award was / is engaged in corrupt or fraudulent practice(s) before or after signing of the contract resulting into the conviction of the proprietor under criminal case besides blacklisting of the firm either indefinitely or for such period of time as may be determined by the Procuring Agency.
- (c) will declare a firm ineligible, either indefinitely or for a stated period of time, for the award of a Contract if it, at any time, determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing a Contract.

B: General Conditions of Contract (GCC)

1. DEFINITIONS

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Procuring Agency and the Bidder, 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 Bidder under the Contract for the full and proper performance of its Contractual obligations.
- (c) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Procuring Agency under the Contract.
- (d) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance, printing of special instructions on the label and packing, design and logo of the Procuring Agency, transportation of goods up to the desired destinations and other such obligations of the Bidder covered under the Contract.
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Procuring Agency" means the Dow University of Health Sciences, Karachi.
- (h) "The Bidder" means the individual or firm supplying the goods under this Contract.
- (i) "Day" means official working day excluding national holidays.

2. APPLICATION

2.1 These General Conditions shall apply to the extent that they are not inconsistent with provisions of other parts of the Contract.

3. STANDARDS

3.1 The goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications goods eligibility criteria.

4. USE OF CONTRACT DOCUMENTS AND INFORMATION

4.1 The Bidder shall not without the Procuring Agency'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 Agency in connection therewith, to any person other than a person employed by the Bidder in the performance of the Contract. Disclosure to such employed person shall be made in confidence and shall extend only, as far as may be necessary, to such performance and not further or otherwise.

4.2 Any document, other than the Contract itself, shall remain the property of the Procuring Agency and shall be returned (all copies) on completion of the Bidder's performance under the Contract.

4.3 The Bidder shall permit the Procuring Agency to inspect the Bidder's accounts and records relating to the performance of the Supplies.

5. PATENT RIGHTS

5.1 The Bidder shall indemnify the Procuring Agency against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the country.

6. ENSURING STORAGE ARRANGEMENTS

6.1 To ensure storage arrangements for the intended supplies, the Bidder shall inform the Procuring Agency at least two weeks prior to the arrival of the consignments at its store/warehouse. However, in case no space is available at its store/warehouse at the time of supply, the Procuring Agency shall, seven days prior to such a situation, inform the Bidder, in writing, of the possible time-frame of availability of space by which the supplies could be made. In case the Bidder abides by the given time frame, he will not be penalized for delay.

7. INSPECTIONS, TESTS AND TRAINING

7.1 The Procuring Agency or its representative shall have the right to inspect and/or test the goods to confirm their conformity to the Contract specifications at the cost payable by the Bidder.

7.2 The Procuring Agency's right to inspect, test and, where necessary, reject the goods either at Bidder's premises or upon arrival at Procuring Agency's destinations shall in no way be limited or waived by reasons of the goods having previously been inspected, tested, and approved by the Procuring

Agency or its representative prior to the goods shipment from the manufacturing point.

7.3 Any specialized training required for the smooth operation of the goods shall be the responsibility of the Bidder.

8. DELIVERY AND DOCUMENTS

8.1 The Bidder shall in accordance with the terms specified in the Schedule of Requirements make delivery of the goods. Details of documents to be furnished by the Bidder are specified in SCC.

9. INSURANCE

9.1 The goods supplied under the Contract shall be delivered to the Procuring Agency after the payment of all taxes and customs duty, cess, octroi charges etc. Risk will be transferred to the Procuring Agency only after the delivery of these goods has been made to the Procuring Agency. Hence, payment of insurance premium, if any, shall be the responsibility of the Bidder.

10. TRANSPORTATION

10.1 The Bidder shall arrange such transportation of the goods as is required to prevent them from damage or deterioration during transit to their final destination as indicated in the Schedule of Requirements.

10.2 The goods shall be supplied on "**D.D.P**" basis at the Dow University of Health Sciences, Karachi AND / OR "**CFR / C&F**" Basis at Karachi Port as per Schedule of Requirements on the risk and cost of the Bidder. Transportation including loading/unloading of goods shall be the responsibility of Bidder.

11. INCIDENTAL SERVICES

11.1 The Bidder will be required to provide to the Procuring Agency incidental services the cost of which should be included in the total bid price.

12. WARRANTY / GUARANTEE

12.1 The term period of warranty / guarantee mean the period of twelve (**12**) **months** form the date on which the Stores have been put into operation and demonstrated to the University staff. In any case this period shall not exceed eighteen (18) months from the date of taking-over certificate.

12.2 During the period of warranty / guarantee, the Contractor shall remedy, at his / her expense, all defects in design, materials, and workmanship that may develop or are revealed under normal use of the goods upon receiving written notice from the University; the notice shall indicate in what respect the goods are faulty.

- 12.3 The provisions of this Clause include all the expenses that the Contractor may have to incur for delivery and installation of such replacement parts, material and equipment as are needed for satisfactory operation of the goods at the University premises.
- 12.4 The contractor shall provide warranty / guarantee for supply of kits and chemicals, consumables, films etc. for at least 05 years (where applicable).
- 12.5 The contractor shall remain responsible for providing after sale services even after expiry of warranty / guarantee period and sign a Service Contract including Parts with Procuring Agency for 05 years (minimum). Bidder shall separately quote the price of service contract inclusive of parts.
- 12.6 In case of consumable items, kits, chemicals, films etc. the contractor shall remain responsible for specificity, efficacy & sensitivity with maximum period of expiry as much allowed by manufacturer.
- 12.7 The Procuring Agency shall promptly notify the Bidder in writing of any claims arising out of this warranty.

13. PAYMENT

- 13.1 The method and conditions of payment to be made to the Bidder under this Contract are specified in SCC.

14. ASSIGNMENT

- 14.1 The Bidder shall not assign, in whole or in part, its obligations to perform to another party under this Contract, except with the Procuring Agency's prior written consent.

15. DELAYS IN THE BIDDER'S PERFORMANCE

- 15.1 Delivery of the goods shall be made by the Bidder in accordance with the time schedule prescribed by the Procuring Agency in the Schedule of Requirements / Contract Award.
- 15.2 If at any time in the course of performance of the Contract, the Bidder encounters anything impeding timely delivery of the goods, he shall promptly notify the Procuring Agency in writing of the causes of delay and its likely duration. As soon as practicable, after receipt of the Bidder's notice, the Procuring Agency shall evaluate the situation and may, depending on merits of the situation, extend the Bidder's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the Parties by a supplementary Contract to be treated as an addendum to the original contract.
- 15.3 Any undue delay by the Bidder in the performance of its delivery obligations shall render it liable to the imposition of liquidated damages.

16. PENALTIES LIQUIDATED DAMAGES

16.1 In case of late delivery, even for reasons beyond control, penalty as specified in SCC will be imposed upon the Bidder / Manufacturer. The Procuring Agency may consider termination of the Contract in case there is an unusual delay in the delivery of the goods whereby the ongoing activity is likely to be affected seriously.

17. TERMINATION FOR DEFAULT

17.1 The Procuring Agency may, without prejudice to any other remedy for breach of Contract, by a written notice of default sent to the Bidder, terminate this Contract in whole or in part if:

- (a) the Bidder fails to deliver any or all installments of the goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency;
- (b) the Bidder fails to perform any other obligation(s) under the Contract to the satisfaction of the Procuring Agency; and
- (c) the Bidder, in the judgment of the Procuring Agency, has engaged itself in corrupt or fraudulent practices before or after executing the Contract.

18. FORCE MAJEURE

18.1 The Bidder shall not be liable for forfeiture of its Performance Guaranty/ Bid Security, or termination / blacklisting for default if and to the extent that this delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure. For the purposes of this Clause Force Majeure means an act of God or an event beyond the control of the Bidder and not involving the Bidder's fault or negligence directly or indirectly purporting to mal-planning, mismanagement and /or lack of foresight to handle the situation. Such events may include but are not restricted to acts of the Procuring Agency in its sovereign capacity, wars or revolutions, fires, floods, earthquakes, strikes, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the Bidder shall promptly notify the Procuring Agency in writing with sufficient and valid evidence of such condition and the cause thereof. The Committee, constituted for redressing grievances, will examine the pros and cons of the case and all reasonable alternative means for completion of purchase order under the Contract and will submit its recommendations to the competent authority. However, unless otherwise directed by the Procuring Agency in writing, the Bidder shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek reasonable' alternative means for performance not prevented by the Force Majeure event.

19. TERMINATION FOR INSOLVENCY

19.1 The Procuring Agency may at any time terminate the Contract by giving written notice of one month time to the Bidder if the Bidder becomes bankrupt or otherwise insolvent. In that event, termination will be without compensation

to the Bidder, provided that such termination will not prejudice or affect any right or remedy which has accrued or will accrue thereafter to the Parties.

20. ARBITRATION AND RESOLUTION OF DISPUTES

20.1 The Procuring Agency and the Bidder shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the Contract.

20.2 If, after thirty (30) days from the commencement of such informal negotiations, the Procuring Agency and the Bidder have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred to the Arbitrator for resolution through arbitration.

20.3 In case of any dispute concerning the interpretation and/or application of this Contract is to be settled through arbitration, the arbitrator to be appointed with the approval of the University's Syndicate. The decisions taken and/or award given by the sole arbitrator shall be final and binding on the Parties.

21. PACKING

21.1 The Bidder 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.

21.2 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 Agency.

22. GOVERNING LANGUAGE

22.1 The Contract shall be written in English language. All correspondence and other documents pertaining to the Contract, which are exchanged by the Parties, shall be written in English.

23. APPLICABLE LAW

23.1 This Contract shall be governed by the laws of Pakistan and the courts of Karachi - Pakistan shall have exclusive jurisdiction.

C: NOTICE INVITING TENDER (NIT)

No. DUHS/DP/2018/-31-32 Dated 18 January 2018

Dow University of Health Sciences (DUHS), Karachi invites following bids on DDP / C&F basis from authorized Dealers / Distributors / Manufacturers, having registration with Federal Board of Revenue (FBR) for Income Tax and Sales Tax.

Name of Bid	Reference No.
Procurement of Radiology Equipment / Instruments and Ancillaries for Establishment of Trauma Center, BSL-3 Lab and Provision of Support Services	DUHS/DP/2018/31
Procurement of Radiology Equipment / Instruments and Ancillaries for Dow Institute of Radiology	DUHS/DP/2018/32

Tender Fee	Rs. 2,000/- (Rupees two thousand only) Non-Refundable in shape of Pay Order / Demand Draft in favor of Dow University of Health Sciences, Karachi
Bidding Procedure	Single Stage – Two Envelope
Bid Security	2% of the total bid value.
Purchasing Date & Time	24 January 2018 to 7 February 2018
Bids Delivery Date & Time	8 February 2018 at 11:00 a.m.
Bid Opening Date & Time	8 February 2018 at 11:30 a.m. In case of any unforeseen situation or government holiday resulting in closure of office on the date of opening, bids shall be submitted / opened on next working day at the given time.

Bidding document may be purchased by interested bidders on the submission of a written application, NTN, GST Certificates and Pay Order / Demand Draft of tender fee during office hours. Bidding Documents are also available at DUHS and SPPRA websites. Interested Bidders may obtain further information personally from 11:00 A.M. to 02:00 P.M.

Conditional Bids, Telegraphic Bids, Bids not accompanied by Bid Security of required amount and form, bids received after specific date and time and bids of Black Listed firms will be rejected.

The Dow University of Health Sciences, Karachi (DUHS) reserves the right to reject any or all the bids subject to the relevant provisions of SPP Rules 2010 (Amended 2013).

Director Procurement
Dow University of Health Sciences (Ojha Campus)
Procurement Directorate at Library Block,
SUPARCO Road, off Main University Road,
Gulzar-e-Hijri, Scheme No. 33, Karachi.
Phone No. + 92-21-99261497
Email: director.procurement@duhs.edu.pk

D: Bid Data Sheet

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

INTRODUCTION

- ITB 1.1** Name of Procuring Agency: Dow University of Health Sciences, Karachi.
- ITB 1.1** Name of Contract:
Procurement of Radiology Equipment / Instruments and Ancillaries for Dow Institute of Radiology

THE BIDDING PROCEDURE

- ITB 4.1** Bids shall be accepted under the **Single Stage - Two Envelope Procedure**.

PREPARATION OF BIDS

- ITB 7.1** Language of the bid shall be English
- ITB 9.6** **For the Goods offered within the Procuring Agency's Country:** the price quoted shall be on **delivered duty paid (DDP) Basis** at Consignee's End.
- For the Goods offered from Outside the Procuring Agency's Country:** the price quoted shall be on **CFR / C&F Karachi Basis**.
- ITB 10.1** **For the Goods offered within the Procuring Agency's Country:** the price quoted shall be in **Pak Rupees**.
- ITB 10.2** **For the Goods offered from Outside the Procuring Agency's Country:** the price quoted shall be in **Foreign Currency**.
- ITB 13.1** The Bid Security shall not be less than **2%** of the total Bid price in Pak Rupees.
- ITB 14.1** Bid validity period shall be **90 days**.
- ITB 15.1** If any bidder elects to submit alternative proposal(s), complete information on the alternative items including all data relating to technical specifications shall be provided.

SUBMISSION OF BIDS

ITB 16.1 (b) The identification of this bidding process is:
**Procurement of Radiology Equipment / Instruments and Ancillaries for
Dow Institute of Radiology
Bid Reference No. DUHS/DP/2018/32
NIT No. DUHS/DP/2018/-31-32 Dated 18 January 2018**

ITB 16.1 (c) Dow University of Health Sciences (Ojha Campus), Procurement Directorate at Library Block, SUPARCO Road, off Main University Road, Gulzar-e-Hijri, Scheme No. 33, Karachi.

“Must bear the name of the bidder” and a warning “Do Not Opened Before the time and date of bid opening”.

ITB 17.1 Deadline for bid submission: **8 February 2018 at 11:00 a.m.**

OPENING & EVALUATION OF BIDS

ITB 20.1 The bid opening shall take place at:
Dow University of Health Sciences (Ojha Campus), Procurement Directorate at Library Block, SUPARCO Road, off Main University Road, Gulzar-e-Hijri, Scheme No. 33, Karachi.

Date: **8 February 2018**
Time: **11:30 a.m.**

CONTRACT AWARD

ITB 31.1 Qty. could be increased or decreased during the contract period (including extended period) according to the actual requirement.

ITB 34.1 The successful Bidder shall furnish the Performance Security equivalent to 5% of the total Contract amount from any scheduled banks in shape of Pay Order / Demand Draft / Call Deposit / Bank Guarantee. The Performance Guarantee/Security Form is provided in the bidding documents. Upon submission of Performance Security / Guarantee the Bid Security would be returned to the Bidder.

E: Special Conditions of Contract (SCC)

1. DEFINITIONS (GCC CLAUSE 1)

GCC 1.1 (g) The Procuring Agency is the Dow University of Health Sciences, Karachi.

GCC 1.1 (h) The Bidder is: _____
(name and address of the successful bidder)

2. BID SECURITY (ITB CLAUSE 13)

ITB 13.1 The Bidder shall furnish, as part of its financial proposal/bid, refundable Bid Security in Pak Rupees @ 2% of the total bid value in the shape of Bank Draft / Pay Order / Call Deposit / Bank Guarantee in the name of the Dow University of Health Sciences, Karachi. The financial bid found deficient of the Bid Security will be rejected. No personal cheque in lieu thereof will be acceptable at any cost. The previous Bid Security, if any, will not be considered or carried forward. However, the Bid Security of the successful Bidder will be returned upon submission of Performance Security equal to 5% of the Contract amount that will remain with the Dow University of Health Sciences, Karachi till satisfactory completion of the Contract period. After delivery and acceptance of the Goods, the performance security shall be reduced to two (2) percent of the Contract Price to cover the Supplier's warranty obligations

3. INSPECTIONS, TESTS AND TRAINING (GCC CLAUSE 7)

GCC 7.1, 7.2 & 7.3 The goods received in the Dow University of Health Services, Karachi from the Bidder will be thoroughly inspected and examined by a Committee to make sure that the goods received conform to the specifications laid down in the bid documents and which have been approved by the Procurement Committee for procurement. The Committee will submit its inspection report, any deficiency pointed out by the Committee shall have to be rectified by the Bidder free of cost. The Bidder will be responsible to provide the Foreign and or Local Training to the University Staff for the specialized Equipment.

4. DELIVERY AND DOCUMENTS (GCC CLAUSE 8)

GCC Clause 8.1 *(a) For Goods from within the Procuring Agency's country:*

The Bidder shall provide the following documents at the time of delivery of goods to the Store / Warehouse of the Dow University of Health Sciences, Karachi for verification duly completed in all respects:

- i. Original copies of Delivery Note (Delivery Challan) (in duplicate) showing item's description, make, model, quantity as well as Lot Number, Batch Number, Registration Number, manufacturing and expiry dates (if applicable).
- ii. Original copies of the Bidder's invoices (in duplicate) showing warranty, item's description, make, model as well as Lot Number, Batch Number, Registration Number, manufacturing and expiry dates (if applicable) per unit cost, and total amount.
- iii. Original copies of the Sales Tax Invoices (where applicable) in duplicate showing item's description, quantity, per unit cost (without GST), amount of GST and total amount (with GST).
- iv. Manufacturer's or Bidder's warranty certificate.
- v. Inspection certificate issued by the nominated inspection committee along with Bidder's factory inspection report.
- vi. Certificate of origin.

(b) For Goods supplied from abroad as per INCOTERM CFR / C&F Karachi:

Details of shipping and documents to be furnished by the Bidder shall be:

Upon shipment, the Bidder shall notify the Procuring Agency and the Insurance Company by telex or fax or email the full details of the shipment, including Contract number, description of Goods, quantity, the vessel / flight, the Bill of Lading / Air Way Bill number and date, port of loading, date of shipment, port of discharge, etc. The Bidder shall send the following documents to the Procuring Agency, with a copy to the Insurance Company:

- i. 04 copies of the Bidder's invoice showing the description of the Goods, quantity, unit price, and total amount.
- ii. Original and 04 copies of the negotiable, clean, on-board bill of lading / air way bill marked "freight prepaid" and 04 copies of non-negotiable bill of lading / air way bill.
- iii. 04 copies of the packing list identifying contents of each package.
- iv. Insurance certificate.
- v. Manufacturer's or Bidder's warranty certificate.
- v. Inspection certificate, issued by the nominated inspection agency along with Bidder's factory inspection report.
- vi. Certificate of origin.

The Procuring Agency shall receive the above documents at least one week before arrival of the Goods at the port or place of arrival and, if

not received, the Bidder will be responsible for any consequent expenses.

5. INSURANCE (GCC CLAUSE 9)

GCC 9.1 The goods supplied under the Contract shall be on DDP / CFR / C&F basis at consignee's end under which risk will be transferred to the Procuring Agency only after it has taken delivery of the goods. Hence insurance coverage is Bidder's responsibility.

6. WARRANTY / GUARANTEE (GCC CLAUSE 12)

GCC 12.1 The goods shall be accompanied by manufacturer standard warranty / guarantee or 1 year, whichever is more.

GCC 12.2 The Procuring Agency shall promptly notify the Bidder in writing of any claims arising out of this warranty.

GCC 12.5 **The bidder shall separately quote the price of post warranty service contract inclusive of parts for 5 years (minimum) in term of %age for total contract value.**

7. PAYMENT (GCC CLAUSE 13)

GCC 13.1 The method and conditions of payment to be made to the Bidder under this Contract shall be as follows:

i. For Goods supplied from within the Procuring Agency's country:

- (a) Payment shall be made in Pak Rupees.
- (b) The payment will be made to the Bidder within 30 days of the receipt of original delivery challan(s) and invoice(s) in duplicate duly completed in all respect and signed and stamped by the Chairman of the Inspection Committee. The Inspection Committee will prepare and submit a report of physical inspection with a certificate to the effect that the goods conform to the specifications laid down in the bidding documents.

OR

ii. For Goods supplied from outside the Procuring Agency's country:

- (a) The Procuring Agency shall pay the Bidder or its Principal through irrevocable letter of credit opened in favor of the Bidder or Its Principal in a bank in its country, upon submission of all the requisite documents.
- (b) Bidder will bear all the additional bank charges inside and outside the Procuring Agency country on account of Confirmation of L/C, if he desire to establish a Confirmed L/C etc.

OR

iii. For Goods supplied from outside the Procuring Agency's country:

- (a) The Procuring Agency shall pay the Bidder or its Principal through **3 years deferred payment** by irrevocable letter of credit opened in favor

of the Bidder or Its Principal in a bank in its country, upon submission of all the requisite documents.

- (b) Bidder will bear all the additional bank charges inside and outside the Procuring Agency country on account of Confirmation of L/C, if he desire to establish a Confirmed L/C etc.

8. PENALTIES/ LIQUIDATED DAMAGES (GCC CLAUSE 16)

GCC 16.1 In case deliveries are not completed within the time frame specified in the schedule of requirements / contract, a Show Cause Notice will be served on the Bidder which will be following by cancellation of the Contract to the extent of non-delivered portion of installments. No supplies will be accepted and the amount of Performance Guarantee / Security to the extent of non-delivered portion of supplies of relevant installments will be forfeited. If the firm fails to supply the whole installments, the entire amount of Performance Guarantee/Security will be forfeited to the Government Account and the firm will be blacklisted at least for two years for future participation in bids:

The liquidated damage shall be 0.5 % per week or part thereof. The maximum amount of liquidated damages shall be 10% of the amount of contract. Once the cumulative amount of liquidated damages reaches ten percent (10%) of the amount of the contract, the Procuring Agency shall rescind the contract, without prejudice to other courses of action and remedies open to it.

9. "ARBITRATION" AND RESOLUTION OF DISPUTES (GCC CLAUSE 20)

GCC 20.3 Dispute resolution mechanism to be applied shall be as follows:

In case of any dispute concerning the interpretation and/or application of this Contract is to be settled through arbitration, the arbitrator to be appointed with the approval of the University's Syndicate. The decisions taken and/or award given by the sole arbitrator shall be final and binding on the Parties

10. PACKING (GCC CLAUSE 21)

GCC 21.1 The packing, marking and documentation within and outside the packages shall be as per manufacturer standards meeting the safety requirements of the goods.

12. GOVERNING LANGUAGE (GCC CLAUSE 22)

GCC 22.1 The language of this Contract shall be English.

11. APPLICABLE LAWS (GCC CLAUSE 23)

GCC 23.1 The Contract shall be governed by the Laws of Pakistan and the Courts of Pakistan shall have exclusive jurisdiction.

12. NOTICES

Procuring Agency's address for notice purposes:

Director Procurement
Dow University of Health Sciences (Ojha Campus)
Procurement Directorate at Library Block,
SUPARCO Road, off Main University Road,
Gulzar-e-Hijri, Scheme No. 33, Karachi.
Phone No. + 92-21-99261497
Email: director.procurement@duhs.edu.pk

Bidder's address for notice purposes:

Name of Bidder: _____

Name of Contact Person & Designation: _____

Phone No. _____

Fax No. _____

Mobile Phone No. _____

Email Address _____

F: Schedule of Requirements

1. SCHEDULE OF REQUIREMENTS

1.1 For Goods supplied from within the Procuring Agency's country (DDP Basis)

- i) The entire quantity of the ordered goods shall be delivered within **30 days** or earlier from the date of issuance of supply order / contract award.
- ii) The delivery period shall start from the date of contract signature.

1.2 For Goods supplied from outside the Procuring Agency's country (C&F / CFR / CNF / CPT Basis):

- i. The shipment of the items of Stores which are to be imported shall be started as early as possible (**preferable within 60 days**); the shipment schedule shall be submitted along with the offer, and shall be negotiable and subject to approval by the University.
- ii. The bidder must indicate in his offer the port **from where** the Stores will be **shipped**.
- iii. The delivery period shall start from the date of opening of letter of credit.

G: Technical Specifications

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
1.	<p>SINGLE PLANE DIGITAL ANGIOGRAPHY / INTERVENTIONAL SYSTEM</p> <p>The single-plane C-arm system for digital acquisition designed to meet the requirements of modern general angiography and interventional procedures with Flat Panel Detector.</p> <p>Consisting of:</p> <p><u>Positioning Arm:</u></p> <ul style="list-style-type: none"> • C-arm with motorized movements. Real time display of rotation angulations. The C-arm should have the possibility of head to toe coverage of the patient without repositioning the patient. • Right anterior oblique (RAO) /Left Anterior Oblique (LAO): +/- 120° or more. • Cranial / Caudal: Minimum + 50 / -45° or more (Capable of achieving Spider position). • Rotation speed 25° / sec. or more in LAO /RAO • Motorized parking (+ / - 120 deg. Motorized rotation of the C-arm) • Integrated, computer-aided collision monitoring / Protection • Programmable auto positioning of selected angulations. (50 or more programmable positions). • Variable source-to-detector distance between 90 cm and 120 cm <p><u>FLAT DETECTOR</u></p> <p>The high resolution dynamic flat panel detector with integrated detachable grid especially designed to fulfill the requirements for diagnostic and interventional cardiology & radiology.</p> <p>Size: Dedicated cardiac Flat Detector (30 cm x 40 cm) ;</p> <p>Pixel size: 190 µm or less</p> <p>Spatial resolution: 2.5 - 2.7 LP/mm or more.</p> <p>Fluoroscopy as well as image acquisition to be done in 16 bit digitization depth.</p> <p>Removable grid for dose saving in pediatric procedures. The grid to be preferably removed with push of a button</p> <p><u>PATIENT SUPPORT / TABLE</u></p> <ul style="list-style-type: none"> • Floor mounted examination table for angiography and interventions. • Motorized height adjustment with variable speed. Floating tabletop with longitudinal and transverse movements. • Left / right pivotal table rotation +/- 90 deg. or more • Patient weight bearing capacity 200 kg or more. Capability to handle additional load (100 kg) for CPR procedure. • Accessories • Arm cradles (pair), Unilateral armrest, Infusion bottle holder, <p><u>X-RAY GENERATOR</u></p> <ul style="list-style-type: none"> • Microprocessor based high frequency X-ray generator • Output Power 100 KW. Radiographic rating minimum 1000 mA at 100 KV. • The system should have capability of digital radiography and fluoroscopy. Should have capability of doing digital pulsed fluoroscopy at 10, 15 & 30 pulses / sec. • Maximum continuous fluoro output power to be 3 KW or more to ensure good image 	1 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>quality during fluoro at oblique angles.</p> <ul style="list-style-type: none"> • Shortest Exposure time of less than 1msec with automatic exposure control. • Should be capable of providing 250 mA or more current during digital pulsed fluoroscopy at small focus <p><u>X-RAY TUBE</u></p> <ul style="list-style-type: none"> • Triple focus X-ray tube with anode heat storage capacity of at least 3.2 MHU or better • Liquid bearing technology for longer durability and quiet operation. <p><u>DIGITAL IMAGING SYSTEM (ACQUISITION / FLUOROSCOPY)</u></p> <ul style="list-style-type: none"> • Acquisition, storage and display in 1024 X 1024X 12 bits. • Real time filtering, online edge enhancement, noise reduction (spatial filtration), pixel shift / remasking, and dynamic real time Pan / zoom. • Hard Disk/Magnetic Disk Capacity for storage of 25,000 frames with 1024X1024X 12 bits matrix • DICOM 3.0 with standard exchange media. • The system must have DICOM send & DICOM Query / Retrieve facility • Digital pulsed fluoroscopy with 7.5 or 10, 12.5 or 15 and 25 or 30 frames per second in 1024X1024X 10 bits or more. • Display of scene directory for easy selection of any image or scene from the examination room or control room • Radiation-free positioning of the primary and semi-transparent diaphragms by means of graphic display in the LIH (Last Image Hold). • Variable Copper filtration during fluoroscopy and acquisition for radiation protection from 0.1 mm to 0.9 mm Cu (at least 05 filters). • The selection of the Cu filters must be automatic by the system based on patient weight / absorption without any user interaction. • Display of the measured dose-area product and the calculated patient air kerma reference on the flat screen display in ceiling suspension • Monitoring of the skin entry dose, taking into account the geometric conditions of the system (device angulation, table position) to ensure that the skin entry dose applied to a specific region of the patient's body will not exceed a specified threshold. • The system to display the dose information in DICOM format after every examination. • Vessel analysis SW • Automatic positioning of the c-arm corresponding to reference image and vice versa. • Simultaneous display of fluoroscopy and reference images. • The system must have online image density (gray scale) correction i.e., Automatic online image density correction of dynamic scenes and single images for clear view in the bright and dark areas of the image. • X-ray optimization before fluoro with built-in intelligence by using c-arm and table position data to calculate before taking an acquisition. • Facility to review previous studies in the examination room from the patient's old CD. • The system should have the capability for retrieval of angio/CT/MR images back into the digital imaging system from the CDs and/or the network. 	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p><u>Controls of Digital Imaging System:</u> All controls of digital imaging system must be available in the examination as well as control room.</p> <p><u>CD / DVD recorder</u> CD/DVD drive for automatic digital image storing on CD-ROM for off-line data exchange in DICOM 3 format. The system must archive the images/scenes onto the CD in background, without blocking ongoing cine acquisition</p> <p><u>Networking</u> Network interface (100 BaseT) with the following integrated DICOM 3 services: DICOM Send, DICOM Storage Commitment (StC), DICOM Query and DICOM Retrieve</p> <p><u>Monitors for the System</u></p> <ul style="list-style-type: none"> • Active Matrix TFT monitors having high resolution • Monitors should be ceiling-mounted in the operating/examination room. • Two 19 inch active matrix digital TFT monitors (resolution min. 1024 x 1280) for live and reference images in the operating/examination room. Maximum brightness of the imaging monitors: 600 cd/m² OR one 30 inch large display for live and reference images (preferred); having 1600 x 2500 resolution and maximum luminance of 600 ad/m² • 19 inch monitor active matrix TFT monitor for live images in the control room. Maximum brightness to be 250 cd/m³ or more. • Data for display of system and table geometry, system messages as well as dose is to be displayed either on the imaging monitors or on a separate monitor integrated into the ceiling suspension system. <p><u>Physiological hemodynamic monitoring system must be quoted separately</u></p> <p>Multichannel (20 channels or more) to record at least 4 channels IBP. Surface ECG in any configuration and simultaneous 12 lead ECG, NIBP and SaO₂ measurement.</p> <ul style="list-style-type: none"> • The system must be complete with software for pediatric & adult, right / left heart, angio / valvular homodynamic examinations including functionality for homodynamic calculations such as gradients, valve areas, shunt. Including annotations and 12 channel ECG. • Digital display of all the parameters like IBP, Heart rate etc. It should be possible to print the waveforms simultaneously while acquiring the data in the background. • It should be possible to store the waveforms on the hard disk / CD of the physiological recording system. The system should include following: <ul style="list-style-type: none"> ○ 2 x invasive blood pressure reusable transducer. ○ Reusable interface for 12 lead ECG. ○ NIBP cuffs (2 Nos.) ○ Holder for mounting the IBP transducer alongside the patient table. • The system should have 40 GB or more hard disk for permanent storage. • Two color monitors 19 inch Active matrix TFT inside the control room. • One 19 inch monitor in the examination room that should be installed on the ceiling suspension with two monitors of imaging system. • DVD / CD writer for archiving of study data and wave form stored on the hard disk. 	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<ul style="list-style-type: none"> • Facility of freezing the homodynamic data and simultaneous recovery of recent data / compare stored data with current waveform. • Tableside control of the Haemodynamic system in the examination room (separate price to be offered). • Bi-directional communication between Haemodynamic system and Digital System of Main angio machine for transfer of patient demographic- and X-ray data such as Acquisition time, RAO/LAO angle, Cran./Caud. Angle, SID, Time of scene, Frame frequency, Total area dose and Fluoroscope time. <p>The Haemodynamic system must be from original manufacturer of angio system.</p> <p><u>Surgical shadow-less light ceiling suspended.</u> Ceiling suspended Lead Glass for Upper Body Radiation Protection Lower body radiation protection flaps</p> <p><u>1 x Fully programmable latest model contrast medium injector with 200 disposable syringes</u> Other Allied Accessories</p> <ul style="list-style-type: none"> • One Postscript level Network Laser Printer for taking image printouts on paper. This printer is to be connected with the Main Digital Imaging System. • Lead Glass Window size 5 x 3 feet. Pb equivalence 2 mm or better • Intercom for communication between control and exam room • Lead Apron with gonadal shielding and thyroid shielding Qty: 06 each • Lead goggles (fit over) light weight Qty: 06 • Accessories set for peripheral studies Qty: 01 Set <p>160 KVA UPS compatible for the whole system with back-up time of 10 minutes for flouro and cine acquisition (MGE, APC, and Chloride).</p> <p><u>POWER MANAGEMENT:</u></p> <ul style="list-style-type: none"> • 380V, 50HZ. <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With All other peripheral items like necessary printer. • Offer should be complete with installation, preparation of room, including distribution board ac and chiller according to the equipment's requirements. • Five year warranty with service and including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal Head office training center as per official training schedule. • Units which is offered should be substantiated with the list of installation at different 	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>sites other than Pakistan.</p> <ul style="list-style-type: none"> • The equipment offered should not be more than 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	
2.	<p>WHOLE BODY CT SCAN MACHINE 16-SLICE</p> <p>GENERAL: Latest Generation Whole Body CT Scanning machine for general purpose, multi-slice technology of 16 -Slice per rotation with helical/spiral scanning capabilities.</p> <p>GANTRY: Gantry Bore diameter 70 cm or more. Tilt at least + 30° from the normal position. Minimum scan length of the table should be 1500 mm. Spiral scan duration up to 100sec. FOV: Maximum field of view to be 50cm.</p> <p>X-RAY GENERATOR: The X -Ray generator should be of 50 KW or more. High frequency type generator. KV range selectable between 80KvP and 1 35kVP or more. Current range of 20mA to 400 mA or more.</p> <p>ROUTINE SCAN TIME: 0.5 Second or less for 360 degree scan.</p> <p>DETECTORS: Should be ultrafast solid state / ceramic detector, compatible with multi slice CT scanner. Low contrasts detestability of 5mm at contrast difference of 3HU (0.3%).</p> <p>SLICE THICKNESS/ COLLIMATION: Multiple slice thickness options, selectable with minimum slice thickness of 0.625mm to or better.</p> <p>X-RAY TUBE: Anode heat storage capacity should be at least 5.0 MHU or equivalent.</p> <p>COOLING SYSTEM: Water to water / oil / air heat exchanger for the dissipation of heat generated in the gantry.</p> <p>TABLE: Motorized table with weight bearing capability of 180 kg or more.</p> <p>HELICAL MODE: Full range of all helical / spiral studies / capabilities should be included.</p> <p>SYSTEM COMPUTER: Quad Core Xeon Processor 2.33GHz/64 Bit RISC or better with compatible software or better System architecture and operating system must be based on latest capacity. Multitasking and parallel processing CPU system with 64-bit word. Hard drive capacity should be 300 GB or more. Storage capacity should be 200,000 images or more.</p>	1 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>Access to raw data files and images should be available. Image zoom, pan, evaluation, measurement and annotation facilities should be present. Image reconstruction speed of 16 images / sec for 512 x 512 matrix. Real time MPR / Multi -planner reformatting. DVD/CDR/MOD storage device (re -writeable) should be available. Compatible keyboard.</p> <p>OPERATOR CONSOLE: High resolution flicker free LCD 19” or more color monitor of 1024 x 1024 or better display matrix with keyboard and mouse control. Intercom for patient monitoring and instructions. Lead Glass 5 x 3 feet</p> <p><u>Offer should be complete with following ancillaries.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With all other Peripheral items like printer, one viewing work station, one Work station complete with post processing capability and connectivity with the existing network. • C.T Injector • Offer should be complete with installation, preparation of room including light, distribution board AC and air-conditioning for the equipment. • Chiller according to equipment requirements. • Five-year warranty with service, including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • At least 4 to 6-week training of doctor at any English-speaking country hospital where the offered equipment is installed. • One Biomedical engineer should be trained at the Principal’s training center. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	
3.	<p>DIGITAL MAMMOGRAPHY UNIT WITH STEREO BIOPSY</p> <p>1. HIGH FREQUENCY X-RAY GENERATOR:</p> <ul style="list-style-type: none"> • 5 KW • 23 — 35 KV (1 KV STEPS}, better will be preferred • mAs range 5 - 500 mAs. • Exposure Time 4 - 6sec • Exposure Mode: Manual & Automatic (AEC). • Automatic Exposure mode should have automatic selection of Track, filter, kv and 	1 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>mAs. .</p> <ol style="list-style-type: none"> 2. C ARM with source to detector distance 65 cm or more. <ul style="list-style-type: none"> • Motorized Isocentric rotation • User defined Motorized compression device with safety release. • Rotation 160 - 180° 3. X-RAY TUBE WITH ROTATING ANODE <ul style="list-style-type: none"> • Tube type should be rotating with dual material anode preferred material would be Molybdenum, Rhodium, Vanadium Tungsten. Tube should comprise of all this material. • Four focal spot 0.1 & 0.3 and dual focus in each track preferred. • Anode heat storage capacity 162kHU or better. • System should have separate monitoring software for tube overload protection 4. COLLIMATION <ul style="list-style-type: none"> • Manual & Automatic. • Automatically switching light centering device. • Collimators should have at least two filters Molybdenum 0.03mm or better, and Rhodium 0.025mm. 5. DIRECT / INDIRECT CONVERSION FULLFIELD FLAT PANELDETECTOR 24 X 30 CM FORMAT. <ul style="list-style-type: none"> • DEPTH 14 -BIT or more • PIXEL PITCH: 100 X 100 μM and RESOLUTION: 3062 X 2394 PIXELS or better • DQE: 60 % or more 6. REMOVABLE GRID {RATIO 5:1, 30 LP/MM or better} <ul style="list-style-type: none"> • Should have motorized Grid • Should have Br east support for Geometric Magnification. 7. ACQUISITION WORKSTATION : <ul style="list-style-type: none"> • Intel /AMD Dual Core HP or Equivalent brand from original Manufacturer workstation. • Memory should be 2 GB RAM or better • Should be able to store up to 25,000 images or more. • 3 MP LCD Monitor Medical Grade. • Compression force display • Rotation Angle Display. • Breast Thickness display with Thickness Compensation Algorithm. • Processing Features should include: <ul style="list-style-type: none"> • Dose Calculation information /AGD [Average Glandular Dose) • Zoom & Pan • Magnifying glass • Flip, rotation of image. 	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<ul style="list-style-type: none"> • Inversion • Measurement and Annotation Tools. • Should have online/ built -in UPS for avoiding loss of information • (Recommended built in UPS from original Manufacturer for system safety and reliability) • Emergency Stop button <p>8. REPORTING WORKSTATION</p> <ul style="list-style-type: none"> • Latest workstation from the original manufacture with the undertaking that the same workstation having supplied with this machine all over the world and should be manufactured by the original Manufacturer of Digital Mammography system. • 2 Intel/AMD Xeon or Equivalent processor for High Density image processing. • Storage HDD 2 TB or more. _ • 32 GB RAM. Or more • DVD, /RW optical Device. • Workstation should have 19” 1 MP Medical for Patient and Report Management. • Dual 5 MP 21” Medical Grade Monitor for image Review. • The work station should be multimodality and should be able to review and analyze from other breast imaging modalities from ultrasound and MRI for Comprehensive Diagnosis should have the connectivity with the existing network • Dedicated Measurement tool for distance, area and angle measurement. • Should have free continuous zoom and quadrant zoom functions with panning and navigation zoom function. • Integrated reporting tool. • Zoom and Pan images. • Magnifying glass • Invert and graphical annotation through shapes. • Rotate or flip. • Should have ability to display Computer Aided Detection (CAD) markers for micro - calcification and markers. • Should have the ability to support CAD supported reports. • Should have DICOM functions (Print, Storage. Query & R e t r I e v e modality work list) <p>9. STEREO BIOPSY DEVICE</p> <ul style="list-style-type: none"> • Stereotaxy device should be easy to install and should be able to perform fine needle aspiration, core biopsy, vacuum assisted biopsy or hook wire placement. • Needle approach should be Automatic and Manual motor driven both. • Should have Vertical and lateral Approach for easy access to breast lesions. • Should have three axis in both Vertical and lateral Approach • Should provide phantom for Quality checks. • Should also include Stereotaxic positioner and paddle. • Should include lateral and vertical approach kit and metal guides <p>10. STANDARD ACCESSORIES :</p> <ul style="list-style-type: none"> • 24 x 30 cm compression paddles. 	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<ul style="list-style-type: none"> • 19 x 23 cm sliding compression paddle. • 24 x 30 cm flexible & sliding compression paddle • 19 x 23 cm flexible & sliding compression paddle • Wall mount stand for paddles & stereo device. • Gridless device for geometric variable • Magnification 1.5x and 2x. • Two pairs of compression foot paddle. • X-ray control push-button with extensible cable. • X—ray shield from original manufacturer integrated with acquisition console for protection. • Laser printer capable of printing of 10 x 12 and 14 x17 films with two packets of films for testing purpose. • Two set of special illuminators for viewing the mammograms. • Ups to run the whole system with minimum 20 min backup • Standard manuals, calibration equipment and quality control devices should be part of the system. • Lead apron, female and male should be provided at least 6 each • 2 magnifying glass hand mirrors for viewing <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 20 min. • With all other Peripheral items like printer, one viewing work station, one Work station complete with post processing capability and connectivity with the existing network. • Offer should be complete with installation, preparation of room including light, distribution board AC and air-conditioning for the equipment • Five-year warranty with service, including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices • The system should be upgradable to Advance applications 3D TOMOSYNTHESIS. • Application training in house two weeks by the application specialist at site. • At least 4 to 6-week training of doctor at any English-speaking country hospital where the offered equipment is installed. • One Biomedical engineer should be trained at the Principal’s training center. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be more than 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
4.	<p>DIGITAL FLUOROGRAPHY SYSTEM</p> <p><u>Image input</u> Continuous fluoroscopy:1024 × 1024 pixels @ 15 fps or more Radiographic image acquisition:1024 × 1024 pixels Maximum number of images: 150 images per examination or more</p> <p><u>Image storage</u> Hard Disk: 20,000 images or more Optical drive: DVD drive provision Cine view: Cine view with optional reference monitor (to be quoted as standard) Sub-display with main diagnostic display Suitable fluoroscopic image: New AEC; Auto-compensation by pixel value of ABC Digital compensation electronic filters</p> <p><u>Fluoroscopic function</u> Fluoroscopic image processing Dynamic recursive filter processing Last image hold processing Image vertical and lateral flip processing</p> <p><u>Fluorography function Images should be recorded on the hard disk and should be processed and Displayed on the monitor.</u> Digital single fluorography Digital sequential fluorography Sequence parameters to be preset.</p> <p><u>Radiographic image processing</u> Gray-scale processing Auto-window processing Spatial filter processing (edge enhancement, smoothing) Negative/positive reversal processing Magnification processing. Rotation Image vertical and lateral flip processing</p> <p><u>Display functions</u> Multi frame display Subdivided display Auto display shutter Graphics (letters, arrows, rectangles, ellipses)</p> <p><u>Filming</u> Laser imager interface: DICOM print connection Network communication DICOM storage DICOM print</p>	1 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p><u>Digital Radiography System</u></p> <ul style="list-style-type: none"> • TV camera <ul style="list-style-type: none"> – Image sensor: At least One-million-pixel CCD – Max. Frame rate: 30 fps, progressive scan – Number of bits: 14 bits depth • Image storage <ul style="list-style-type: none"> – Capacity of main hard disk 90,000 images or more - Capacity of mirror same as main hard disk <p><u>Monitor</u></p> <p>LCD size: 20 inches or more Color/monochrome: Color Resolution: 1600 × 1200 Laser Camera: Integrated DICOM interface supports printing from DICOM print modalities. 2ND STATION FOR RADIOGRAPHY.</p> <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With All other paraffin items like necessary printer. • Offer should be complete with installation, preparation of room, including distribution board ac and AC according your equipment’s requirements and five year warranty with service and including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal Head office training center as per official training schedule. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be more than 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	
5.	<p>DEXA SCAN</p> <ul style="list-style-type: none"> ○ 2d fan-bean system with better image quality in less time having following features: <ul style="list-style-type: none"> • Fan-Beam technology for excellent quality images in only 30 seconds for osteoporosis assessment. • A 4 linear, multi, array detector (64 x 4) elements each), ensuring excellent images quality and an optimal diagnosis. • Exam time of only 30 seconds per site or less. • Whole Body DXA Bone Densitometer Including: 	1 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<ul style="list-style-type: none"> - 2D-Fan Beam with X and Y kinematics - 256 detectors - X-ray source and detector - Windows XP OR upper based software o Data management software o Archiving system o Hip, Spine and Forearm, Hip comparison, o Whole Body o Scan combination of Hip and Spine o Lateral Spine BMD o DVA o Orthopedic o Pediatrics o Dicom push and print, Work list, Workstation o FRAX tool o Morphometry <ul style="list-style-type: none"> • Calibration phantom • Positioning accessories • Shipping crate o Including PC, Monitor, Printer& UPS. <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With All other peripheral items like necessary printer. • Offer should be complete with installation, preparation of room, including distribution board ac and A.C according your equipment's requirements and five year warranty with service and including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal Head office training center as per official training schedule. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be more than 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
6.	<p>ULTRASOUND COLOUR DOPPLER MACHINE FOR ECHOCARDIOGRAPHY</p> <p><u>GENERAL:</u></p> <ul style="list-style-type: none"> High end heavy duty Digital Beam Former trolley mounted color Doppler Ultrasound system with cardiac functionality. <p><u>DISPLAY:</u></p> <ul style="list-style-type: none"> High resolution 19 inches or more HD Resolution, wide angle visibility, Tilt able and swivel able LCD 11 inches or more tablet like touch screen <p><u>OPERATING MODES:</u></p> <ul style="list-style-type: none"> 2-D and M-modes, PW HPRF, CW, Color Doppler, Real Time Duplex mode, Real time Triplex Mode, Tissue Doppler, B-Flow/SMI, panoramic imaging and CRT programming protocols, system should have capability of sector matrix and single crystal probe. <p><u>CONTROL PANEL:</u></p> <ul style="list-style-type: none"> Alphanumeric keyboard with built-in trackball. Direct access to system function through dedicated keys. Indicator lights identify activated keys. Audio volume control. User selectable image magnification control. Adjustable transmit focusing control. Digital TGC <p><u>FRAME RATE:</u></p> <ul style="list-style-type: none"> Minimum 1400 frames per second (more are preferable) in 2-D mode and 500 frames per second (more are preferable) in Doppler mode. <p><u>MEASUREMENTS:</u></p> <ul style="list-style-type: none"> Complete (Adult & Peds) cardiac calculations including Z scores available in system Retrospective/Prospective saving of images and cine <p><u>CINE MEMORY:</u></p> <ul style="list-style-type: none"> Minimum cine memory for 1000 frames (more are preferable). <p><u>IMAGE VIEWING DEPTH:</u></p> <ul style="list-style-type: none"> 20-300mm or more for cardiac applications. <p><u>PROBES:</u></p> <ul style="list-style-type: none"> Multi frequency sector probes to minimum cover 3 to 5 MHz range for adults. Multi frequency sector probes to minimum cover 4 to 8 MHz range for pediatrics. Multi Frequency Linear Vascular probe to minimum cover 3 to 9 MHz range (Optional) Adult TEE Probe (Optional) Ped TEE Probe (Optional) 	2 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p><u>IMAGING MODES / TECHNIQUES:</u></p> <ul style="list-style-type: none"> • Tissue harmonic imaging for cardiac and vascular imaging, • Tissue Doppler imaging, • Tool for calculating deformation and rate of deformation of the tissue, visualization of small vessels, velocity of myocardial segments, real time myocardial systolic displacement, wider field of view with phased array probe • Steerable M-Mode • System should be capable to set Stress Protocols • Customizable automation that help the user through each step of the scan • Tool for comprehensive reporting in system • Compatibility with adult and pediatric TEE Probe • Spectral Tracking • Auto EF • Stress strain imaging <p><u>STORAGE, INTERFACES AND EXTERNAL OUTPUT:</u></p> <ul style="list-style-type: none"> • Audio & Video out • Multiple USB ports • LAN connectivity. • System should possess different file format like MPEG, AVI, DICOM, JPEG for storage and export. • Built in DVD writer. • Built stand by battery with backup time of minimum 15 minutes for uninterrupted scanning of patients (UPS is separate) <p><u>ACCESSORIES:</u></p> <ul style="list-style-type: none"> • B&W Thermal Printer • On line (pure sine wave) UPS for minimum 25 minutes back up time for complete unit including for workstation <p><u>Mandatory Options:</u></p> <ul style="list-style-type: none"> • DICOM 3.0 Complete image storage, Print, Query, Retrieve, Data and Imaging flow, Network communication. <p><u>INTERNATIONAL QUALITY AND SAFETY STANDARDS:</u></p> <ul style="list-style-type: none"> • ISO 9000 • FDA/CE <p><u>POWER MANAGEMENT:</u></p> <ul style="list-style-type: none"> • 220V, 50HZ. <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With All other peripheral items like necessary printer. • Offer should be complete with installation, preparation of room, including distribution board ac and According equipment's requirements and five-year warranty including 	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>transducers.</p> <ul style="list-style-type: none"> • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p>NOTE:</p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal Head office training center as per official training schedule. • Units which is offered should be substantiated with the list of installation at different sites other than • The equipment offered should not be more than 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	
7.	<p>DIGITAL HIGH END COLOR DOPPLER</p> <p>Color Doppler with more than 192 transmitting channels with 12 -Bit A/D Conversion Fully Digital Beam former having 2D / M -Mode and Doppler Facilities, (PW, HPRF, & Color Flow Imaging) with High Resolution Imaging Doppler Signal Quality; having DICOM Compatibility and Upgradeable to CW and 4D Imaging in Convex, Linear and Endocavity Probe.</p> <ol style="list-style-type: none"> 1. B-MODE Specification: <ol style="list-style-type: none"> a) Sector Scan Angle Variable in Four Steps. b) Viewing Depth: 30 cm Minimum (Both in B & W and Color). c) Frame Rate: 1000 f/sec or more d) Built-in cine loop with ability to vary reverse and slow motion of display; Internal Memory 2000 or more Color Images or more/ Equivalent. e) Real time and Freeze Image Magnification at least 10X or more with panning for Real, Freeze and Memorized Images. 2. M-mode specification: <ol style="list-style-type: none"> a) Magnification: X2 or more. b) Sweep Speed: Slow, Medium and Fast. c) Color Display of M -Mode. 3. D-mode specification: <ol style="list-style-type: none"> a) Pulse -Wave Doppler Measureable Velocity Range. b) HPRF Doppler. c) CONTINUOUS -WAVE DOPPLER: d) Measurable Velocity Range: Steerable. e) Must have Doppler Beam Steering and Bi -Directional Stereo -Audio. f) Colorized Spectrum Display. g) Automatic Baseline and Velocity Range Control. h) Live Measurements for Doppler Spectrum. 	11 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>i) Min. detectable velocity range 0.05 /cm or less for low flow velocity blood vessels.</p> <p>4. Color doppler mode specifications:</p> <ul style="list-style-type: none"> a) Both CW and PW Doppler must be Continuous Steerable in the ColorBlood Flow Image Mode in Real Time. b) 2D Image with Color, CW and PW Doppler. c) Windows based System for easy usage with Programmable ControlPanel Keys. d) Tissue Harmonic Imaging with 4THI or more Frequency. e) Power Doppler. f) -Triplex Mode for Simultaneous Display of Color B/M and D-ModeDisplays. g) 200 db system dynamic range or more. <p>5. Measurement package: To provide Comprehensive Software Package for Measurement of Distance, Circumference, Area, Time Depth, ANGLE, IMT, Velocity, Frequency, Heart Rate, Volumes, Nuchal Thickness/ Measurement Software to be Provided as a Standard.</p> <p>6. System complete e with following facilities and accessories:</p> <ul style="list-style-type: none"> - 19-Inches Minimum TFT / LED Color Monitor, with Resolution 1280 x1024 Pixels minimum. - Foot-Switch. - 4 Active Transducer Connector for Tran thoracic Probes DVD / CDDrive for Image Storage to be Built -in to the System. - 500 GB or more Hard Disk Drive to be Built-in to the System. - Built-in DICOM Compatibility. (3.0 with all components) - Touch Command Screen Control at least 10 -inches LCD / TFT. - Full DICOM (Upgradable) <p>7. Upgradeability:</p> <ul style="list-style-type: none"> - System Software must be Upgradable. <p>8. Standard probes:</p> <ul style="list-style-type: none"> - 2–6 MHz Multi -Frequency Single Crystal Convex Probe forB/M/CDI/PW and Shearwave Elastography. - 5-9 MHz Multi -Frequency Linear Probe with shearwaveelastography. - TVS/ENDOCAVITORY Color PROBE - 7-14 MHz Multi -Frequency Linear Probe for B/M/CDI/PW(OPTION) <p>NOTE: Probes should be of same Country of Manufacturer & Origin as main unit</p> <p>9. Standard recording devices:</p> <ul style="list-style-type: none"> - Thermal Paper Printer with fifty Rolls of Paper (Black & White) withHD - CINEWAVE UPS Online with 30 minutes back up time for the System. - IMPORTED <p>10. Tissue Doppler Imaging Mode.</p> <p>11. Pure Wave / Pulse Inversion / Differential Tissue Harmonic Imaging to Enhance Effective Wide Band Frequency Range to provide Simultaneously Spatial Resolution, Contrast</p>	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>Resolution and increased Penetration using Two Transmission Pulses at Different Frequencies Simultaneously and Reception at Harmonic as well as Differential Component.</p> <p>12. Auto Image Optimization / Quick Scan Imaging for Automatic STC / GAIN and Doppler Spectrum Adjustment with Optimal Image Quality by using One Touch Operation.</p> <p>13. B -Flow / Dynamic Flow Imaging / E -Flow.</p> <p>14. Trapezoid Imaging / Virtual Convex Imaging with Linear Probe .</p> <p>15. Compound / Aplipure Imaging for THI/both Frequency Compounding and Spatial Compounding in B/W and Color Mode.</p> <p>16. Panoramic / SIESCAPE / Logic view Imaging with Measurements.</p> <p>17. TISSUE CONTRAST ENHANCEMENT SOFTWARE/SPECTRAL REDUCTION</p> <p>18. N-Sight / Adaptive Suppression / Precision Imaging /Cross beam to Enhance B -Mode Imaging, Xress/Ccare/or equivalent Detailed in Layers and Boundaries and Sharpened Outlines of the Lesions and reduce Cluttering.</p> <p>19. Micro CPA / Superb Micro Imaging/vascular enhancement Color/spectral to Clearly Show Blood Flow in tiny Vessels,</p> <p>20. Shear wave Elastography with Quantification for body Organs specially</p> <p>21. Liver with Convex & Linear Probes to visualize Tissue Stiffness by Generating Images through Shear Wave Propagation.</p> <p>22. Live Strain Rate Elastography with Quantification for Body Organs Specially Breast to Visualize Lesions.</p> <p>23. Contrast Harmonic Imaging Upgradable.</p> <p>24. Fusion Imaging of CT / MRI 3D Volume DATA to Synchronize with Ultrasound Imaging. Complete with Hardware /NEEDLE NAVIGATION WITH TRACKING SYSTEM & Software Upgradable.--OPTION</p> <p>25. Voltage : 220V – 240V, 50 – 60 HZ</p> <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With All other peripheral items like necessary printer. • Offer should be complete with installation, preparation of room, including distribution board ac and AC according to equipment’s requirements and five year warranty with service and including probes • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal Head office training center as per official training schedule. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be more than 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. 	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
8.	<p>DIGITAL MEDIUM RANGE COLOR DOPPLER</p> <p>Color Doppler with more than 192 transmitting channels with 12 -Bit A/D Conversion Fully Digital Beam former having 2D / M -Mode and Doppler Facilities, (PW, HPRF, & Color Flow Imaging) with High Resolution Imaging Doppler Signal Quality; having DICOM Compatibility and Upgradeable to CWand 4D Imaging in Convex, Linear and Endocavity Probe.</p> <p>1) B-MODE Specification:</p> <ol style="list-style-type: none"> a) Sector Scan Angle Variable in Four Steps. b) Viewing Depth: 30 cm Minimum (Both in B & W and Color). c) Frame Rate: 1000 f/sec or more d) Built-in cine loop with ability to vary reverse and slow motion of display; Internal Memory 2000 or more Color Images or more/ Equivalent. e) Real time and Freeze Image Magnification at least 10X or more with panning for Real, Freeze and Memorized Images. <p>2) M-MODE SPECIFICATION:</p> <ol style="list-style-type: none"> a) Magnification: X2 or more. b) Sweep Speed: Slow, Medium and Fast. c) Color Display of M -Mode. <p>3) D-MODE SPECIFICATION:</p> <ol style="list-style-type: none"> a)Pulse -Wave Doppler Measureable Velocity Range. b)HPRF Doppler. c)CONTINUOUS -WAVE DOPPLER: <ul style="list-style-type: none"> - Measurable Velocity Range: Steerable. - Must have Doppler Beam Steering and Bi -Directional Stereo -Audio. d)Colorized Spectrum Display. e)Automatic Baseline and Velocity Range Control. f) Live Measurements for Doppler Spectrum. g) Min. detectable velocity range 0.05/cm or less for low flow velocity bloodvessels. <p>4) COLOR DOPPLER MODE SPECIFICATIONS</p> <ul style="list-style-type: none"> • Both CW and PW Doppler must be Continuous Steerable in the Color Blood Flow Image Mode in Real Time. • 2D Image with Color, CW and PW Doppler. • Windows based System for easy usage with Programmable Control Panel Keys. • Tissue Harmonic imaging with 4 THI or more Frequency. • Power Doppler. • Triplex Mode for Simultaneous Display of Color B/M and D-Mode Displays. • 200 db system dynamic range or more. <p>5) MEASUREMENT PACKAGE:</p> <p>To provide Comprehensive Software Package for Measurement of Distance, Circumference, Area, Time Depth, ANGLE, IMT, Velocity, Frequency, Heart Rate,</p>	3 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>Volumes, Nuchal Thickness/ Measurement Software to be Provided as a Standard.</p> <p>6) SYSTEM COMPLETE WITH FOLLOWING FACILITIES AND ACCESSORIES:</p> <ul style="list-style-type: none"> • 19-Inches Minimum TFT / LED Color Monitor, with Resolution 1280 x1024 Pixels minimum. • Foot-Switch. • 3 Active Transducer Connector for Tran thoracic Probes DVD / CD Drivefor Image Storage to be Built -in to the System. • 500 GB or more Hard Disk Drive to be Built-in to the System. • Built-in D ICOM Compatibility. (3.0 with all components) • Touch Command Screen Control at least 10 -inches LCD / TFT. • Full DICOM (Upgradable) <p>7) UPGRADEABILITY</p> <ul style="list-style-type: none"> - System Software must be Upgradable. <p>8) STANDARD PROBES:</p> <ul style="list-style-type: none"> - 2–6 MHz Multi -Frequency Single Crystal Convex Probe for B/M/CDI/PW. - 5-9 MHz Multi -Frequency Linear Probe for vascular studies. - TVS/ENDOCAVITORY Color PROBE - 7-14 MHz Multi -Frequency Linear Probe for B/M/CDI/PW <p>NOTE: Probes should be of same Country of Manufacturer & Origin as main unit</p> <p>9) STANDARD RECORDING DEVICES:</p> <ul style="list-style-type: none"> - Thermal Paper Printer with fifty Rolls of Paper (Black & White). WITH HD - CINEWAVE UPS Online with 30 minutes back up time for the System. <p>10) Tissue Harmonic imaging without contrast with 4 harmonic frequencies.</p> <p>11) Pure Wave / Pulse Inversion / Differential Tissue Harmonic Imaging or similar.</p> <p>12) Auto Image Optimization / Quick Scan Imaging for Automatic STC / GAIN and Doppler Spectrum Adjustment with Optimal Image Quality by using One Touch Operation.</p> <p>13) B-Flow / Dynamic Flow Imaging / E -Flow clarify for low flow vessels imaging.</p> <p>14) Trapezoid Imaging / Virtual Convex Imaging with Linear Probe.</p> <p>15) Compound / Aplipure Imaging for THI/both Frequency Compounding and Spatial Compounding in B/W and Color Mode.</p> <p>16) Panoramic / SIESCAPE / Logic view Imaging with Measurements.</p> <p>17) Fusion Imaging of CT / MRI 3D Volume DATA to Synchronize with Ultrasound Imaging. Complete with Hardware /NEEDLENAVIGATION WITHTRACKING SYSTEM & Software Upgradable. (OPTION)</p> <p>18) Voltage: 220V – 240V, 50 – 60 HZ</p> <p>SYSTEM MUST HAVE FDA AND CE.</p>	

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With All other Peripheral items like printer. • Offer should be complete with installation, preparation of room, including distribution board AC and chiller according to equipment requirements. • Five year warranty with service. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal's training center. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. 	
9.	<p>STATIC X -RAY MACHINE WITH DR SYSTEM</p> <ul style="list-style-type: none"> • Microprocessor based. • High frequency, 50KW X -Ray generator. • 1000 mA a/ 150 kv • Anatomical programmed radiography. • Digital display of all set parameters. • Rotating anode x -ray tube, with dual focus 0.6 & 1.2 mm. Anode heat storage capacity of at least 300 KHU or more electronic timer with exposure time of 1 msec. • System with AEC facility. • Ceiling mounted with three directional movement • Capable of lateral radiography. • 6-way floating table • Chest Stand with Bucky's • Complete with grid 12.1 ratio. • Automatic over -load protection device and automatic line compensation. • 3 Phase 380V 50Hz <p>DIGITAL RADIOGRAPHY SYSTEM</p> <p>Detector</p> <ol style="list-style-type: none"> a) Digital Flat Panel Detector, scintillator & amorphous silicon glass. b) Scintillator Csi c) Pixel size (µm) 125 x 125 µm or better d) Matrix 2800 x 3408 or better e) Analog to Digital 14 bits. f) Grey scale 4096 grey scale. 	4 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>g) Electric Shock proof. h) Size 35cmx43cm (14 inch x 17 inch). i) Detector weight 3.1 Kg.</p> <p>Operator Console / Main Console</p> <p>a) Workstation Console. b) 21 inch Medical Grade monitor. c) Key board. d) Image preview within 3 to 5 Seconds. e) Processor 3GHz. f) RAM 2GB. g) HDD for Data storage 1 TB h) The system is capable of entering patient ID through Hospital management System (HMS / Radiology Information System (RIS).</p> <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With all other Peripheral items like printer, one viewing work station, one Work station complete with post processing capability and connectivity with the existing network. • C.T Injector • Offer should be complete with installation, preparation of room including light, distribution board AC and air-conditioning for the equipment. • Chiller according to equipment requirements. • Five year warranty with service, including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal's training center. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	
10.	<p>STATIC X -RAY MACHINE WITH CR SYSTEM</p> <ul style="list-style-type: none"> • Microprocessor based. • High frequency, 50KW X -Ray generator. • 1000 mA a/ 150 kv • Anatomical programmed radiography. • Digital display of all set parameters. • Rotating anode x -ray tube, with dual focus 0.6 & 1.2 mm. Anode heat storage capacity of at least 300 KHU or more electronic timer with 	1 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>exposure time of 1 msec.</p> <ul style="list-style-type: none"> • System with AEC facility. • Ceiling mounted with three directional movement • Capable of lateral radiography. • 6-way floating table • Chest Stand with Bucky's • Complete with grid 12:1 ratio. • Automatic over-load protection device and automatic line compensation. • 3 Phase 380V 50Hz <p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With all other Peripheral items like printer, one viewing work station, one Work station complete with post processing capability and connectivity with the existing network. • C.T Injector • Offer should be complete with installation, preparation of room including light, distribution board AC and air-conditioning for the equipment. • Chiller according to equipment requirements. • Five year warranty with service, including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at the Principal's training center. • Units which is offered should be substantiated with the list of installation at different sites including Pakistan. • The equipment offered should not be 3 years old. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	
11.	<p>MOBILE X-RAY UNIT</p> <p>Mobile Microprocessor based X -Ray Unit. High frequency, 30KW X -Ray Generator. 300 mA at 100 kv Digital display of all set parameters. Rotating anode x -ray tube, with dual focus / Single Focus Anode heat storage capacity of at least 107 KHU or more Electronic timer with exposure time of 1 -3 msec. Automatic over -load protection device and automatic line compensation. The unit should be battery supported for exposure 220 V, 50 Hz.</p>	2 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p><u>Offer should be complete with following.</u></p> <ul style="list-style-type: none"> • UPS with complete unit for 10 min. • With All other paraffin items like necessary printer. • Offer should be complete with installation, preparation of room, including distribution board ac and chiller according your equipment requirements and five year warranty with service and including tube and detector with unlimited exposures. • The bidder shall separately quote the price of post warranty service contract with parts and without parts for 5 years (minimum) in term of %age for finally negotiated value. <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • All latest applications should be quoted as optional with separate prices. • Application training in house two weeks by the application specialist at site. • One Biomedical engineer should be trained at local training center. • Units which is offered should be substantiated with the list of installation at different sites other than Pakistan. • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	
12.	<p>PRINTER</p> <p>DICOM 3.0 compliant Grayscale Dry LASER Printer with 3 online sizes. Should have minimum productivity of 150 films/ hour in mixed sizes. Printer should be capable of printing 08x10, 10x12, 11x14, 14x14 & 14x17 size films. Minimum resolution should be 10 pixels/mm with 12-bit gradation. 80 Sheets Per Hour. Printers should connect with mammography. Warranty: 5 year warranty with parts and accessories.</p> <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	6 Nos.
13.	<p>CR SYSTEMS</p> <p>Reading gray scale “12 Bits” Warranty: 5 year warranty with parts and accessories.</p> <p><u>NOTE:</u></p> <ul style="list-style-type: none"> • Clearly mention country of origin of company and country of manufacturing of offering equipment. <p>Country of Origin: USA / Japan / Europe</p>	6 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
14.	DOSIMETER Prime Quality	8 Nos.
15.	TLD BADGES Prime Quality	80 Nos.
16.	CASSETTES WITH IPS SIZE 14 X 17 Prime Quality	30 Nos.
17.	CASSETTES WITH IPS SIZE 10 X 12 Prime Quality	20 Nos.
18.	CASSETTES FOR MAMMO WITH IPS SIZE 08 X 10 Prime Quality	10 Nos.
19.	CASSETTES WITH IPS SIZE 10 X 12 Prime Quality	10 Nos.
20	LEAD APRON WITH THYROID SHIELDING Prime Quality Large Size: 4 Nos. Medium Size: 8 Nos. Small Size: 7 Nos.	1 Set

2. (a) **PRICE SCHEDULE IN PAK RUPEES delivered duty paid (DDP BASIS)**

FOR GOODS OFFERED WITHIN THE PROCURING AGENCY'S COUNTRY

S#	Detailed Specification of Goods	Model / Cat No.	Name of Manufacturer	Country of Origin	Port of Shipment	Quantity of Stores	Unit	Rate Per Unit	Total Price
1	2	3	4	5	6	7	8	9	10
Total Amount in Pak Rs.									

Name _____

In the capacity of _____

Signed _____

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

Date _____

NOTE:

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

2. (B) PRICE SCHEDULE IN FOREIGN CURRENCY (CFR / C&F BASIS)

FOR GOODS OFFERED FROM OUTSIDE THE PROCURING AGENCY'S COUNTRY

S#	Detailed Specification of Goods	Model / Cat No.	Name of Manufacturer	Country of Origin	Port of Shipment	Quantity of Stores	Unit	Currency	Rate Per Unit	Total Price
1	2	3	4	5	6	7	8	9	10	11
Total Amount in Foreign Currency										

Name _____

In the capacity of _____

Signed _____

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

Date _____

NOTE:

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