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SINDH AGRICULTURE UNIVERSITY **TANDOJAM**



BIDDING DOCUMENT

**Establishment of Khairpur College of Agriculture & Management Sciences,
Khairpur Mir's (Constituent College of SAU Tandojam)**

Single Stage-One Envelope Procedure

NIT No. PD-SAU-2024/ 217, Dated: 22/02/2024

**PROCUREMENT FOR SUPPLYING/INSTALLATION/COMMISSIONING OF AGRICULTURE LAB AND
OTHER EQUIPMENT AT KHAIRPUR COLLEGE OF AGRICULTURE & MANAGEMENT SCIENCES,
KHAIRPUR MIR'S.**

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PART - ONE

SECTION-I

INSTRUCTION TO BIDDERS

A-INTRODUCTION

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| ITB-1 | Source of Funds: | 1.1 The procuring agency received an approved project in which there is a component of " Equipment ", from which the funds will be utilized. |
| ITB-2 | Eligible Bidders: | <p>2.1 This Invitation for Bids is open to all suppliers from eligible source as defined in the SPP Rules-2010 (Amended 2019) and its Bidding Documents except as provided hereinafter.</p> <p>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 that have been engaged by the Procuring agency 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.</p> <p>2.3 Government-owned enterprises in the Province of Sindh 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 Government of Sindh.</p> <p>2.4 Bidders shall not be eligible to bid if they are under a declaration of ineligibility for corrupt and fraudulent practices issued by the any government organization in accordance with sub clause 34.1</p> |
| ITB-3 | Eligible Goods and Services: | <p>3.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries, defined in the SPP Rules-2009 and its Bidding Documents and all expenditures made under the contract will be limited to such goods and services.</p> <p>3.2 For purposes of this clause, "origin" means the place where the goods are mined, grown, or produced, or the place from which the related services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially-recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.</p> <p>3.3 The origin of goods and services is distinct from the nationality of the Bidder.</p> |
| ITB-4 | Cost of Bidding: | 4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring agency named in the Bid Data Sheet, hereinafter referred to as the Procuring Agency will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process (SPP Rules 24 & 25). |

B-BIDDING DOCUMENTS

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| ITB-5 | Contents of Bidding Document: | <p>5.1 The bidding document includes:
 Instructions to Bidders (ITB)
 Bid Data Sheet
 General Conditions of Contract (GCC)
 Special Conditions of Contract (SCC)
 Schedule-A (Schedule of Prices/Bill of Quantities BoQ)
 Schedule-B (Schedule of Requirements)
 Technical Specifications</p> <p>5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's own risk and may result in the rejection of its bid.</p> |
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- ITB-6 Clarification of Bidding Documents: 6.1 An interested Bidder requiring any clarification of the bidding documents may notify the Procuring agency in writing. The Procuring agency will respond in writing to any request for clarification of the bidding documents which it receives no later than five working days prior to the deadline for the submission of bids prescribed in the Bid Data Sheet (SPP Rule 23.1). Written copies of the Procuring agency's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all interested bidders that have received the bidding documents.
- ITB-7 Amendment of Bidding Documents: 7.1 At any time prior to the deadline for submission of bids, the Procuring Agency, for any reason, whether at its own initiative or in response to a clarification requested by an interested Bidder, may modify the bidding documents by amendment.
- 7.2 All interested bidders that have received the bidding documents will be notified the amendment in writing and will be binding on them.
- 7.3 In order to allow interested bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring Agency at its discretion, may extend the deadline for the submission of bids.

C-PREPARATION OF BIDS

- ITB-8 Language of Bid: 8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring agency shall be written in the language specified in the Bid Data Sheet. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the Bid Data Sheet, in which case, for purposes of interpretation of the Bid, the translation shall govern.
- ITB-9 Documents Comprising the Bid: 9.1 The bid prepared by the Bidder shall comprise the following components:
- (a) Covering Letter
 - (b) A Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11, and 12,
 - (c) Documentary evidence established in accordance with ITB Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted,
 - (d) Documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bidding documents, and
 - (e) Bid security furnished in accordance with ITB Clause 15.
- ITB-10 Bid Form: 10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.
- ITB-11 Bid Prices: 11.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.
- 11.2 Prices indicated on the relevant Price Schedule shall be delivered duty paid (DDP) prices. The price of other (incidental) services if any, listed in the Bid Data Sheet will be entered separately.
- 11.3 The Bidder's separation of price components in accordance with ITB Clause 11.2 above will be solely for the purpose of facilitating the comparison of bids by the Procuring agency and will not in any way limit the Procuring agency's right to contract on any of the terms offered.
- 11.4 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet. A bid submitted with an adjustable price

quotation will be treated as nonresponsive and will be rejected, pursuant to ITB Clause 24. If, however, in accordance with the Bid Data Sheet, prices quoted by the Bidder shall be subject to adjustment during the performance of the contract, a bid submitted with a fixed price quotation will not be rejected, but the price adjustment would be treated as zero.

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| ITB-12 | Bid Currencies: | 12.1 | Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet. |
| ITB-13 | Documents Establishing Bidder's Eligibility and Qualification: | 13.1 | Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted. |
| | | 13.2 | The documentary evidence of the Bidder's eligibility to bid shall establish to the Procuring agency's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 2. |
| | | 13.3 | 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: <ul style="list-style-type: none"> (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 Supplier's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and (d) That the Bidder meets the qualification criteria listed in the Bid Data Sheet. |
| ITB-14 | Documents Establishing Goods' Eligibility and Conformity to Bidding Documents: | 14.1 | Pursuant to ITB Clause 9, 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. |
| | | 14.2 | The documentary evidence of the eligibility of the goods and services shall consist of a statement in the Price Schedule of the country of origin of the goods and services offered which shall be confirmed by a certificate of origin issued at the time of shipment. |
| | | 14.3 | The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and data, and shall consist of: <ul style="list-style-type: none"> (a) a detailed description of the essential technical and performance characteristics of the goods. (b) a list giving full particulars, including available sources and current prices of spare parts, special tools, etc. necessary for the proper and continuing functioning of the goods for a period to be specified in the Bid Data Sheet, following commencement of the use of the goods by the Procuring agency, and Specifications demonstrating substantial responsiveness of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications. |
| | | 14.4 | For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procuring 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. |

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| ITB-15 | Bid Security | <p>15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount specified in the Bid Data Sheet.
The bid security may be forfeited:</p> <ul style="list-style-type: none"> (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form. or (b) in the case of a successful Bidder if the Bidder fails: <ul style="list-style-type: none"> (i) to sign the contract in accordance with ITB Clause 32, or (ii) to furnish performance security in accordance with ITB Clause 33. <p>15.2 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7.</p> <p>15.3 The bid security shall be in Pak. Rupees and shall be in one of the following forms:</p> <ul style="list-style-type: none"> (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding documents or another form acceptable to the Procuring agency and valid for thirty (30) days beyond the validity of the bid; or (b) Irrevocable en-cashable on-demand Bank call-deposit. <p>15.4 Any bid not secured in accordance with ITB Clauses 15.1 and 15.3 will be rejected by the Procuring agency as nonresponsive, pursuant to ITB Clause 24.</p> <p>15.5 Unsuccessful bidder's bid security will be discharged or returned as promptly as possible but not later than thirty (30) days after the expiration of the period of bid validity prescribed by the Procuring agency pursuant to ITB Clause 16.</p> <p>15.6 The successful Bidder's bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 32, and furnishing the performance security, pursuant to ITB Clause 33.</p> <p>15.7 The bid security may be forfeited:</p> <ul style="list-style-type: none"> (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form. (b) in the case of a successful Bidder if the Bidder fails: <ul style="list-style-type: none"> (i) to sign the contract in accordance with ITB Clause 32, or (ii) to furnish performance security in accordance with ITB Clause 33. |
| ITB-16 | Period of Validity of Bids: | <p>16.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Procuring agency, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Procuring agency as nonresponsive.</p> <p>16.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided under ITB Clause 15 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid, except as provided in the bidding document.</p> |
| ITB-17 | Format and Signing of Bid: | <p>17.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall govern.</p> <p>17.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.</p> <p>17.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.</p> <p>17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.</p> |

D-SUBMISSION OF BIDS

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| ITB-18 | Sealing and Marking of Bids: | <p>18.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as “ORIGINAL” and “COPY.” The envelopes shall then be sealed in an outer envelope.</p> <p>18.2 The inner and outer envelopes shall:</p> <ul style="list-style-type: none"> (a) be addressed to the Procuring agency at the address given in the Bid Data Sheet, and (b) bear the Project name indicated in the Bid Data Sheet, the Invitation for Bids (IFB) title and number indicated in the Bid Data Sheet, and a statement: “DO NOT OPEN BEFORE,” to be completed with the time and the date specified in the Bid Data Sheet, pursuant to ITB Clause 2.2. <p>18.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared “late”.</p> <p>18.4 If the outer envelope is not sealed and marked as required by ITB Clause 18.2, the Procuring agency will assume no responsibility for the bid’s misplacement or premature opening.</p> |
| ITB-19 | Deadline for Submission of Bids: | <p>19.1 Bids must be received by the Procuring agency at the address specified under ITB Clause 18.2 no later than the time and date specified in the Bid Data Sheet.</p> <p>19.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in accordance with ITB Clause 7, in which case all rights and obligations of the Procuring agency and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.</p> |
| ITB-20 | Late Bids: | <p>20.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribed by the Procuring agency pursuant to ITB Clause 19 will be rejected and returned unopened to the Bidder.</p> |
| ITB-21 | Modification and Withdrawal of Bids: | <p>21.1 The Bidder may modify or withdraw its bid after the bid’s submission provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the deadline prescribed for submission of bids.</p> <p>21.2 The Bidder’s modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of ITB Clause 18. by a signed confirmation copy, postmarked not later than the deadline for submission of bids.</p> <p>21.3 No bid may be modified after the deadline for submission of bids.</p> <p>21.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval may result in the Bidder’s forfeiture of its bid security, pursuant to the ITB Clause 15.7.</p> |

E-OPENING AND EVALUATION OF BIDS

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| ITB-22 | Opening of Bids by the Procuring agency : | <p>22.1 The Procuring agency will open all bids in the presence of bidder's representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidder's representatives who are present shall sign a register evidencing their attendance.</p> <p>22.2 The bidder's 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 20.</p> <p>22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) that are not opened and read out at bid opening shall not be considered further for evaluation,</p> |
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- irrespective of the circumstances. Withdrawn bids will be returned unopened to the bidders.
- ITB-23 Clarification of Bids:
- 22.4 The Procuring agency will prepare minutes of the bid opening.
- 23.1 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.
- ITB-24 Preliminary Examination:
- 24.1 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.
- 24.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Supplier does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
- 24.3 The Procuring 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 Bid
- 24.4 Prior to the detailed evaluation, pursuant to ITB Clause 25 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 (ITB Clause 15), Applicable Law (GCC Clause 30), and Taxes and Duties (GCC Clause 32), will be deemed to be a material deviation. The Procuring agency's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 24.5 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.
- ITB-25 Evaluation and Comparison of Bids:
- 25.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24
- 25.2 The Procuring agency's evaluation of a bid will be on delivered duty paid (DDP) price inclusive of prevailing duties and will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 25.3 The Procuring agency's evaluation of a bid will take into account, in addition to the bid price quoted in accordance with ITB Clause 11.2, one or more of the following factors as specified in the Bid Data Sheet, and quantified in ITB Clause 25.4
- (a) incidental costs
 - (b) delivery schedule offered in the bid
 - (c) deviations in payment schedule from that specified in the Special Conditions of Contract
 - (d) the cost of components, mandatory spare parts, and service
 - (e) the availability Procuring agency of spare parts and after-sales services for the equipment offered in the bid
 - (f) the projected operating and maintenance costs during the life of the equipment
 - (g) the performance and productivity of the equipment offered; and/or
 - (h) other specific criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.
- 25.4 For factors retained in the Bid Data Sheet pursuant to ITB 25.3, one or more of the following quantification methods will be applied, as detailed in the Bid Data Sheet:

- (a) Incidental costs provided by the bidder will be added by Procuring agency to the delivered duty paid (DDP) price at the final destination.
- (b) *Delivery schedule.*
- (i) The Procuring agency requires that the goods under the Invitation for Bids shall be delivered at the time specified in the Schedule of Requirements which will be treated as the base, a delivery “adjustment” will be calculated for bids by applying a percentage, specified in the Bid Data Sheet, of the DDP price for each week of delay beyond the base, and this will be added to the bid price for evaluation. No credit shall be given to early delivery.
- (ii) The goods covered under this invitation are required to be delivered (shipped) within an acceptable range of weeks specified in the Schedule of Requirement. No credit will be given to earlier deliveries, and bids offering delivery beyond this range will be treated as nonresponsive. Within this acceptable range, an adjustment per week, as specified in the Bid Data Sheet, will be added for evaluation to the bid price of bids offering deliveries later than the earliest delivery period specified in the Schedule of Requirements.
- (c) *Deviation in payment schedule.*
- (i) Bidders shall state their bid price for the payment schedule outlined in the SCC. Bids will be evaluated on the basis of this base price. Bidders are, however, permitted to state an alternative payment schedule and indicate the reduction in bid price they wish to offer for such alternative payment schedule. The Procuring agency may consider the alternative payment schedule offered by the selected Bidder. or
- (ii) The SCC stipulates the payment schedule offered by the Procuring agency. If a bid deviates from the schedule and if such deviation is considered acceptable to the Procuring agency, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared with those stipulated in this invitation, at the rate per annum specified in the Bid Data Sheet.
- (d) *Cost of spare parts.*
- (i) The list of items and quantities of major assemblies, components, and selected spare parts, likely to be required during the initial period of operation specified in the Bid Data Sheet, is annexed to the Technical Specifications. The total cost of these items, at the unit prices quoted in each bid, will be added to the bid price. or
- (ii) The Procuring agency will draw up a list of high-usage and high-value items of components and spare parts, along with estimated quantities of usage in the initial period of operation specified in the Bid Data Sheet. The total cost of these items and quantities will be computed from spare parts unit prices submitted by the Bidder and added to the bid price. or
- (iii) The Procuring agency will estimate the cost of spare parts usage in the initial period of operation specified in the Bid Data Sheet, based on information furnished by each Bidder, as well as on past experience of the Procuring agency or other procuring agencies in similar situations. Such costs shall be added to the bid price for evaluation.
- (e) *Spare parts and after sales service facilities in the Procuring agency’s country.*
- 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) *Operating and maintenance costs.*
 Since the operating and maintenance costs of the goods under procurement form a major part of the life cycle cost of the equipment, these costs will be evaluated in accordance with the criteria specified in the Bid Data Sheet or in the Technical Specifications.

(g) *Performance and productivity of the equipment.*
 (i) Bidders shall state the guaranteed performance or efficiency in response to the Technical Specification. For each drop in the performance or efficiency below the norm of 100, an adjustment for an amount specified in the Bid Data Sheet will be added to the bid price, representing the capitalized cost of additional operating costs over the life of the plant, using the methodology specified in the Bid Data Sheet or in the Technical Specifications. or
 (ii) Goods offered shall have a minimum productivity specified under the relevant provision in the Technical Specifications to be considered responsive. Evaluation shall be based on the cost per unit of the actual productivity of goods offered in the bid, and adjustment will be added to the bid price using the methodology specified in the Bid Data Sheet or in the Technical Specifications.

(h) *Specific additional criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.*
 The relevant evaluation method shall be detailed in the Bid Data Sheet and/or in the Technical Specifications.

ITB-26	Alternative:	26.1	<p>Merit Point System: The following merit point system for weighing evaluation factors can be applied if none of the evaluation methods listed in 25.4 above has been retained in the Bid Data Sheet. The number of points allocated to each factor shall be specified in the Bid Data Sheet.</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 20px;">Evaluated price of the goods.....</td> <td style="text-align: right;">0-20</td> </tr> <tr> <td style="padding-left: 20px;">Cost of common list spare parts.....</td> <td style="text-align: right;">0-20</td> </tr> <tr> <td style="padding-left: 20px;">Technical features, and maintenance and operating costs.....</td> <td style="text-align: right;">0-20</td> </tr> <tr> <td style="padding-left: 20px;">Availability of service and spare parts.....</td> <td style="text-align: right;">0-20</td> </tr> <tr> <td style="padding-left: 20px;">Standardization.....</td> <td style="text-align: right;">0-20</td> </tr> <tr> <td style="text-align: right; padding-right: 20px;">Total</td> <td style="text-align: right;">100</td> </tr> </table>	Evaluated price of the goods.....	0-20	Cost of common list spare parts.....	0-20	Technical features, and maintenance and operating costs.....	0-20	Availability of service and spare parts.....	0-20	Standardization.....	0-20	Total	100
Evaluated price of the goods.....	0-20														
Cost of common list spare parts.....	0-20														
Technical features, and maintenance and operating costs.....	0-20														
Availability of service and spare parts.....	0-20														
Standardization.....	0-20														
Total	100														

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

ITB-27	Contacting the Procuring agency	27.1	Subject to ITB Clause 23, 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 the Bidder wishes to bring additional information to the notice of the Procuring agency, it should do so in writing.
		27.2	Any effort by a Bidder to influence the Procuring agency in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid

F- AWARD OF CONTRACT

ITB-28	Post-qualification:	28.1	In the absence of prequalification, the Procuring agency will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.3.
		28.2	The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13.3, as well as such other information as the Procuring agency deems necessary and appropriate.

- 28.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.
- ITB-29 Award Criteria: 29.1 Subject to ITB Clause 30, the Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.
- ITB-30 Procuring agency's Right to Vary Quantities at Time of Award: 30.1 The Procuring agency reserves the right at the time of contract award to increase or decrease, by the percentage indicated in the Bid Data Sheet, the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.
- ITB-31 Procuring agency's Right to Accept any Bid and to Reject any or All Bids: 31.1 The Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Procuring agency's action.
- ITB-32 Notification of Award: 32.1 Prior to the expiration of the period of bid validity, the Procuring agency will notify the successful Bidder in writing by registered letter or by cable, to be confirmed in writing by registered letter, that its bid has been accepted.
32.2 The notification of award will constitute the formation of the Contract.
32.3 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 33, the Procuring agency will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 15.
- ITB-33 Signing of Contract: 33.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
33.2 Within thirty (30) days of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.
- ITB-34 Performance Security: 34.1 Within twenty (20) days of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.
34.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 32 or ITB Clause 33.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.
- ITB-35 Corrupt or Fraudulent Practices: 35.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies loans) as well as Bidders / Suppliers / Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPPRA Act, 2009 and Rules made there under:
(a) defines, for the purposes of this provision, the terms set forth below as follows:
(i) "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution, and
(iii) "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) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
- (c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a government-financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government-financed contract.

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

SECTION-II
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 between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
 - (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
 - (c) "The Goods" means all of the equipment, machinery, and/or other materials which the Supplier is required to supply to the Procuring agency under the Contract.
 - (d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
 - (e) "GCC" mean the General Conditions of Contract contained in this section.
 - (f) "SCC" means the Special Conditions of Contract.
 - (g) "The Procuring agency" means the organization purchasing the Goods, as named in SCC.
 - (h) "The Procuring agency's country" is the country named in SCC.
 - (i) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
 - (j) "The Project Site", where applicable, means the place or places named in SCC.
 - (k) "Day" means calendar day.
- GCC-2 Application: 2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.
- GCC-3 Country of Origin: 3.1 All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules and further elaborated in the SCC.
- 3.2 For purposes of this Clause, "origin" means the place where the Goods were mined, grown, or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.
- GCC-4 Standards: 4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.

- GCC-5 Use of Contract Documents and Information Inspection and Audit by the Government:
- 5.1 The Supplier 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 Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The Supplier shall not, without the Procuring agency's prior written consent makes use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.
- 5.3 (all copies) to the Procuring agency on completion of the Supplier's performance under the Contract if so required by the Procuring Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring agency and shall be returned agency.
- 5.4 The Supplier shall permit the Procuring agency to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the procuring agency, if so required.
- GCC-6 Patent Rights:
- 6.1 The Supplier shall indemnify the Procuring agency against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring agency's country.
- GCC-7 Performance Security:
- 7.1 Within twenty (20) days of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 7.3 The performance security shall be denominated in the currency of the Contract acceptable to the Procuring agency and shall be in one of the following forms:
- (a) A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding documents or another form acceptable to the Procuring agency, or
 - (b) A cashier's or certified check.
- 7.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.
- GCC-8 Inspections and Tests
- 8.1 The Procuring agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring agency. SCC and the Technical Specifications shall specify what inspections and tests the Procuring agency requires and where they are to be conducted. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at the Goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring agency.
- 8.3 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring agency may reject the Goods, and the Supplier shall either replace

the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring agency.

- 8.4 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring agency's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring agency or its representative prior to the Goods' shipment from the country of origin.
- 8.5 Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.
- GCC-9 Packing:
- 9.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Procuring agency.
- GCC-10 Delivery and Documents:
- 10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are specified in SCC.
- 10.2 Documents to be submitted by the Supplier are specified in SCC.
- GCC-11 Insurance:
- 11.1 The Goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after having been delivered, hence insurance coverage is sellers' responsibility.
- GCC-12 Transportation:
- 12.1 The Supplier is required under the Contract to transport the Goods to a specified place of destination within the Procuring agency's country, transport to such place of destination in the Procuring agency's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.
- GCC-13 Incidental Services:
- 13.1 The Supplier may be required to provide any or all of the following services including additional services, if any, specified in SCC:
- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods.
 - (c) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
 - (d) Training of the Procuring agency's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
 - (e) Training of the Procuring agency's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
- 13.2 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged for other parties by the Supplier for similar services.

- GCC-14 Separate Parts: 14.1 As specified in SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
 - (b) in the event of termination of production of the spare parts:
 - (i) advance notification to the Procuring agency of the pending termination, in sufficient time to permit the Procuring agency to procure needed requirements; and
 - (ii) Following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.
- GCC-15 Warranty: 15.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.
- 15.3 The Procuring agency shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring agency.
- 15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Procuring agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.
- 15.6 The provisions of this clause include all the expenses that the bidder may have to incur for delivery and installation of such replacement parts, material and equipment as are needed for satisfactory operation of goods at all the consignees ends.
- 15.7 During the period of warranty, the bidder shall remedy, at his/her expense all defects in design, material and workmanship that may develop or are revealed under normal use of goods upon receiving writing notice from the Procuring Agency; the notice shall indicate in what respect the goods are faulty.
- 15.8 The bidder shall provide warranty/guarantee for supply of reagents, kits and chemicals, consumables, films, and ancillaries for at least 10 years (where applicable).
- 15.9 The bidder shall remain responsible for providing after sale services even after expiry of warranty/guarantee period and sign a Service Contract i/c parts with Procuring Agency for 05 years (minimum). Bidder shall separately quote the price of service contract (in terms of percentage) inclusive of parts and without parts, separately.

- 15.10 In case of consumable items, reagents, kits, chemicals, films etc. the contractor shall remain responsible for specificity, efficacy & sensitivity with maximum period of expiry as much allowed by manufacturer.
- 15.11 The Procuring Agency shall promptly notify the bidder in writing of any claims arising out of this warranty.
- 15.12 The bidder shall be responsible to ensure the 90% uptime of the machinery/equipment during the warranty period.
- GCC-16 Payments:
- 16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 16.2 The Supplier's request(s) for payment shall be made to the Procuring agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Procuring agency, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.
- 16.4 The currency of payment shall be in Pak. Rupees.
- GCC-17 Prices:
- 17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in SCC or in the Procuring agency's request for bid validity extension, as the case may be.
- GCC-18 Change Orders:
- 18.1 The Procuring agency may at any time, by a written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:
- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring Agency.
 - (b) The method of shipment and packing.
 - (c) The Place of delivery, and/or
 - (d) the Services to be provided by the Supplier.
- 18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty days from the date of the Supplier's receipt of the Procuring agency's change order.
- GCC-19 Contract Amendments:
- 19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
- GCC-20 Assignment:
- 20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under this Contract, except with the Procuring agency's prior written consent.
- GCC-21 Subcontracts:
- 21.1 The Supplier shall notify the Procuring agency in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.
- 21.2 Subcontracts must comply with the provisions of GCC Clause 3.
- GCC-22 Delay in the supplier's Performance:
- 22.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring agency in the Schedule of Requirements.

- 22.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.
- 22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.
- GCC-23 Liquidated Damages: 23.1 Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring agency may consider termination of the Contract pursuant to GCC Clause 24.
- GCC-24 Termination for Default: 24.1 The Procuring Agency, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, may terminate this contract in whole or in part.
- (a) If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC clause-22, or
- (b) If the Supplier fails to perform any other obligation(s) under the Contract. or
- (c) If the Supplier, in the judgment of the Procuring Agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- "Corrupt Practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of public official in the procurement process or in contract execution.
- "Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the borrower and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the borrower of the benefits of free and open competition.
- 24.2 In the event the Procuring Agency terminates the contract in whole or in part, pursuant to GCC clause 24.1, the Procuring Agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Procuring Agency for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the contract to the extent not terminated.
- GCC-25 Force Majeure: 25.1 Notwithstanding the of GCC clauses 22, 23 and 24, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 25.2 For purposes of this clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include but are not restricted to acts of the Procuring Agency in its sovereign capacity, wars or revolutions, fires, floods,

epidemics, quarantine restrictions, and freight embargoes.

- 25.3 If a Force Majeure situation arises, the supplier shall promptly notify the Procuring Agency in writing of such conditions and the cause thereof. Unless otherwise directed by the Procuring Agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical and seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- GCC-26 Termination for Insolvency: 26.1 The Procuring Agency may at any time terminate the contract by giving written notice to the Supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has occurred or will accrue thereafter to the Procuring Agency.
- GCC-27 Termination for convenience: 27.1 The Procuring agency, by written notice sent to the Supplier, may terminate the for-Convenience Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring agency's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- The Goods that are complete and ready for shipment within thirty (30) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring agency at the Contract terms and prices. For the remaining Goods, the Procuring agency may elect:
- (a) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.
- GCC-28 Resolution of Disputes: 28.1 The Procuring agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 28.2 If, after thirty (30) days from the commencement of such informal negotiations, the Procuring agency and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanisms may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed manner and/or arbitration.
- GCC-29 Governing Language: 29.1 The contract shall be written in the language specified in SCC subject to GCC clause-30, the version of the contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the contract which are exchanged by the parties shall be written in the same language.
- GCC-30 Applicable Law: 30.1 The contract shall be interrupted in accordance with the laws of the Procuring agency's country (Islamic republic of Pakistan), unless otherwise specified in SCC.
- GCC-31 Notices 31.1 Any notice given by one party to the other pursuant to this contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.
- 31.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- GCC-32 Taxes and Duties: 32.1 Supplier shall be entirely responsible for all taxes, duties, license fees, etc. incurred until delivery of the contracted Goods to the Procuring agency in case of Delivered Duty Paid (DDP) basis.

PART - TWO

SECTION-I

INVITATION FOR BIDS

Khairpur College of Agriculture & Management Sciences, Khairpur Mir's
Constituent College of Sindh Agriculture University Tandojam
 Email: www.sau.edu.pk

No. PD-SAU-2024/ 217
 Dated: 22/02/2024

"Say No to Corruption"

NOTICE INVITING TENDER

Sealed tenders on itemized rates are invited as per SPPRA Rules 2010 (Amended 2019) on "Single Stage One Envelope" procedure from eligible Manufacturers / Authorized Dealers / Distributors / Contractors / Suppliers who are registered with FBR, SRB and GST departments for the below mentioned works:

S. #	Tender Name of work	Tender Schedule-Date & Time				Completion Period
		Issue / Sale		Submission Date	Opening Date	
		From	To			
1.	Procurement for Supplying / Installation / Commissioning of Agriculture Lab and other Equipment at Khairpur College of Agriculture & Management Sciences, Khairpur Mir's.	26/02/2024	14/03/2024	15/03/2024 at 10:00 a.m.	15/03/2024 at 10:30 a.m.	6 months

- The Bid Documents can be obtained from the office of undersigned against payment of tender fee (non-refundable) of **Rs. 2000/-** Cash / Pay Order / Demand Draft in favour of **Sindh Agriculture University Tandojam**. Bidding Documents containing detailed terms and conditions can be downloaded from the SPPRA website www.pprms.pprasinidh.gov.pk and University website www.sau.edu.pk.
- Amount of bid security shall be **2%** of the total bid price of the bidder in shape of Pay Order / Call Deposit / Bank Draft issued by scheduled bank of Pakistan in favor of **Sindh Agriculture University Tandojam** and submit along with the Bid Document duly filled in.
- Any conditional or Telegraphic or without bid security/call deposit or the tender received after specific date and time and blacklisted firms will not be considered.
- The Financial bids of the eligible firms will only be opened who will fulfil the mandatory eligible criteria.
- In case of any unforeseen situation or Government holiday resulting in closure of office or non-availability of undersigned on the day of opening, bids shall be submitted / opened on next working day at the given time and venue.
- Details of turnover (including in terms of rupees) of at least last three years that average turnover of last three years should not be less than Rs. 100 million per year as per online annual returns submitted to FBR
- The bidder must have at least **five years** of experience in the relevant field.
- Affidavit confirming that the firm has not been blacklisted by any Government, Semi Government or Autonomous bodies on non-judicial stamp paper.


PROJECT DIRECTOR
SAU, Tandojam (022-3405140)

SECTION-II

BID DATA SHEET

ITB-1.1	Name of Procuring agency	:	Sindh Agriculture University Tandojam.
ITB-1.1	Name of Project / Scheme / Department / Institute	:	Establishment of Khairpur College of Agriculture & Management Sciences, Khairpur Mir's.
ITB-1.1	Name of Contract	:	Procurement for Supplying/Installation/Commissioning of Agriculture Lab and other equipment at KCA&MS, Khairpur Mir's.
ITB-4.1	Name of Procuring agency	:	Sindh Agriculture University Tandojam.
ITB-6.1	Address of Procuring Agency	:	Project Director Sindh Agriculture University, Tandojam PTCL # 022-3405140
ITB-8.1	Language of Bid	:	English
ITB-11.2	Bid Prices	:	The price quoted shall be in Pakistani Rupee for the Goods offered within the Procuring Agency's country on delivered paid price (DDP).
ITB-11.4	Bid Prices	:	The price shall be fixed during the contract period.
ITB-12.1	Bid Currencies	:	The price quoted shall be in Pakistani Rupee on delivered duty paid (DDP) basis.
ITB-13.3	Preparation and Submission of Bids	:	

S. No.	Qualification Criteria	Requirement
1.	Compliance to the Technical Specifications	Mandatory
2.	Catalogue / Brochure /Technical Data Sheet (having complete technical specifications of the offered Goods)	Mandatory
3.	Item-wise / Feature-wise product compliance / Deviation Sheet / Statement.	Mandatory
4.	Original Tender Purchase Receipt / Pay Order of Tender Fee	
5.	The Bid Form and Price Schedule shall be inserted in the Bid Document.	Mandatory
6.	Bid Security shall be inserted in the Bid Document.	Mandatory
7.	Complete Bidding Document duly signed and stamped on its each/every page as acceptance of all terms and conditions.	Mandatory
8.	Registration with FBR/SRB/GST with Active Taxpayer Status on FBR website.	Mandatory
9.	Copy of CNIC of signatory of the Bid Forms.	Mandatory
10.	Compliance to payment terms and conditions.	Mandatory
11.	Compliance to bid validity period.	Mandatory
12.	Company Profile of the Bidder	
13.	Documentary evidence / Work orders of similar type of works, five completed works within last five years.	
14.	Compliance to delivery schedule.	Mandatory
15.	Affidavit on stamp paper of Rs. 100/- duly notarized to the effect that: <ul style="list-style-type: none"> i- The bidder is neither blacklisted nor suspended by any National/International, including Provincial and Federal Government. ii- Any director or owner of the bidding company is not awarded any punishment from any Court of Law. iii- Bidder has submitted the correct and complete information along with the bid/offer. If any document / information is found forged / engineered / fake / bogus at any stage, the bidder may be declared as Blacklisted in accordance with law and the performance guarantee and payment, if any may be forfeited. 	Mandatory

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- ITB-15.1 Amount of Bid Security : 2% of the total bid price in form of PO/DD/Bank guarantee from a scheduled Bank
- Amount of Performance Security / Security Deposit : 8%
- Percentage if any, to be deducted from bill : All Taxes
- Liquidity damages :
- Stamp duty : (0.05% of Bid cost)
- : 0.35% or notified by the Govt. of Sindh, will be paid by Successful bidder as stamp duty.
- ITB-16.1 Period of Bid Validity : 90 days
- ITB-19.1 Deadline of submission along with time : Date: 15/03/2024
Time: 10.00 a.m.
Bidders do not have the option of submitting their bids electronically Unsealed bids will not be entertained / received.
- ITB-22.1 Venue, Date & Time of Bid opening : Venue: Office of the Project Director, SAU, Tandojam.
Date: 15 March 2024
Time: 10.30 a.m.
- ITB-24 Time for completion from written order of commence : Delivery should be made within 06-months after the award of contract.
- ITB 25.3 Evaluation and Comparison of Bids: : Criteria for bid evaluation
- i- The bids not responsive to MANDATORY QUALIFICATION CRITERIA provided will not be considered.
- ii- Conditional or Telegraphic Bids, Bids not accompanied by Bid Security of required amount and form, Bids received after specific date and time and Bids of Blacklisted firms will be treated as rejected/non-responsive.
- iii- The Bids will be evaluated and compared on ITEMIZED BASIS AND SPECIFICATIONS.

SECTION-III

SPECIAL CONDITIONS OF CONTRACT

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

1. Definitions (GCC Clause-1)
 - GCC 1.1-(g): The Procuring agency is: **Sindh, Agriculture University, Tandojam**
 - GCC 1.1-(h): The Procuring agency's country is: Islamic Republic of Pakistan
 - GCC 1.1-(i): The Supplier is: _____
[Name and Address of Bidder]
2. Country of Origin (GCC Clause-3): As per BoQ
3. Performance Security (GCC Clause-7)
 - GCC 7.1: The amount of Performance Security/Security Deposit, as a percentage of the Contract Price, shall be: **05%** of the Contract Price in favour of Sindh Agriculture University Tandojam.
 - GCC 7.4: After delivery and acceptance of the Goods, the performance security shall be reduced to two percent (2%) of the Contract Price to cover the Supplier's warranty obligations in accordance with Clause GCC 15.2.
4. Inspections and Tests (GCC Clause-8)
 - GCC 7.4: Goods shown in the BoQ shall be supplied strictly in accordance with approved quality, brand and measurement.
In case of unsatisfactory supplies/services in any manner including quality & quantity and timeline, the bid security/earnest money will be forfeited, and contract will be partially/fully cancelled which may lead to blacklisting of firm.
5. Packing (GCC Clause-9)
 - Standard packing or as described in specification.
6. Delivery and Documents (GCC Clause-10)
 - Delivery schedule: Delivery should be made within **06 months** if the contract is awarded. Else Penalty will be charged as per Rules.
 - The Supplier shall mail the following documents to the Procuring agency at the time delivery:
 - i. Copy/s of the Bill/GST invoice showing Good's description, quantity, unit price, and total amount.
 - ii. Manufacturers or Supplier's warranty certificate: (if Applicable)
 - iii. Inspection certificate, issued by the nominated inspection agency, and the
 - iv. Supplier's factory inspection report, (if Applicable)
7. Insurance (GCC Clause-11): NA
8. Incidental Services (GCC Clause-13): NA
9. Spare Parts (GCC Clause-14): NA
10. Warranty (GCC Clause-15): As per BOQ
11. Payment (GCC Clause-16):
 - Payment for Goods supplied: Payment shall be made in Pak. Rupees in the following manner:
 - i. Advance Payment: NA.

- ii. On Shipment: Eighty (80) percent of the Contract Price of the Goods shipped shall be paid through irrevocable confirmed letter of credit opened in favor of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 10.
- iii. On Acceptance: Ten (10) percent of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods upon submission of claim supported by the acceptance certificate issued by the Procuring agency.
 Payment of local currency portion shall be made in Pakistani Rupee within thirty (30) days of presentation of claim supported by a certificate from the Procuring agency declaring that the Goods have been delivered and that all other contracted Services have been performed.
- iv. 100% of the Contract Price on complete delivery of store within thirty (30) days on submission of claim supported by acceptance certificate from procuring agency declaring Goods have been delivered and that all contracted services have been performed.
- v. Part payment on part supply may be allowed.

12. Prices (GCC Clause-17): NA

13. Liquidated Damages (GCC Clause-23)

GCC 23.1: Applicable rate:
Maximum deduction: 0.05% of Estimated Cost or Bid Cost.

14. Resolution of Disputes (GCC Clause 28):

GCC 28.3: The dispute resolution mechanism to be applied pursuant to GCC Clause 28.2 shall be as follows:

In the case of a dispute between the Procuring agency and the Supplier, the dispute shall be referred to adjudication or arbitration in accordance with the laws of the Procuring agency's country.

15. Governing Language (GCC Clause-29):

GCC 29.1: The Governing Language shall be: English.

16. Applicable Law (GCC Clause-30)

GCC 30.1: The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan which includes the following legislation:
The Employment of Children (ECA) Act 1991
The Bonded Labour System (Abolition) Act of 1992
The Factories Act 1934

17. Notices: Procuring agency's address for notice purposes:

Office of the Project Director, project wing Sindh Agriculture University Tandojam

Supplier's address for notice purposes:

Contractor Name: _____

Signature: _____

Stamp: _____

TERMS & CONDITIONS (SUMMARIZE)

The bid documents will be submitted in single stage one envelope.

The Company will send Technical Staff for TIR (Technical Inspection Report).

The company will make sure that all documents/manuals/Software/CDs (if applicable) are included in BOX.

Suppliers shall be provided guarantee for the following.

Warranty period. Ensure availability of accessories of the model for at least 10-years.

Items Supplier will be responsible for fixing/installation/commissioning, **operation of equipment** and training of the staff of concerned department.

Supplier is bound to provide all the material required for fixing/installation and make sure material/equipment to be supplied and fixed/installed with all essential/optional accessories, spare parts, operational manuals and catalogues.

After sales service during warranty period as and when required shall be provided.

Dealers will have to quote their rates against each item sequence wise on the official format of tender document with all Governmental Taxes.

Dealers will have to produce call deposit, Bid Security **02%** of the offered bid in shape of Pay Order' Bank Draft in the name of Project Director, Sindh Agriculture University Tandojam, if failure the tender document will not be entertained.

All applicable governmental taxes will be deducted from the bill as per Government approved rates.

Quantity of any item can be reduced/increased as per SPPRA rule (Amended-2019) Incomplete, or conditional tenders will not be accepted.

All sealed tenders shall be opened in the presence of bidders or their authorized representatives' nominee who wish to be present.

The successful bidder has to sign the integrity pact as per SPPRA rules 89 the sample is attached (Amended 2019)

Successful Bidders will have to submit the contract agreements on stamp paper of Rs.100.00 (Rupees: One Hundred Only) by pasting stamp duties for value of Rs3.5 on per thousand (PKRs1000) and must be signed & stamp by Oath Commissioner as notified by the Govt. of Sindh.

The University authorities (Procuring agency) may reject all or any bids subject to the relevant provisions of SPPRA Rules.

Schedule-B**Procurement for Supplying/Installation/Commissioning of Agriculture Lab and other Equipment at Khairpur College of Agriculture & Management Sciences, Khairpur Mir's.**

S. No.	Name of equipment	Qty	Rate	Amount
	Department of Farm Power and Machinery Engineering			
1	Stationary I.C. Engines (Petrol & Diesel, 20 HP) Imported Country of Origin: UK/USA/EU or Equivalent	2		
2	Complete Glass Chassis showing all operating function of Engine up to transmission. Country of Origin: UK/USA/EU or Equivalent	1		
3	Complete Toolbox Country of Origin: UK/USA/EU or Equivalent	1		
4	Voltmeter Country of Origin: UK/USA/EU or Equivalent	1		
5	Sledgehammer 5 kg Country of Origin: UK/USA/EU or Equivalent	2		
6	Hand Saw of Various types. Country of Origin: UK/USA/EU or Equivalent	10		
7	Tongs of different types Country of Origin: UK/USA/EU or Equivalent	10		
8	Hammers of Various types Country of Origin: UK/USA/EU or Equivalent	5		
9	Hack Saw blade of Various size. Country of Origin: UK/USA/EU or Equivalent	20		
10	Wood Chisel of Various types Country of Origin: UK/USA/EU or Equivalent	10		
11	Drawing board and T-Square Country of Origin: UK/USA/EU or Equivalent	50		
12	Transmission Model Country of Origin: UK/USA/EU or Equivalent	1		
13	Portable Exhaust Analyzer Country of Origin: UK/USA/EU or Equivalent	1		
14	Vacuum and Pressure Tester Country of Origin: UK/USA/EU or Equivalent	1		
15	Nozzle Tester Country of Origin: UK/USA/EU or Equivalent	1		
16	Cylinder Power Analyzer Country of Origin: UK/USA/EU or Equivalent	1		
17	Cylinder Bore Gauge Country of Origin: UK/USA/EU or Equivalent	1		
18	Battery Hydrometer Country of Origin: UK/USA/EU or Equivalent	1		
19	Agro Laser Land Leveling System	1		
20	Zero Tillage Drill for Wheat	1		
21	Cotton Planter with Bed making mechanism.	1		
22	Mold Board Plow 3-bottom	2		

23	Disc Plow 3-Bottom	2		
24	Rotavator	2		
S. No.	Name of equipment	Qty	Rate	Amount
25	Disc Harrow 16 Disc 24"	2		
26	Cultivator 11 tines	2		
27	Trolley 12' x 6' x 2' single	2		
28	Land Leveler	1		
29	Complete Tillage Meter with accessories (for measuring force of tillage tools)	1		
30	Strain Gauges Country of Origin: UK/USA/EU or Equivalent	2		
31	Shearing Boxes Country of Origin: UK/USA/EU or Equivalent	2		
32	Pull Type Dyno Meter Drawbar. Country of Origin: UK/USA/EU or Equivalent	1		
33	Computer for advance Drawing & Design Country of Origin: UK/USA/EU or Equivalent	2		
34	Drafting Machine Country of Origin: UK/USA/EU or Equivalent	2		
35	Universal Electric Planner Machine Country of Origin: UK/USA/EU or Equivalent	2		
36	Electric Hand Drilling Machine Country of Origin: UK/USA/EU or Equivalent	1		
37	Wooden Planner Country of Origin: UK/USA/EU or Equivalent	12		
38	Wooden vice	12		
39	Electric Welding Transformer 350 Amp Country of Origin: UK/USA/EU or Equivalent	4		
40	Oxygen Gas Cylinder	4		
41	Acetylene Gas Cylinder Country of Origin: UK/USA/EU or Equivalent	3		
42	Spot Welding Machine Country of Origin: UK/USA/EU or Equivalent	1		
43	Tig Welding Machine Country of Origin: UK/USA/EU or Equivalent	1		
44	Anvil 75 Kgs Country of Origin: UK/USA/EU or Equivalent	1		
45	Ball Point Hammer 1.5 Kg Country of Origin: UK/USA/EU or Equivalent	24		
46	Electric Blowers 0.5 HP Country of Origin: UK/USA/EU or Equivalent	2		
47	Fire clay. Country of Origin: UK/USA/EU or Equivalent	6		
48	Electric Arc Welding Plant Country of Origin: UK/USA/EU or Equivalent	1		
49	Oxy-Acetylene/ Gas Welding Plant Country of Origin: UK/USA/EU or Equivalent	1		
50	Welding Hood, Shield & Goggle Country of Origin: UK/USA/EU or Equivalent	10		

51	Bench vice and Leg vice. Country of Origin: UK/USA/EU or Equivalent	5		
52	Portable Power Planer Country of Origin: UK/USA/EU or Equivalent	5		
S. No.	Name of equipment	Qty	Rate	Amount
53	Potable Power Drill Machine Country of Origin: UK/USA/EU or Equivalent	5		
54	Blade Set for Electric Planer Country of Origin: UK/USA/EU or Equivalent	10		
55	Turbo Diesel engine Direct injection (Cut working model, look & learn) Country of Origin: UK/USA/EU or Equivalent	1		
56	CHASSIS FRONT-WHEEL DRIVE DIESEL ENGINE INDIRECT INJECTION (Cut working model, look & learn) Country of Origin: UK/USA/EU or Equivalent	1		
57	Chassis rear wheel derive Twin cam overhead camshaft petrol engine (Cut working model, look & learn) Country of Origin: UK/USA/EU or Equivalent	1		
58	<p>Small engine test bed Main metallic elements made of stainless steel. Diagram in the front panel with distribution of the elements similar to the real one. Mounting base with vibration dampening device to instal the testing engine. Transparent panels that allow to visualize the operation of the unit. Computer controlled electric motor to generate the load: Braking torque: 8 N·m. Maximum speed: 3600 rpm. This motor also works as the engine starter. Transmission between the combustion engine and the brake through an elastic couplings. Acceleration of the combustion engine through the computer controlled fuel valve (acceleration/deceleration). 5 l capacity fuel tank: either for petrol or for diesel-oil (depending on the purchased test engine). Determination of the characteristic curves of an internal combustion engine at different speed regimes: Torque. Power. Specific consumption of fuel.</p> <p>2.- Determination of the efficiency, fuel specific consumption and air-fuel ratio of an internal combustion engine. 3.- Determination of the volumetric efficiency and the average effective pressure of an internal combustion engine.</p> <p>Additional practical possibilities: 4.- Familiarization with four strokes petrol and diesel engines. 5.- Comparison of the characteristics of diesel oil and petrol engines. 6.- Study of cooling in alternative internal combustion engines. 7.- Analysis of an internal combustion engine exhaust gases (it requires the additional recommended element TBMC-AGE). Recommended for petrol engines. 8.- Calculation of the heat contained in the exhaust gases of an internal combustion engine (it requires the additional recommended element TBMC-CG). 9.- Sensors calibration.</p> <p>Other possibilities to be done with this unit: 10.-Many students view results simultaneously. To view all results in real time in the classroom by means of a projector or an electronic whiteboard. 11.-Open Control, Multicontrol and Real Time Control. This unit allows intrinsically and/or extrinsically to change the span, gains; proportional, integral, derivative parameters; etc, in real time. 12.-The Computer Control System with SCADA allows a real industrial simulation. 13.-This unit is totally safe as uses mechanical, electrical/electronic, and software safety devices. 14.-This unit can be used for doing applied research. 15.-This unit can be used for giving training courses to Industries even to other Technical Education Institutions. 16.-Control of the TBMC3 unit process through the control interface box without</p>	1		

	the computer. 17.-Visualization of all the sensors values used in the TBMC3 unit process. Several other exercises can be done and designed by the user. Country of Origin: UK/USA/EU or Equivalent			
S. No.	Name of equipment	Qty	Rate	Amount
59	Fuel Cell Demonstration Unit Anodized aluminum frame and panels made of painted steel. Main metallic elements made of stainless steel. Diagram in the front panel with distribution of the elements similar to the real one. Metal hydride bottle for storage of H ₂ of 300 NL capacity. Pressure regulator for the hydrogen inlet at the PEM fuel cell, range: 0 – 1 bar. Pressure regulator of the H ₂ bottle. Inlet at 200 bar and outlet at 5 – 50 bar. Solenoid valve to supply H ₂ . Purge solenoid valve. Suitable tubes and hoses for their use with H ₂ with a high safety factor, up to 210 bar. Load module: Rheostat: 22 R – 760 W. Battery and charger (12 V). 1.- Study of the fundamental principles of operation of a proton exchange fuel cell (PEM). 2.- Study of the structure and main principles of a metal hydride bottle. 3.- Calculation of a fuel cell efficiency. 4.- Study of the influence of air consumption and hydrogen in the efficiency of a fuel cell. 5.- Study of the influence of generated power in the efficiency of a fuel cell. 6.- Determination of the current density - voltage characteristics of a fuel cell. 7.- Power density from a single cell and a stack of cells. 8.- Representation of the polarization curve of a fuel cell. 9.- Study of the influence of the reagents' flows in the generation of electrical power. 10.-Study of the use of reagents and transport phenomena. Country of Origin: UK/USA/EU or Equivalent	1		
60	CNC Lathe Machine	1		
61	Milling Machine	1		
62	Shaper Machine	1		
	Department of Soil and Water Recourses Engineering			
63	Turbidity Meter Portable Complete Country of Origin: UK/USA/EU or Equivalent	1		
64	Test kits for Manganese, Nitrite Phosphate Country of Origin: UK/USA/EU or Equivalent	1		
65	Pocket Spring Balance 0 to 110 Kg Country of Origin: UK/USA/EU or Equivalent	1		
66	Flow meters. Country of Origin: UK/USA/EU or Equivalent	1		
67	Cutthroat Flume, Minimum Head (Ft) 0.10, Minimum Head (m) 0.0305, Minimum Flow Rate (cfs) 0.0140, Minimum Flow Rate (1/s) 0.3960, Maximum Head (ft) 0.50, Maximum Head (m) 0.1524, Maximum Flow Rate (cfs) 0.445, Maximum Flow Rate (1/s) 12.60 Country of Origin: UK/USA/EU or Equivalent	1		
68	Infiltrometers (Tension type and/or Wooding type) Country of Origin: UK/USA/EU or Equivalent	2		
69	Marriot Bottles and tubing Country of Origin: UK/USA/EU or Equivalent	5		
70	Tempe Cells with fittings (Tempe cell stand, brass cylinder 3 cm and 6 cm long, ½ bar high flow porous ceramic plate for 1400 temp pressure cell, 1bar and 1 bar HF porous ceramic plate for 1400 temp pressure cell, 1400 Tempe Studs 3 cm, O-rings	5		

	seal, Buna-N, clamp screws, out flow flasks etc. Country of Origin: UK/USA/EU or Equivalent			
71	Desiccators Country of Origin: UK/USA/EU or Equivalent	3		
S. No.	Name of equipment	Qty	Rate	Amount
72	Gravity/density bottles Country of Origin: UK/USA/EU or Equivalent	10		
73	Set of Sieves with Shaker Country of Origin: UK/USA/EU or Equivalent It incorporates an electric motor to provide an effective sieving action. This unit will accept 20, 250, 300 and 315mm, 8 and 12 inch diameter sieves, The shaker can hold up to eight 200mm diameter sieves or seven 300mm diameter sieves. It is fitted with a 0-to-60-minute timer. Wet sieving kits in the appropriate sizes may be used with this shaker. - Country of Origin: UK/USA/EU or Equivalent Specification Sieve Sizes, 200mm, 250mm, 300mm, 315mm, Accepted: diameter 8 inch & 12-inch diameter, Rating, 0 – 60 minutes, Rating, 110W, Power Supply: 220-240V 50Hz 1pH, Dimension: 350 x 400 x 950mm, Weight: 24 kg Country of Origin: UK/USA/EU or Equivalent	2		
74	Software such as: HYDRUS, MODFLOW, DRAINMOD, STAINMOD, SIRMOD, FEFLOW, INFILT, IPARM, CO-BASIN, SURFER & suitable models related water resources engineering etc. Country of Origin: UK/USA/EU or Equivalent	1		
75	Soil Augers/ Sampling Kit Country of Origin: UK/USA/EU or Equivalent	2		
76	Falling Head Permeameter Equipment Country of Origin: UK/USA/EU or Equivalent	2		
77	Soil Moisture Meter, Accurate soil moisture measurements. Supply insert the soil moisture probe into the soil, switch on the readout meter, and within seconds you can be logging soil moisture. Rapid, accurate measurement of water content in soil. Soil moisture with $\pm 1\%$ accuracy. View, store and retrieve readings with the hand held moisture Meter. International reputation for ruggedness and reliability. Fast and easy to use research grade instrument Country of Origin: UK/USA/EU or Equivalent	2		
78	Quick Draw Soil Moisture Probe Country of Origin: UK/USA/EU or Equivalent	1		
79	Soil Hydrometer Country of Origin: UK/USA/EU or Equivalent	1		
80	Water Analysis Kit Country of Origin: UK/USA/EU or Equivalent	1		
81	Soil Temp Moisture station Country of Origin: UK/USA/EU or Equivalent	1		
82	Suspended Sediment Sampler, Sediment measurement involves sampling the water-sediment mixture to determine the mean suspended sediment concentration, particle size distribution, specific gravity, temperature of the water sediment mixture, and other physical and chemical properties of the transported solids. Suspended sediment concentration in a natural stream varies from the water surface to the streambed and laterally across the stream. Concentration generally increases from a minimum at the water surface to a maximum at or near the streambed. Country of Origin: UK/USA/EU or Equivalent	1		
83	Horizontal Sieving Machine Country of Origin: UK/USA/EU or Equivalent	1		
84	COMPUTER CONTROLLED WATER HAMMER UNIT Anodized aluminum frame and panels made of painted steel. Main metallic elements made of stainless steel. Diagram in the front panel with distribution of the elements similar to the real one. Constant level tank, manufactured in PVC glass, which supplies water to the circuits for making the practices. Discharge tank, manufactured in PVC glass. Four	1		

	circuits/pipes for essays:Stainless steel (D=25 mm).PVC (D=25 mm).PVC (D=32 mm).PVC (D=25 mm) and methacrylate (D=40 mm),interchangeable with the third one when checking the effects of abrupt expansions in pipes.Ball valves, to open or close the relevant circuit.Three impact valves provide fast closing necessary to			
S. No.	Name of equipment	Qty	Rate	Amount
	produce the characteristic overpressure of the hydraulic ram and warrant a fast closing without vibrations that affect to measurements.Two pressure sensors, which can be placed in any of the twelve possible points of the four circuits, range: 0 – 5 psi.Three surge tanks (equilibrium chimneys) adaptable to any of the several possible points of the system and subsection clips.Included elements:- FME00/B. Basic Hydraulic Feed System:Centrifugal pump:0.37 kW, 30 – 80 l/min at 20.1 – 12.8 m.Tank capacity: 140 l approx.Flow meter.Membrane type flow adjusting valve.Safety switch.The unit includes wheels to facilitate its mobility.The complete unit includes as well:COMPLETE TECHNICAL SPECIFICATIONS (for main items)With this unit there are several options and possibilities:Main items: 1, 2, 3, 4, 5 and 6.Optional items: 7, 8 and 9.Let us describe first the main items (1 to 6): 1Advanced Real-Time SCADA.Open Control + Multi control + Real-Time Control.Specialized EDIBON Control Software based on LabVIEW.National Instruments Data Acquisition board (250 KS/s, kilo samples per second). Country of Origin: UK/USA/EU or Equivalent			
85	Digital / Analogue Anemometer Country of Origin: UK/USA/EU or Equivalent	1		
86	Hook Gauge evaporimeter, Measures the rate of evaporation by the change in level from a free water surface in a pan or tank. It is used by meteorologists and water engineers throughout the world, especially in hot, arid countries where water conservation is of vital importance. Range of adjustment: 100mm (micrometer moves 1 mm per turn) Resolution: 0.2mm Weight: 340 g Country of Origin: UK/USA/EU or Equivalent	1		
87	Portable Water Level Recorder Country of Origin: UK/USA/EU or Equivalent	1		
88	Series Smart Handheld Water Quality Meter with Conductivity Sensor Channel Triple Memory 10,000 Data with date and time stamp Data Log Auto / Manual Measurement Modes Auto Stable / Auto Hold / Real Time Calibration Alarm Programmable: 0 to 400 days Auto Power Off Programmable: 0 to 60 minutes Real-time Clock Available Sensor Status On display Diagnostics Error codes Language English, Japanese, French, German, Spanish, Portuguese, Chinese PC Communication Via micro USB cable or wireless Printer Communication Via 25-pin D-sub printer (RS232) cable Meter Input Push-pull connector Display Color graphic TFT-LCD, 3.5 inches Housing IP67, shock & scratch resistant, non-slip (ABS / polycarbonate) Power Requirement 4 x AA batteries / battery pack or USB charger with micro USB cable Battery Life > 100 hours (with display brightness 3 and no sensor connected) Dimensions 220 (L) x 90 (W) x 34 (H) mm Weight Approx. 400g (batteries included), 320 g (batteries excluded) Standard Accessories Carrying case, 4 x AA batteries, wireless SD card, manual, and quick guide Conductivity Sensor 2m Cable Length Country of Origin: UK/USA/I109EU or Equivalent	1		
89	Conductivity meter, Range, 0~20.00, 200.0, 2000µS/cm, 20.00, 200.0mS/cm, Accuracy, ±1%F.S, Resolution, 0.01, 0.1, 1, Calibration points 1 to3 point, Calibration Solutions, 84µS/cm, 1413µS/cm, 12.88S/cm, Temperature Coefficient on, 0~100oC, Automatic or Manual, Temperature Coefficient, 0.0~10.0 % °C, Cell Constant, K=0.1, 1, 10, Connector, 6-pin Country of Origin: UK/USA/EU or Equivalent	1		
90	Field Drain Filter test apparatus	1		

	Country of Origin: UK/USA/EU or Equivalent			
91	Bed Profile Plotter Country of Origin: UK/USA/EU or Equivalent	1		
S. No.	Name of equipment	Qty	Rate	Amount
92	Venturi, Bernoulli and Cavitation Unit, Stainless structure, Screws, nuts, plates and all the metallic elements in stainless steel, Diagram in the front panel with similar distribution to the elements in the real unit, Quick connections for adaptation to feed hydraulics source, Manometer (Bourdon type), range: 0-2.5 bar, Manometer (bourdon type), range: 0-(-1) bar, 2 Tanks, height; 135 mm and internal diameter: 64 mm, Venturi tube with 6 tapings (Divergent/Convergent), Differential manometers: 0-500 mm, 5/Manometric tubes, Easy and quick coupling system built-in, Anodized aluminum structure and panels of painted steel Country of Origin: UK/USA/EU or Equivalent	1		
93	Series Smart Handheld Water Quality Meter Dissolved Oxygen Sensor Channel Triple Memory 10,000 Data with date and time stamp Data Log Auto / Manual Measurement Modes Auto Stable / Auto Hold / Real Time Calibration Alarm Programmable: 0 to 400 days Auto Power Off Programmable: 0 to 60 minutes Real-time Clock Available Sensor Status On display Diagnostics Error codes Language English, Japanese, French, German, Spanish, Portuguese, Chinese PC Communication Via micro USB cable or wireless Printer Communication Via 25-pin D-sub printer (RS232) cable Meter Input Push-pull connector Display Color graphic TFT-LCD, 3.5 inches Housing IP67, shock & scratch resistant, non-slip (ABS / polycarbonate) Power Requirement 4 x AA batteries / battery pack or USB charger with micro USB cable Battery Life > 100 hours (with display brightness 3 and no sensor connected) Dimensions 220 (L) x 90 (W) x 34 (H) mm Weight Approx. 400g (batteries included), 320 g (batteries excluded) Standard Accessories Carrying case, 4 x AA batteries, wireless SD card, manual, and quick guide Dissolved Oxygen Sensor 2m Cable Length Country of Origin: UK/USA/EU or Equivalent	1		
94	Digital pH meter-pH, Rang - 2.00~16.00pH, Accuracy, ± 0.01 pH, Resolution, 0.01pH, Calibration points, 2 points, Calibration Solutions, USA (pH4.01/7.00/10.1), Temperature Compensation, 0~100oC, 32~212oF, Compensation Mode, Manual or Automatic, mV, Range, -1999~1999mV, Accuracy, ± 1 mV, Resolution, 1mV, Temperature, Range, 0~100oC, 32~212oF, Accuracy, ± 1 oC, Resolution, 0.1 °C, Others, Hold Function, Manual, Memory, Stores upto50 data sets Country of Origin: UK/USA/EU or Equivalent Series Smart Handheld Water Quality Meters Ph Sensor Channel Triple Memory 10,000 Data with date and time stamp Diagnostics Error codes Language English, Japanese, French, German, Spanish, Portuguese, Chinese PC Communication Via micro USB cable or wireless Printer Communication Via 25-pin D-sub printer (RS232) cable Meter Input Push-pull connector Display Color graphic TFT-LCD, 3.5 inches Housing IP67, shock & scratch resistant, non-slip (ABS / polycarbonate) Power Requirement 4 x AA batteries / battery pack or USB charger with micro USB cable Battery Life > 100 hours (with display brightness 3 and no sensor connected) Dimensions 220 (L) x 90 (W) x 34 (H) mm Weight Approx. 400g (batteries included), 320 g (batteries excluded) Standard Accessories Carrying case, 4 x AA batteries, wireless SD card, manual, and quick guide pH Sensor 2m Cable Length Country of Origin: UK/USA/EU or Equivalent Data Log Auto / Manual	1		

	Measurement Modes Auto Stable / Auto Hold / Real Time Calibration Alarm Programmable: 0 to 400 days Auto Power Off Programmable: 0 to 60 minutes Real-time Clock Available Sensor Status On display			
S. No.	Name of equipment	Qty	Rate	Amount
95	Dissolved Oxygen Meter Country of Origin: UK/USA/EU or Equivalent	1		
96	Double Ring Infiltrometer Country of Origin: UK/USA/EU or Equivalent	1		
97	Digital EC meter Country of Origin: UK/USA/EU or Equivalent	1		
98	Soil Sampling kit Sampling kits come with 3/4in threaded professional regular auger and mud auger 2 1/4in or 3 1/4in), as well as three 4ft extensions, 18in rubber-coated cross handle, 10 lb slide hammer, split-core sampler (2in x 6in or 1 3/8in x 6in), plastic liner, two end caps, rock breaker kit, cleaning brush, universal slip wrench, and two adjustable crescent wrenches. All the components fit into an included AMS deluxe carrying case with handles and wheels for added portability. Country of Origin: UK/USA/EU or Equivalent	2		
99	Laboratory Oven Country of Origin: UK/USA/EU or Equivalent	1		
100	Balance Country of Origin: UK/USA/EU or Equivalent	1		
101	Sieve set + sieve shaker. Country of Origin: UK/USA/EU or Equivalent	1		
102	Digital Rainfall Recorder Country of Origin: UK/USA/EU or Equivalent	1		
103	Turbidity meter Country of Origin: UK/USA/EU or Equivalent	1		
104	Soil Temperature Recorder Country of Origin: UK/USA/EU or Equivalent	2		
105	Ranging, Poles, Arrow, Pegs Country of Origin: UK/USA/EU or Equivalent	50		
106	Total station 1" Minimum increment accuracy reading 5" Angle Accuracy. Minimum Focusing Dist. 1.5m. Magnification 33x, With Single Tilting Rage Pole Prism Set Distance 2300m (2.3Km), 1" Minimum increment accuracy reading 5" Angle Accuracy. Minimum Focusing Dist. 1.5m. Magnification 33x, With Single Tilting Rage Pole Prism Set Distance 2300m (2.3Km), Memory 10,000 point record. Create Job: Unlimited jobs, on board Software: Station Setup, Resection, Automatic Azimuth Angle, Quick Station, 3d Coordinate, Remote Benchmark, stake out HA-HD, XYZ, stake out Line, divide line, Offset Dist., Offset Ang, 2 point Ref. line, Tape, point Projection, Area & Perm, Calcu, Traverse Calcu, REM, RDM (Radial, Cont COGO Function, Field coding with Standard Access. Like Carrying Case, Lens Cover, Batteries, X2, Belts, Cover Country of Origin: UK/USA/EU or Equivalent	1		
107	Theodolite Station, Distance Measurement (Single Prism): Range: 300m, Accuracy: 5", Telescopic Image: Erect, Magnification: 30x, Effective aperture: 45mm, Field of view: 1 30', Reading system: Absolute Encoding, Minimum reading: 1"/ 5" (Selectable), Horizontal & Vertical Ange: Dual, LCD Display: 2 sides, Laser range: be seen up to 100m, Internal memory: Space for 256 pairs, Power Supply: Rechargeable Ni-H battery/ AA battery, Operating time: 10 hrs., Weight: 5.2 kg Country of Origin: UK/USA/EU or Equivalent"	1		
108	Spectrophotometer Country of Origin: UK/USA/EU or Equivalent	1		
109	Plain Table with accessories Country of Origin: UK/USA/EU or Equivalent	4		

110	Digital Tensiometers Country of Origin: UK/USA/EU or Equivalent	2		
111	Tension Plates Country of Origin: UK/USA/EU or Equivalent	2		
S. No.	Name of equipment	Qty	Rate	Amount
112	GPS Device Country of Origin: UK/USA/EU or Equivalent	1		
113	Cutaway petrol Engine Model, 4 Stroke, 4 Cylinders in line, Overhead Camshaft (OHC), Toothed belt, Carburetor, Alternator, Air filter, Gear oil pump, Oil filter, Water cooling without Gearbox, Clutch Country of Origin: UK/USA/EU or Equivalent	1		
114	ELECTRICAL SYSTEM, COMPLYING WITH "CE" STANDARDS Transmission Model, Helical gears, Selector slider, Speed forks, Dry clutch single plat, on stand with wheels, Main Supply: 220 V, Country of Origin: UK/USA/EU or Equivalent	1		
115	Digital Microscope Country of Origin: UK/USA/EU or Equivalent	1		
116	pH / Temp. meter Country of Origin: UK/USA/EU or Equivalent	2		
117	BERNOULLI'S THEOREM DEMONSTRATION Manometer range: 0 to 300 mm of water. Number of manometer tubes: 8. Upstream diameter of the throat: 25 mm. Narrowing: Downstream: 21°. Upstream: 10°. Easy and quick coupling system built in. Anodized aluminum structure and panel of painted steel. Country of Origin: UK/USA/EU or Equivalent	1		
118	Cutaway Turbo Diesel Engine direct injection Model, 4 Stroke, 4 Cylinders in line, Indirect Injection, Overhead camshaft (OHC), Toothed belt, Rotating Distributor, Turbocharger, Air Filter, Gear oil pump and oil filter, Water cooling, With Gearbox 5 speed + reverse, Dry Clutch single plate, MOUNTED ON STAND WITH WHEELS Country of Origin: UK/USA/EU or Equivalent	1		
119	Basic hydraulic bench, Stainless structure, Screws, nuts, plates and all the metallic elements in stainless steel, Diagram in the front panel with similar distribution to the elements in the real unit, Quick connections for adaptation to feed hydraulics source, Centrifugal pump: 0.37 KW, 30-80 l./min at 20.1-12.8m single-phase 220V./50Hz. Or 110V./60Hz, Stainless steel impeller, Tank capacity: 140 l.approx, Flow meter, Membrane type flow adjusting valve, Safety switch ON/OFF, Supports for accommodating the test module, This unit incorporates wheels for its mobility. - Country of Origin: UK/USA/EU or Equivalent	1		
120	Venturi meter and manometer Country of Origin: UK/USA/EU or Equivalent	1		
	Department of Post Harvest and Food Processing Engineering			
121	Domestic Air Conditioning Controls Country of Origin: UK/USA/EU or Equivalent Specification, [1] Demanding benchtop unit on electrical components in ventilation and air conditioning units	1		
122	Distillation Plant Country of Origin: UK/USA/EU or Equivalent	1		
123	Dissolved oxygen meter Country of Origin: UK/USA/EU or Equivalent	1		
124	Halogen Gas Leak detection unit (along with calibrating device). To detect Gas leakage to a precision of 0.04 ounces per year. Portable type. Country of Origin: UK/USA/EU or Equivalent	1		

125	Digital Temperature display unit with (multi thermo couples' probes). To measure temperature ranging from -300oF to 1000F., Precision range: + 10F, Portable type. Country of Origin: UK/USA/EU or Equivalent	1		
S. No.	Name of equipment	Qty	Rate	Amount
126	Drying oven for drying materials in bulk	1		
127	<p>COMPUTER CONTROLLED AIR CONDITIONING LABORATORY UNIT</p> <p>Anodized aluminum frame and panels made of painted steel.</p> <p>The unit includes wheels to facilitate its mobility.</p> <p>Main metallic elements made of stainless steel.</p> <p>Diagram in the front panel with distribution of the elements similar to the real one.</p> <p>Tunnel:</p> <p>Material: stainless steel.</p> <p>Dimensions: 300 x 300 x 1600 mm.</p> <p>It includes:</p> <p>Axial fan, with speed control from computer, max. speed: 2500 rpm, max flow: 2160 m³/h.</p> <p>Two heating elements, computer controlled: one (pre-heater) situated at the evaporator inlet, power: 2000 W and other (re-heater) situated at the vaporator outlet, power: 1000 W. PID control of e the temperature.</p> <p>Four hygrometers, placed along the tunnel, formed each one by two temperature sensors (wet and dry bulb).</p> <p>Two steam lines inject steam from a steam generator (not included) to the tunnel to modify the air characteristics.</p> <p>Two windows of 200 x 300 mm to visualize the tunnel inside.</p> <p>Evaporator. It consists of a finned radiator where a coolant flow circulates.</p> <p>Cooling circuit. It includes:</p> <p>Compressor, computer controlled, 1/2 CV.</p> <p>Filter.</p> <p>Condenser.</p> <p>High-pressure switch (it switch off the compressor when the pressure reach the fix pressure).</p> <p>Expansion valve.</p> <p>Twelve temperature sensors, type "J":</p> <p>Eight temperature sensors (four temperature sensors (dry bulb) and four temperature sensors (wet bulb) to form four hygrometers).</p> <p>Four temperature sensors in the cooling circuit:</p> <p>Two temperature sensors at the inlet and outlet of the evaporator and two temperature sensors at the inlet and outlet of the condenser.</p> <p>Two flow sensors:</p> <p>Flow sensor to measure the coolant flow, range: 5 – 60 l/h.</p> <p>Flow sensor to measure the air flow, range: 0 – 2500 m³/h.</p> <p>Two pressure sensors:</p> <p>Pressure sensor is situated at the condenser inlet and other is situated at the condenser outlet, range:</p> <p>0 – 25 bar.</p> <p>Three Bourdon manometers:</p> <p>Manometer is situated at the evaporator inlet, other is situated at the evaporator outlet and the last one is situated at the condenser outlet.</p> <p>Psychrometric chart and Enthalpy diagram of R-513a.</p> <p>This unit has been designed for the use with the refrigerant R-513a, CFC-free, environmentally friendly.</p> <p>Advanced Real-Time SCADA and PID Control.</p>	1		

	Open Control + Multi control + Real-Time Control. Specialized EDIBON Control Software based on LabVIEW. National Instruments Data Acquisition board (250 KS/s, kilo samples per second) Country of Origin: UK/USA/EU or Equivalent			
S. No.	Name of equipment	Qty	Rate	Amount
128	<p>COMPUTER CONTROLLED VAPOUR-COMPRESSION REFRIGERATION UNIT</p> <p>Anodized aluminum frame and panels made of painted steel. The unit includes wheels to facilitate its mobility. Main metallic elements made of stainless steel. Diagram in the front panel with distribution of the elements similar to the real one</p> <p>High pressure area: Computer controlled hermetic compressor with different operation speed. Wattmeter to measure the compressor power. Pressure sensor located at the outlet of the compressor, range: 0 – 25 bar. High pressure manometer located at the outlet of the compressor. “J” type temperature sensor located at the outlet of the compressor. High pressure switch.</p> <p>Condensation area: Plate heat exchanger that uses water as heat transfer medium. High pressure manometer located at the outlet of the condenser. “J” type temperature sensor located at the outlet of the condenser. Refrigerant receiver. Refrigerant filter to retain particles of condensate. Refrigerant flow sensor, range: 5 – 60 l/h.</p> <p>Low pressure area: Expansion valve. Low pressure manometer located after the expansion valve. “J” type temperature sensor located after the expansion valves.</p> <p>Evaporation area and compressor inlet: Plate heat exchanger that uses water as heat transfer medium. Liquid separator to retain liquid particles before going on to the compressor. Low pressure manometer located at the outlet of the evaporator. Pressure sensor located at the compressor inlet, range: 0 – 10 bar. “J” type temperature sensor located at the outlet of the evaporator.</p> <p>Heat exchange water circuit: Water reservoir, capacity: 400 l. Two computer controlled water circulation pumps: Max. flow: 47 l/min. Max. head: 6 m. Two regulation valves to control the condensation water flow and the evaporation water flow.</p> <p>Two water flow sensors, one for the condensation water and other for the evaporation water, range: 0.25 – 6.5 l/min.</p> <p>Four “J” type temperature sensors for measuring the inlet and outlet temperature of condensation and evaporation water.</p> <p>Enthalpy diagram of R-513a.</p> <p>This unit has been designed for the use with the refrigerant R-513a, CFC-free, environmental friendly</p> <p>The complete unit includes as well: Additional recommended elements T/KIT1. Maintenance Kit containing Vacuum Pump, Hoses and Manometers. T/KIT2. Maintenance Kit containing Leakage Detector. T/KIT3. Maintenance Kit containing Refrigerant Filling and Evacuation Module.</p> <p>COMPLETE TECHNICAL SPECIFICATIONS (for main items)</p> <p>With this unit there are several options and possibilities: Main items: 1, 2, 3, 4, 5 and 6. Optional items: 7, 8, 9, 10 and 11.</p> <p>Let us describe first the main items (1 to 6): Advanced Real-Time SCADA. Open Control + Multi control + Real-Time Control.</p>	1		

	Specialized EDIBON Control Software based on LabVIEW. National Instruments Data Acquisition board (250 KS/s, kilo samples per second) Country of Origin: UK/USA/EU or Equivalent			
S. No.	Name of equipment	Qty	Rate	Amount
129	<p>COMPUTER CONTROLLED REFRIGERATION CYCLE DEMONSTRATION UNIT</p> <p>Bench-top unit. Anodized aluminum structure and panels of painted steel. Main metallic elements of stainless steel. Diagram in the front panel with distribution of the elements similar to the real one. Compressor: Computer controlled hermetic compressor. Power: 1/2 CV. Condenser: Vertical transparent cylinder, through which the coil of heat exchange can be seen. Totally hermetic by Viton joints. It has a copper coil through which circulates cooling water inside: Nine nickel-plated copper spires. Diameter of coil: 1/4". Heat transfer area: 0.032 m² approx. Expansion: Expansion valve, float type, that is assembled on the condenser. Sight glass placed between the expansion valve and the evaporator, to show the formation of vapour bubbles after the expansion valve. Evaporator: Vertical transparent cylinder, through which the coil of heat exchange can be seen. Totally hermetic by viton joints. It has a copper coil through which circulates water to promote the ebullition inside: Nine nickel-plated copper spires. Diameter of coil: 1/4". Heat transfer area: 0.032 m² approx. Instrumentation: Eleven temperature sensors ("J" type) that indicate the water output and input temperatures, both in the condenser and in the evaporator, and the evaporation, condensation, expansion and environmental temperatures. Two flow sensors to measure the water flow (condenser and evaporator), range: 0.25 – 6.5 l/min. Two pressure sensors indicate the refrigerant fluid pressure in the condenser and in the evaporator: Pressure sensor (condenser), range: 0 – 6 bar. Pressure sensor (evaporator), range: -1 – 1.6 bar. Power measurement from computer. Measure range: 0 – 1000 W. The unit has all necessary security measures for safe work: Relief valve with a tare of 2.4 bar, so in case of overpressure in the condenser it will open. High pressure cut-out, that stops the compressor if the condensation pressure exceeds 2.3 bar. Other valves: Isolation valves to allow easy maintenance and modification. Control valves. This unit has been designed for the use with the SES36 refrigerant gas, environmental friendly. With the unit is supply following diagrams: Mollier diagram of SES36 refrigerant. Enthalpy diagram of SES36 refrigerant. The complete unit includes as well: COMPLETE TECHNICAL SPECIFICATIONS (for main items) With this unit there are several options and possibilities: Main items: 1, 2, 3, 4, 5 and 6. Optional items: 7, 8, 9, 10 and 11. Let us describe first the main items (1 to 6): 1 Advanced Real-Time SCADA. Open Control + Multi control + Real-Time Control. Specialized EDIBON Control Software based on LabVIEW. National Instruments Data Acquisition board (250 KS/s, kilo samples per second). Country of Origin: UK/USA/EU or Equivalent</p>	1		

Department Food Sciences and Technology				
S. No.	Name of equipment	Qty	Rate	Amount
130	Centrifuge Machine (micro and temperature controlled) Country of Origin: UK/USA/EU or Equivalent	1		
131	Autoclave (small) Country of Origin: UK/USA/EU or Equivalent	1		
132	Autoclave large. Country of Origin: UK/USA/EU or Equivalent	1		
133	Water bath Country of Origin: UK/USA/EU or Equivalent	1		
134	Incubator Country of Origin: UK/USA/EU or Equivalent	1		
135	Top loading balance Country of Origin: UK/USA/EU or Equivalent	1		
136	Spectrophotometer (uv-1800) Country of Origin: UK/USA/EU or Equivalent	1		
137	Laminar flow cabinet (horizontal) Country of Origin: UK/USA/EU or Equivalent	1		
138	Double distillation units Country of Origin: UK/USA/EU or Equivalent	1		
139	Polarimeter Country of Origin: UK/USA/EU or Equivalent	1		
140	Kjeldahl units Country of Origin: UK/USA/EU or Equivalent	1		
141	Digital moisture meter Country of Origin: UK/USA/EU or Equivalent	1		
142	pH meter Country of Origin: UK/USA/EU or Equivalent	1		
143	Conductivity meter Country of Origin: UK/USA/EU or Equivalent	1		
144	Refrigerators Country of Origin: UK/USA/EU or Equivalent	1		
145	Deep Freezer Country of Origin: UK/USA/EU or Equivalent	1		
146	Cooking range /gas oven Country of Origin: UK/USA/EU or Equivalent	1		
147	Microscope Country of Origin: UK/USA/EU or Equivalent	1		
148	Hand Refractor meter c-32/cutm Country of Origin: UK/USA/EU or Equivalent	1		
149	Electric Balance Country of Origin: UK/USA/EU or Equivalent	1		
150	Juicer Blander Country of Origin: UK/USA/EU or Equivalent	1		
151	Electric Chopper Braum MR 555 Country of Origin: UK/USA/EU or Equivalent	1		
152	Electric Fryer machine 5 kg batch capacity Country of Origin: UK/USA/EU or Equivalent	1		
153	Freeze dryer large. Country of Origin: UK/USA/EU or Equivalent	1		
154	Vertical electric dehydrator (dehydrator chamber) Country of Origin: UK/USA/EU or Equivalent	1		
155	Gas stove Country of Origin: UK/USA/EU or Equivalent	1		

156	Gas Cylinder Country of Origin: UK/USA/EU or Equivalent	1		
157	Thermometer Country of Origin: UK/USA/EU or Equivalent	1		
S. No.	Name of equipment	Qty	Rate	Amount
158	Baking oven gas operated (reeling oven) large Country of Origin: UK/USA/EU or Equivalent	1		
159	Hot air oven Country of Origin: UK/USA/EU or Equivalent	1		
160	Dough mixer Country of Origin: UK/USA/EU or Equivalent	1		
161	Cold storage unit humidity control Country of Origin: UK/USA/EU or Equivalent	1		
162	Batch type digital Refractor meter Country of Origin: UK/USA/EU or Equivalent	1		
163	Bottle sterilizer. Country of Origin: UK/USA/EU or Equivalent	1		
164	Steam generator. Country of Origin: UK/USA/EU or Equivalent	1		
165	Pulping machine Country of Origin: UK/USA/EU or Equivalent	1		
166	Garber machine Country of Origin: UK/USA/EU or Equivalent	1		
167	Vacuum sealing machine Country of Origin: UK/USA/EU or Equivalent	1		
168	Sealing machine Country of Origin: UK/USA/EU or Equivalent	1		
169	Grinder Machine with different sieves Country of Origin: UK/USA/EU or Equivalent	1		
170	Utensils Country of Origin: UK/USA/EU or Equivalent	1		
171	Hot air gum Country of Origin: UK/USA/EU or Equivalent	1		
172	Digital Grain Analyzer (for all cereals) Country of Origin: UK/USA/EU or Equivalent	1		
173	Semi-Automatic Labeling Machine Country of Origin: UK/USA/EU or Equivalent	1		
174	Abrasive peeler machine Country of Origin: UK/USA/EU or Equivalent	1		
175	Hot water bath machine Country of Origin: UK/USA/EU or Equivalent	1		
176	Multimedia Country of Origin: UK/USA/EU or Equivalent	1		
	Department of Biotechnology	1		
177	Electric Balance Country of Origin: UK/USA/EU or Equivalent	1		
178	Micro Pipettes (0.5µl-10µl) Country of Origin: UK/USA/EU or Equivalent	1		
179	Micro Pipettes (2µl-20µl) Country of Origin: UK/USA/EU or Equivalent	1		
180	Micro Pipettes (20µl-200µl) Country of Origin: UK/USA/EU or Equivalent	1		

181	Micro Pipettes (100µl-10000µl) Country of Origin: UK/USA/EU or Equivalent	1		
182	pH meter Country of Origin: UK/USA/EU or Equivalent	1		
S. No.	Name of equipment	Qty	Rate	Amount
183	Microwave Oven Country of Origin: UK/USA/EU or Equivalent	1		
184	Freezer (-20) Country of Origin: UK/USA/EU or Equivalent	1		
185	Freezer (-40) Country of Origin: UK/USA/EU or Equivalent	1		
186	Freezer (-80) Country of Origin: UK/USA/EU or Equivalent	1		
187	Refrigerated Cold Cabinet Country of Origin: UK/USA/EU or Equivalent	1		
188	Ice machine (for molecular analysis) Country of Origin: UK/USA/EU or Equivalent	1		
189	Autoclaving Machine Country of Origin: UK/USA/EU or Equivalent	1		
190	Stir bar magnetic. Country of Origin: UK/USA/EU or Equivalent	1		
191	Laminar Flow Cabinet Country of Origin: UK/USA/EU or Equivalent	1		
192	Analytical balance Country of Origin: UK/USA/EU or Equivalent	1		
193	Gel documentation System Country of Origin: UK/USA/EU or Equivalent	1		
194	Vertical Midi Gel Electrophoresis Country of Origin: UK/USA/EU or Equivalent	1		
195	Blotter for Transfer DNA to membrane Country of Origin: UK/USA/EU or Equivalent	1		
196	Horizontal Mini gel Electrophoresis Country of Origin: UK/USA/EU or Equivalent	1		
197	Power supplies (1 to 500V) Country of Origin: UK/USA/EU or Equivalent	1		
198	Power Pac Supply (1 to 5000V) Country of Origin: UK/USA/EU or Equivalent	1		
199	Dry bath Country of Origin: UK/USA/EU or Equivalent	1		
200	Water bath Country of Origin: UK/USA/EU or Equivalent	1		
201	Water Single Distillation Unit Country of Origin: UK/USA/EU or Equivalent	1		
202	Water Double Distillation Unit Country of Origin: UK/USA/EU or Equivalent	1		
203	Water Purification System Country of Origin: UK/USA/EU or Equivalent	1		
204	Circulating Water Bath with Cooling Country of Origin: UK/USA/EU or Equivalent	1		
205	Growth Chambers Country of Origin: UK/USA/EU or Equivalent	1		
206	Spectrophotometer Country of Origin: UK/USA/EU or Equivalent	1		

207	Thermal cyclers (PCR Machine) Country of Origin: UK/USA/EU or Equivalent	1		
208	Real Time PCR Country of Origin: UK/USA/EU or Equivalent	1		
S. No.	Name of equipment	Qty	Rate	Amount
209	Mini spin Centrifuge Machine Country of Origin: UK/USA/EU or Equivalent	1		
210	Centrifuge Machine Country of Origin: UK/USA/EU or Equivalent	1		
211	Refrigerated Centrifuge machine Country of Origin: UK/USA/EU or Equivalent	1		
212	Ultracentrifuge Machine (50000 rpm) Country of Origin: UK/USA/EU or Equivalent	1		
213	Hybridization oven Country of Origin: UK/USA/EU or Equivalent	1		
214	Shaking incubators With Cooling Country of Origin: UK/USA/EU or Equivalent	1		
215	Tank for liquid Gasses (25 to 30 Lit) Country of Origin: UK/USA/EU or Equivalent	1		
216	Flasks for Liquid Nitrogen (1 to 2 Lit) Country of Origin: UK/USA/EU or Equivalent	1		
217	Vortex mixture Country of Origin: UK/USA/EU or Equivalent	1		
218	Binocular Microscope Country of Origin: UK/USA/EU or Equivalent	1		
219	Trinocular Microscope Country of Origin: UK/USA/EU or Equivalent	1		
220	UV Face Protection Shields Country of Origin: UK/USA/EU or Equivalent	1		
221	UV Lamp Country of Origin: UK/USA/EU or Equivalent	1		
222	Hot and Cold-Water dispenser Country of Origin: UK/USA/EU or Equivalent	1		
223	Uninterrupted Power Supply (UPS)2KVA Country of Origin: UK/USA/EU or Equivalent	1		
	I.T Equipment			
224	Branded Desktop Computers <ul style="list-style-type: none"> • Processor: Core i7-11th Gen. • RAM: 16GB DDR-4 • Hard Disk: 512 GB SSD • Casing Type: Tower • LED: 24" Screen • Keyboard/ Mouse: Branded • Wi-Fi: Built-in • 1 Year local Warranty HP, Dell, Lenovo or Equivalent	50		
225	Laptops <ul style="list-style-type: none"> • Processor: Core i7-11th Gen • RAM: 16GB DDR-4 • Hard Disk: 512 GB SSD • Wi-Fi: Built-in • Screen: 15.6" FHD • 1 Year local Warranty HP, Dell, Lenovo or Equivalent	1		
226	Multifunction Laser Printers (includes Scanner, Photocopier) <ul style="list-style-type: none"> • PPM: 30 Pages • Printing Resolution: 1200x1200 	3		

	<ul style="list-style-type: none"> • Memory Capacity: 512 MB • Processor Speed: 800 MHz • Interface: Network and USB • 1 Year local warranty HP or equivalent			
S. No.	Name of equipment	Qty	Rate	Amount
227	Laser jet Printer PPM: 42 Pages Printing Resolution: 1200x1200 dpi Interface: Network and USB HP Laser jet Enterprise M 406 dm or equivalent.	4		
228	Laser jet Printer PPM: 18 Pages Printing Resolution: 600 x 600 dpi Interface: Network and USB HP or equivalent	6		
229	Photocopier Two-way paper feeding system. Bypass Feeding System. Network Printer & Scanner. Automatic Document Feeding & Duplexing Option. Ricoh, Konica, Canon or equivalent	2		
230	Scanner Flatbed Scanner 1200 dpi Canon or equivalent	8		
231	Multimedia Projectors <ul style="list-style-type: none"> • Lumens: 4,000-5,000 • Contrast: 5,000:1 • Resolution: 1920 x 1200 pixels • Speakers • Built-in bulb life cycle, normal: 37 dB • HDMI and Wireless supportable • 1 Year local warranty ViewSonic, Acer, Panasonic or equivalent	8		
232	Wall mounted multimedia screen i/c Ceiling mounted kit Foreign or equivalent	8		
233	Sound System and Mic (For Large Class) <ul style="list-style-type: none"> • 2 Mics (one fixed with stand and one wireless) • 2 Speakers • Amplifier • Remote Control • LED Display • MIC input • USB Supported • 1 Year Local Warranty Audionic or equivalent	8		
234	Camera DSLR Country of Origin: UK/USA/EU or Equivalent	1		

Contractor Name: _____

Signature: _____

Stamp: _____

Date: _____

(Sample Form-01)**ELIGIBILITY CRITERIA / CHECK LIST**

Name of contractor: _____

S. No.	Particulars	Tick	Remarks
1.	Compliance to the Technical Specifications		
2.	Tender Fee as per requirement		
3.	Call Deposit/Earnest money (5%)		
4.	The Bid Form and Price Schedule.		
5.	Complete Bidding Document duly signed and stamped on its each/every page as acceptance of all terms and conditions.		
6.	Valid CNIC, FBR/SRB, Professional Tax certificate (Copy must be attached) with Active Taxpayer Status on FBR website.		
7.	Experience of similar Projects of minimum 05 years (W.O Copy must be attached)		
8.	The Bidder will have to attach the Catalogue/Profile of the items which he shall supply.		
9.	<p>Affidavit on stamp paper of Rs. 100/- duly notarized to the effect that:</p> <p>i- The bidder is neither blacklisted nor suspended by any National/International, including Provincial and Federal Government.</p> <p>ii- Any director or owner of the bidding company is not awarded any punishment from any Court of Law.</p> <p>iii- Bidder has submitted the correct and complete information along with the bid/offer. If any document / information is found forged / engineered / fake / bogus at any stage, the bidder may be declared as Blacklisted in accordance with law and the performance guarantee and payment, if any may be forfeited.</p>		

(Sample Form-02)

BID DECLARATION FORM

1. Name of Firm: _____
2. CNIC #: _____
(Please attach Copy of CNIC)
3. NTN #: _____
(Please attach Copy of NTN Certificate)
4. GST #: _____
(Please attach Copy of GST Certificate)
5. Value of Earnest Money Rs. _____, DD/PO #: _____
(Inwords) _____, Bank: _____
6. Contact Person: _____
7. Postal Address: _____
8. Email address: _____
9. Telephone (PTCL): _____, Cell Phone: _____
Compulsory

Declaration:

I certify that, to the best of my knowledge and belief, all of the information on and attached is true, correct, complete and made in good faith. I understand that false or fraudulent information on or attached to this form may be grounds for not entertaining my bid, or for cancellation after bid acceptance, and may be punishable by fine or imprisonment according to law of Pakistan. I understand that any information I voluntarily provide on or attached to this bid may be investigated. Moreover, I hereby declare the all the terms and conditions of the bidding document are accepted.

Name of Contractor: _____

Signature: _____

Stamp: _____

Date: _____

(Sample Form-03)

LETTER OF ACCEPTANCE

To,
Project Director,
Sindh Agriculture University,
Tandojam

Dear Sir:

Having examined the bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver the required items in conformity with the said bidding documents for the sum of (total bid amount in words and figures) or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to Five (5) percent of the Contract Price/Pay order for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this Bid for a period of 15 days from the date fixed for Bid opening under Clause 10 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

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

Dated this _____ day of _____ 2024

Signature

(In Capacity of)

Duly authorized to sign Bid for and on behalf of _____

(Sample Form-04)

EXPERIENCE FOR SUPPLYING OF GOODS

S.No.	Assignment Description	Name of Client	Cost	Start Date	Completion Date	Remarks

(Sample Form-05)

INTEGRITY PACT

**DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC PAYABLE BY CONTRACTORS
(FOR CONTRACTS WORTH RS. 10.00 MILLION OR MORE)**

Contract No. _____, dated: _____

Contract Value: _____

Contract Title: _____

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

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

[name of Contractor] accepts full responsibility and strict liability that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Contractor] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA.

Notwithstanding any rights and remedies exercised by PA in this regard, [name of Supplier/Contractor/Consultant] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder’s fee or kickback given by [name of Contractor] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from PA.

.....
[Procuring Agency]

[Contractor]

