



University of Agriculture, Faisalabad

Bidding Documents

Tender No.150/2016

SPECIAL INSTRUCTIONS

- No cutting, erasing is allowed in the Tender bid.
- Bid offered strictly in accordance with the bid document will only be accepted.
- Only typed bid will be accepted failing which it will be considered as non responsive.

THIS IS FOR STRICT COMPLIANCE

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Section I.

Invitation for Bids



UNIVERSITY OF AGRICULTURE, FAISALABAD
(TENDER NOTICE No.150/2016)

Sealed tenders are invited from Income Tax and Sales Tax registered firms on the basis of Single Stage (two envelop procedure) for supply/installation/commissioning of Laboratory Equipment under development project titled "Establishment of Sub Campus of University of Agriculture, Faisalabad at Depalpur, District Okara".

Date of Receiving and Opening	30.11.2016	Receiving Time	10:30 a.m.
		Opening Time	11:00 a.m.
		Bid Security	2% of the
			Estimated Cost
		Tender Fee	Rs.500/-

The bidding documents are available in the office of the undersigned and the same may be obtained subject to the payment of the cost of the printing and provision of the document (tender Fee) as mentioned above to be deposited in the University Income Account (No.11-9/NBP, UAF Branch), in case of city other than Faisalabad add Rs.200/-. The bidding documents can also be down loaded free of cost from the UAF website www.uaf.edu.pk/Admininstration/Directorate of Procurement & Inventory Control.

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Section II.

Instructions to Bidders

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Instructions to Bidders

A. Introduction

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| 1. Source of Funds | University of Agriculture, Faisalabad. |
| 2. Eligible Bidders | <p>2.1 The invitation for Bids is opened to all supplier having trade relations with Pakistan and registration for National Tax Number & Sales Tax Number with Federal Board of Revenue</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 which have been engaged by the Purchaser 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 Only Government owned enterprises may participate, only if they are legally allowed.</p> <p>2.4 bidders shall not be under a declaration of ineligibility in accordance with ITB 36.1&37 by any Government organization. The bidder shall provide affidavit to this effect.</p> |
| 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, 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> |
| 4. Cost of Bidding | <p>4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser named in the bid date sheet, hereinafter referred to as “the purchaser” will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.</p> |

B. The Bidding Documents

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| 5. Content of Bidding Documents | <p>5.1 The goods required, bidding procedures, and contract terms are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents include:</p> <ul style="list-style-type: none">(a) Instructions to Bidders (ITB)(b) Bid Data Sheet(c) General Conditions of Contract (GCC)(d) Special Conditions of Contract (SCC)(e) Schedule of Requirements(f) Technical Specifications(g) Bid Form and Price Schedules(h) Bank Guarantee Form if applicable(i) Manufacturer's Authorization Form(j) Integrity pact.(k) Mechanism of Blacklisting and Deregistration <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 risk and may result in the rejection of its bid.</p> |
| 6. Clarification of Bidding Documents | <p>6.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Purchaser in writing at the Purchaser's address indicated in the Bid Data Sheet. The Purchaser will respond in writing to any request for clarification of the bidding documents which it receives prior to the deadline for the submission of bids prescribed in ITB Clause 19.1. Written copies of the Purchaser's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective bidders that have received the bidding documents.</p> |
| 7. Amendment of Bidding Documents | <p>7.1 At any time prior to the deadline for submission of bids, the Purchaser, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, may modify the bidding documents by amendment.</p> <p>7.2 All prospective bidders that have received the bidding documents will be notified of the amendment in writing and will be binding on them.</p> <p>7.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the</p> |

Purchaser, at its discretion, may extend the deadline for the submission of bids.

C. Preparation of Bids

- 8. Language of Bid** 8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser shall be written in English. 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 above, in which case, for purposes of interpretation of the Bid, the translation shall govern.
- 9. Documents Constituting the Bid** 9.1 The bid prepared by the Bidder shall comprise the following components:
- (a) a Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11, and 12;
 - (b) documentary evidence established in accordance with ITB Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;
 - (c) documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bidding documents; and
 - (d) bid security furnished in accordance with ITB Clause 15.
- 10. Bid Form** 10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.
- 10.2 Bidders tendering for engineering goods produced in Pakistan shall be accorded a price preference in rupees up to a specific percentage (in proportion to the value addition) of the lowest quoted landed cost of an item of foreign origin with similar specifications as mentioned in the tenders:
- (1) Provided that-
 - (a) The saving in foreign exchange is not less than the amount of price preference; and
 - (b) It is ensured that in each case of such preference, the total import requirements for producing the supplies tendered for locally manufactured items has been duly indicated by the bidders.

(2) Price preference shall be allowed as under:-

- (a) Having minimum of twenty percent value addition through indigenous manufacturing price preference shall fifteen percent;
- (b) Having over twenty percent and up to thirty percent value addition through indigenous manufacturing, price preference shall be twenty percent, and
- (c) Having over thirty percent value addition through indigenous manufacturing, price preference shall be twenty five percent.

(3) For the purpose of granting a margin of domestic preference bids will be classified into following groups.

Group.A. Bids offering engineering goods produced in Pakistan.

Group.B. Bids offering good of foreign origin to be imported by the purchaser through the supplier's Local (Pakistan) Agent.

Group.C. Bids offering good of foreign origin to be imported by the purchaser directly.

11. Bid Prices

11.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.

11.2 Prices indicated on the Price Schedule shall be entered separately in the following manner or specified otherwise in the Bid Data Sheet:-

a). for goods offered from within Pakistan;

the price shall be quoted on FOR UAF basis. (FOR means the price of goods quoted by the bidder shall be inclusive of all costs, expenses, charges, duties and taxes etc. whatsoever incidental to their delivery, installation and commissioning as the case may be at UAF site).

b). for goods offered from abroad by the local agent of Pakistan:

the price shall be quoted on Free in Stores Plus (FIS+) UAF basis. (FIS+ means the price of goods quoted by the bidder shall be inclusive of all domestic and abroad costs, expenses, charges, duties and taxes etc. whatsoever

except customs duty and of the Pakistan incidental to their delivery installation/commissioning at UAF site). The bidder, in quoting the price, shall be free to use transportation in abroad other than Israel.

- c) for goods offered from abroad by the foreign principal directly:

the price shall be quoted CFR/CPT Karachi seaport or Lahore airport Pakistan, as the case may be. The bidder shall also add all cost expenses, charges, duties and taxes etc. whatsoever except customs duties, incidental to delivery installation/commissioning of goods from the port of destination to UAF site. The bidder, in quoting the price, shall be free to use transportation in abroad other than Israel.

- 11.3 The terms CFR, CPT, etc., shall be governed by the rules prescribed in the current edition of *Incoterms* published by the International Chamber of Commerce, Paris or otherwise specified in the Bid Data Sheet and SCC
- 11.4 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 Purchaser and will not in any way limit the Purchaser's right to contract on any of the terms offered.
- 11.5 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 non-responsive and will be rejected, pursuant to ITB Clause 24. If, however, in accordance with the Bid Data Sheet, prices quoted by the Bidder shall be subject to adjustment during the performance of the contract, a bid submitted with a fixed price quotation will not be rejected, but the price adjustment would be treated as zero.

12. Bid Currencies

- 12.1 Prices shall be quoted in the following currencies:
- (a) For goods and services that the Bidder will supply from within the Purchaser Country, the prices shall be quoted in Pak Rupees, unless otherwise specified in the **Bid Data Sheet**.
 - (b) For goods and services that the Bidder will supply from outside the Purchaser Country, the prices shall be quoted in any currency. However the payment will only be made by the purchaser in pak rupees in case of ITB clause 11.2 (b) and SCC.

13. Documents

- 13.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its

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| Establishing
Bidder's
Eligibility
and
Qualification | <p>bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.</p> <p>13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Purchaser's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 2.</p> <p>13.3 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction:</p> <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 Purchaser 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 Purchaser Country, the Bidder is or will be (if awarded the contract) represented by an Agent in that country equipped and able to carry out the Supplier's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and (d) that the Bidder meets the qualification criteria listed in the Bid Data Sheet. |
| 14. Documents
Establishing
Goods'
Eligibility
and
Conformity
to Bidding
Documents | <p>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.</p> <p>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.</p> <p>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:</p> <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 Purchaser; and

- (c) an item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.

14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Purchaser 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 Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

15. Bid Security

15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security @ 2% of the Estimated Cost or in the amount specified otherwise in the **Bid Data Sheet**.

15.2 The bid security is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7.

15.3 The bid security shall be denominated in the currency of the bid or in another freely convertible currency, and shall be in one of the following forms:

- (a) Call deposit receipt (CDR).

15.4 Any bid not secured in accordance with ITB Clauses 15.1 and 15.3 will be rejected by the Purchaser as nonresponsive, pursuant to ITB Clause 24.

15.5 Unsuccessful bidders' bid securities 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 Purchaser pursuant to ITB Clause 16.

15.6 The successful Bidder's bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 34, and furnishing the performance security, pursuant to ITB Clause 35.

15.7 The bid security may be forfeited:

- (a) if a Bidder:
 - (i) withdraws its bid during the period of bid validity

specified by the Bidder on the Bid Form, or

- (ii) does not accept the correction of errors pursuant to ITB Clause 24.2; or
- (b) in the case of a successful Bidder, if the Bidder fails:
 - (i) to sign the contract in accordance with ITB Clause 34; or
 - (ii) to furnish performance security in accordance with ITB Clause 35.

**16. Period of
Validity of
Bids**

- 16.1 Bids shall remain valid for the period specified in the **Bid Data Sheet** after the deadline date of bid submission prescribed by the Purchaser, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.
- 16.2 In exceptional circumstances, the Purchaser 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.

**17. Format and
Signing of
Bid**

- 17.1 The Bidder shall prepare an original bid indicated in the **Bid Data Sheet**, clearly marking each "TECHNICAL BID" and "FINANCIAL BID," as appropriate. In the event of any discrepancy between them, the original shall govern.
- 17.2 The original 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 unamended printed literature, shall be initialed by the person or persons signing the bid.
- 17.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.
- 17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

18. Sealing and

- 18.1 The Bidder shall seal the Technical and Financial Bid in

Marking of Bids	<p>separate envelopes, duly marking the envelopes as “TECHNICAL” and “FINANCIAL.” 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 Purchaser 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 22.1. <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 Purchaser will assume no responsibility for the bid’s misplacement or premature opening.</p>
19. Deadline for Submission of Bids	<p>19.1 Bids must be received by the Purchaser at the address specified under ITB Clause 18.2 (a) not later than the time and date specified in the Bid Data Sheet.</p> <p>19.2 The Purchaser 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 Purchaser and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.</p>
20. Late Bids	<p>20.1 Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser pursuant to ITB Clause 19 will be rejected and returned unopened to the Bidder.</p>
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 Purchaser 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. A withdrawal notice may also be sent by fax, but followed 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</p>

for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to the ITB Clause 15.7.

E. Opening and Evaluation of Bids

22. Opening of Bids by the Purchaser

- 22.1 The Purchaser will open all bids in the presence of bidders' representatives who choose to attend, at the time, on the date, and at the place specified in the **Bid Data Sheet**. The bidders' representatives who are present shall sign a register evidencing their attendance.
- 22.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Purchaser, 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.
- 22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.
- 22.4 The Purchaser will prepare minutes of the bid opening.

23. Clarification of Bids

- 23.1 During evaluation of the bids, the Purchaser 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.

24. Preliminary Examination

- 24.1 The Purchaser 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 there is a discrepancy between words and figures, the amount in words will prevail. If the Supplier does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited.
- 24.3 The Purchaser may waive any minor informality,

nonconformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

- 24.4 Prior to the detailed evaluation, pursuant to ITB Clause 26, the Purchaser 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 31), and Taxes and Duties (GCC Clause 33), will be deemed to be a material deviation. The Purchaser'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 Purchaser and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

**25. Conversion
to Single
Currency**

25.1 To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to either:

- (a) Purchaser Country at the selling exchange rate established for similar transactions by the State Bank of Pakistan and National Bank of Pakistan or specified otherwise;

25.2 The currency selected for converting bid prices to a common base for the purpose of evaluation is Pak Rupees to be converted as per rate of the bank shown in ITB 25.1 (a) on the date of opening of the financial bid or specified otherwise in the **Bid Data Sheet**.

26. Evaluation and Comparison of Bids

26.1 The Purchaser will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24.

26.2 The Purchaser'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 26.3:

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

26.3 For factors retained in the Bid Data Sheet pursuant to ITB 26.2, one or more of the following quantification methods will be applied, as detailed in the Bid Data Sheet:

- (a) *Delivery schedule.*
 - (i) 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.
- (b) *Deviation in payment schedule.*
 - (i) The SCC stipulates the payment schedule offered by the Purchaser. If a bid deviates from the schedule it will be considered as non-responsive bid.

(c) *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 shall be specified by the bidder. The total cost of these items, at the unit prices quoted in each bid, will be added to the bid price.

or

- (ii) The bidder 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. 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.
- (d) *Spare parts and after sales service facilities in the Purchaser's country.*

The cost to the Purchaser of establishing the minimum service facilities and parts inventories, if outlined in the **Bid Data Sheet** or elsewhere in the bidding documents, if quoted separately, shall be added to the bid price.

(e) *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.

(f) *Performance and productivity of the equipment.*

- (i) 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 or otherwise specified in the **Bid Data Sheet** or in the Technical Specifications.

(g) *Specific additional criteria*

Other specific additional criteria to be considered in the evaluation and the evaluation method shall be detailed in the **Bid Data Sheet** and/or the Technical Specifications.

26.4. Delivery Schedule.

As mentioned in Bid Data Sheet.

27. Domestic Preference

- 27.1 If the **Bid Data Sheet** so specifies, the Purchaser will grant a margin of preference to goods manufactured in the Purchaser's country for the purpose of bid comparison, in accordance with the procedures outlined in subsequent paragraphs, provided the Bidder shall have established to the satisfaction of the Purchaser that its bid complies with the criteria specified in ITB Clause 10.2 (a):
- 27.2 The Purchaser will first review the bids to confirm the appropriateness of, and to modify as necessary, the bid group classification to which bidders assigned their bids in preparing their Bid Forms and Price Schedules, pursuant to ITB Clauses 10 and 11.
- 27.3 All evaluated bids in each group will then be compared among themselves to determine the lowest evaluated bid of each group. The lowest evaluated bid of each group will next be compared with the lowest evaluated bids of the other groups. If this comparison results in a bid from Group A or Group B being the lowest, it will be selected for contract award.
- 27.4 If, as a result of the preceding comparison, the lowest evaluated bid is from Group C, all Group C bids will then be further compared with the lowest evaluated bid from Group A, after adding to the evaluated bid price of the imported goods offered in each Group C bid, for the purpose of this further comparison only:
- (a) the amount of customs duties and other import taxes that a nonexempt importer would have to pay for the importation of goods offered in each Group C bid;

If the Group A bid in the further comparison is the lowest, it will be selected for award. If not, the lowest evaluated bid from Group C, as determined from the comparison under ITB Clause 27.3 above, will be selected for award.

28. Contacting the Purchaser

- 28.1 From the time of bid opening to the time of contract award, if any bidder wishes to contact the Purchaser on any matter related to the bid, it should do so in writing.
- 28.2 Any effort by a Bidder to influence the Purchaser 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**29. Post-**

- 29.1 In the absence of prequalification, the Purchaser will determine

qualification

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.

29.2 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 Purchaser deems necessary and appropriate.

29.3 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 Purchaser will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

**30. Award
Criteria**

30.1 Subject to ITB Clause 32, the Purchaser 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.

**31. Purchaser's
Right to Vary
Quantities at
Time of
Award**

31.1 The Purchaser reserves the right at the time of contract award to increase or decrease, as per requirement, the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.

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| 32. Purchaser's Right to Accept Bid and to Reject All Bids | 32.1 The Purchaser reserves the right to accept 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. |
| 33. Notification of Award | <p>33.1 Prior to the expiration of the period of bid validity, the Purchaser will notify/inform the successful and unsuccessful Bidder in writing by letter or by Fax/ e-mail, or telephonically, that its bid has been accepted and unaccepted as the case may by.</p> <p>33.2 The notification of award will constitute the formation of the Contract.</p> <p>33.3 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 35, the Purchaser will discharge bid security to each unsuccessful Bidder on his written request, pursuant to ITB Clause 15.</p> <p>33.4 If, after notification of award, a Bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Purchaser. The Purchaser will promptly respond in writing to the unsuccessful Bidder.</p> |
| 34. Signing of Contract | 34.1 After 10 days from the announcement of evaluation report, the Purchaser will send supply order or Formal Contract as the case may be to successful bidder. In case of formal contract, the successful bidder will send back the contract to the purchaser duly signed within 7 days from the issuance date. Failing which the Purchaser reserves the right under ITB Clause 15.7. |
| 35. Performance Security | <p>35.1 Within Seven (07) days from the issuance of acceptance letter from the Purchaser, the successful Bidder shall furnish the performance security in shape of CDR or Bank guarantee at the discretion of the Purchaser. In case the amount of bid security is equal or greater than the value of the goods to be supplied then the bidder shall not require furnishing the performance security separately and the bid security will be retained to meet the requirement of performance security.</p> <p>35.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 34.2 or ITB Clause 35.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Purchaser may make the award to the next lowest evaluated Bidder or call for new bids.</p> |
| 36. Corrupt or Fraudulent Practices | 36.1 The purchaser as well as Bidders/Suppliers/Contractors should observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the PPRA Govt. of the Punjab; |

- (a) the terms set forth below as follows:
 - (i) “corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, 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 Purchaser of the benefits of free and open competition;
- (b) The purchaser 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) The Purchaser will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a University Contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a University Contract.

36.2 Furthermore, Bidders shall be aware of the provision stated in Clauses 5.4 and 24.1 of the General Conditions of Contract.

37.Blacklisting/37.1 the Purchaser reserves the right to blacklist or deregister (may impose Permanent or temporary bar for participation in the procurement proceedings respectively) the bidder as follows:-

- (a) **Blacklisting:** The bidder who
 - (i) Fail to perform contractual obligations or the performance under the contract is not upto the mark;
 - (ii) Found to be indulging in corrupt or fraudulent practices;
 - (iii) Commit an action causing or liable to cause loss to the University;
 - (iv) Furnish false information;
- (b) **Deregistration:** The bidder who
 - (i) Submit bid as employee of the firm, or proprietor or shareholder being an employee of the University;
 - (ii) Show non-responsive attitude in case of summoning by the University.

- (iii) Back out from their offers after opening of tender;
- (iv) Misbehave with the University employee;

37.2 The bidder shall provide affidavit that the firm was not declared blacklisted or deregistered by any of the Federal and Provincial Government institution.

Section III.

Bid Data Sheet

Bid Data Sheet

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

A-Introduction	
ITB 2.1	The invitation for Bids is opened to all suppliers having registration for National Tax Number & Sales Tax Number with Federal Board of Revenue.
ITB2.3	Government owned enterprises may participate, only if they are legally allowed.
ITB 2.4	In addition to the contents of ITB 2.4 the bidder shall not be blacklisted by any organization of the Government of the Punjab as well as Federal Government. The bidder shall provide affidavit to this effect.
ITB 4.1	Name of Purchaser: Dr. Tariq Aziz, Project Director, Sub Campus of UAF at Depalpur, District Okara
B- Bidding Documents	
ITB 5.1(h)	Not applicable
ITB 6.1	<p>Purchaser's address: Dr. Tariq Aziz, Project Director, Sub Campus of UAF at Depalpur, District Okara through</p> <p style="color: red;">Directorate of Procurement & Inventory Control (DPIC) University of Agriculture, Faisalabad Phone No. 041-9200898 Fax. 041-9200898</p> <p style="color: red;"><u>FOR TECHNICAL RESPONSE:</u></p> <p style="color: red;">1. Dr. Tariq Aziz, Project Director</p>
C-Preparation of Bid	
ITB 8.1	Language of the bid. “English”
ITB 11.2	Prices on FOR, CPT and C&F basis shall be mentioned separately
ITB 11.2 (c) ITB 11.3	Not applicable
ITB 13.3 (d)	<p>Qualification requirements.</p> <p>1. Company /Bidder Profile:</p> <ol style="list-style-type: none"> a. Experience in the relevant field minimum 3 Years b. HR strength/Manpower with the Bidder c. Direct genuine source / relationship with the Principal d. Technical expertise with the bidder e. Sound financial position of the bidder (cash available equal to 50% of the quoted value as per bank statement) or 5 time sales volume of quoted value as per Income tax returns of last financial year. f. Name of owner/proprietor g. Copy of CNIC

	<ul style="list-style-type: none"> h. Date of Establishment, Age of Firm i. Copy of NTN and Sales Tax Registration j. Copy of Professional Tax k. Affidavit (Submission of undertaking on legal valid and attested e-stamp paper that the firm not blacklisted by any of Provincial or Federal Government Department, Agency, Organization or autonomous body or private Sector Organization anywhere in Pakistan)
ITB 15.1	Amount of bid security. 2% of the Estimated Cost in shape of Call Deposit Receipt (CDR) in favour of Director (DPIC), UAF to be attached with Technical Bid.
ITB 16.1	Bid validity period. 90 Days
ITB 17.1	Bid: Financial and Technical Separately. Also a soft copy of Technical Bid Only
D-Submission of Bid	
ITB 18.2 (a)	Address for bid submission. Directorate of Procurement & Inventory Control, University of Agriculture, Faisalabad
ITB 18.2 (b)	Tender Notice No.150/2016
ITB 19.1	Deadline for bid submission.30.11.2016
E-Bid Evaluation	
ITB 25.1(a)	State Bank or a Commercial Bank to be read as State Bank of Pakistan and National Bank of Pakistan
ITB 25.2	The common base currency is PAK Rupee to be converted as per rate of the bank shown in ITB 25.1(a) of the bid data sheet on the date of opening of the financial bid.
ITB 26.3 (a)(i)	The SCC stipulates the payment schedule offered by the purchaser. If a bid deviates from the schedule then it will be considered as non-responsive.
ITB 26.3 (c)	The bidder will provide the cost of spare parts required to be replaced during whole life of the goods after the expiry of warranty period.
ITB 26.3 (e)	The bidder will provide :- <ul style="list-style-type: none"> i) Cost of consumables ii) Unit of energy consumption per hour iii) Life cycle of the goods
ITB 26.3 (f)	Performance and productivity of Articles. As per Technical Specification
ITB 26.3 (g)	As per specification.
ITB 27	As per ITB clause 10.2 prior to the award of procurement contract
ITB 33	Subject to PPRA Rule 2014/UAF Procurement Rule 2014, the bidder with the lowest evaluated bid, if not in conflict with any other law, shall be awarded the procurement contract within the original or extended bid validity period after 10 days of announcement of the evaluation report.

Section IV.

General Conditions of Contract

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General Conditions of Contract

1. Definitions

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

- (a) “The Contract” means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, or the supply order issued by the purchaser to the supplier, as the case may be, 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 Purchaser under the Contract.
- (d) “The Services” means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
- (e) “GCC” means the General Conditions of Contract contained in this section.
- (f) “SCC” means the Special Conditions of Contract.
- (g) “The Purchaser” means the organization purchasing the Goods, as mentioned in Bid Data Sheet.
- (h) “The Purchaser’s country” is **Pakistan**.
- (i) “The Supplier” means the individual or firm supplying the Goods and Services under this Contract and **named in Supply Order**.
- (j) “The University” means the **University of Agriculture, Faisalabad**.
- (k) “The Project Site,” where applicable, means the place or places **named in Bid Data Sheet and technical specifications**
- (l) “Day” means calendar day.

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| 2. Application | 2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract. |
| 3. Country of Origin | <p>3.1 All Goods and Services supplied under the Contract shall have their origin in the countries as elaborated in the Technical Specifications.</p> <p>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.</p> <p>3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.</p> |
| 4. Standards | 4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods’ country of origin. Such standards shall be the latest issued by the concerned institution. |
| 5. Use of Contract Documents and Information; Inspection and Audit by Purchaser | <p>5.1 The Supplier shall not, without the Purchaser’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 Purchaser 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.</p> <p>5.2 The Supplier shall not, without the Purchaser’s prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.</p> <p>5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Purchaser and shall be returned (all copies) to the Purchaser on completion of the Supplier’s performance under the Contract if so required by the Purchaser.</p> <p>5.4 The Supplier shall permit the Purchaser to inspect the Supplier’s accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the Purchaser, if so required by the Purchaser.</p> |

- 6. Patent Rights** 6.1 The Supplier shall indemnify the Purchaser 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 Purchaser's country.
- 7. Performance Security** 7.1 Within Seven (07) days from the issuance of acceptance letter from the Purchaser, the successful Bidder shall furnish the performance security in shape of CDR or Bank guarantee at the discretion of the Purchaser in the amount **specified in SCC**. In case the amount of bid security is equal or greater than the value of the goods to be supplied then the bidder shall not require furnishing the performance security separately, it will be retained or deducted from the bidder's claim on bidder's choice.
- 7.2 The proceeds of the performance security shall be payable to the Purchaser 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, or in a freely convertible currency acceptable to the Purchaser and shall be in one of the following forms:
- (a) bank guarantee or CDR issued by a reputable bank located in the Purchaser's country or abroad, acceptable to the Purchaser, in the form provided in the bidding documents or another form acceptable to the Purchaser.
- 7.4 The performance security will be discharged by the Purchaser 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 otherwise **specified in SCC**.
- 8. Inspections and Tests** 8.1 The Purchaser 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 Purchaser. **SCC** and the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser 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 Purchaser.

- 8.3 Should any inspected or tested Goods fail to conform to the Specifications, the Purchaser 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 Purchaser.
- 8.4 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Purchaser's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Purchaser or its representative prior to the Goods' shipment from the country of origin.
- 8.5 Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

9. Packing

- 9.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Purchaser.

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 For purposes of the Contract, "CFR," "CPT", the terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of *Incoterms* published by the International Chamber of Commerce, Paris.
- 10.3 Documents to be submitted by the Supplier are **specified in SCC**.

11. Insurance

- 11.1 The Goods supplied under the Contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery in the manner **specified in the SCC**.
- 11.2 Where delivery of the Goods is required by the Purchaser on a CFR or CPT basis, the Purchaser shall arrange and pay for cargo insurance, naming the supplier as beneficiary.

12. Transportation

- 12.1 Where the Supplier is required under Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 12.2 Where the Supplier is required under Contract to deliver the Goods CFR or CPT, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 12.3 Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within the Purchaser's country, defined as the Project Site, transport to such place of destination in the Purchaser'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.
- 12.4 Where the Supplier is required under Contract to deliver the Goods CFR or CPT, no restriction shall be placed on the choice of carrier. Where the Supplier is required under Contract (a) to deliver the Goods FOB or FCA, and (b) to arrange on behalf and at the expense of the Purchaser for international transportation on specified carriers or on national flag carriers of the Purchaser's country, the Supplier may arrange for such transportation on alternative carriers if the specified or national flag carriers are not available to transport the Goods within the period(s) specified in the Contract.

13. Incidental Services

13.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, **specified in SCC**:

- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Purchaser'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 to other parties by the Supplier for similar services.

14. Spare Parts

14.1 As **specified in SCC**, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) such spare parts as the Purchaser 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 Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

15.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in

design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Purchaser'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 Purchaser 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 notice or in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Purchaser.

15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in the notice or in SCC, the Purchaser 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 Purchaser may have against the Supplier under the Contract.

16. Payment

16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be **specified in SCC.**

16.2 The Supplier's request(s) for payment shall be made to the Purchaser 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 Purchaser, **but in no case later than thirty (30) days** after submission of an invoice or claim by the Supplier.

16.4 The currency or currencies in which payment is made to the Supplier under this Contract shall be **specified in SCC** subject to the following general principle: payment will be made in the currency or currencies in which the payment has been requested in the Supplier's bid.

16.5 All payments shall be made in the currency or currencies

specified in the SCC pursuant to GCC 16.4.

- 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 Purchaser's request for bid validity extension, as the case may be.
- 18. Change Orders** 18.1 The Purchaser may at any time, by a written order given to the Supplier pursuant to GCC Clause 32, 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 Purchaser;
 - (b) the method of shipment or packing;
 - (c) the place of delivery; and/or
 - (d) the Services to be provided by the Supplier.
- 18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Purchaser's change order.
- 19. Contract Amendments** 19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
- 20. Assignment** 20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under this Contract, except with the Purchaser's prior written consent.
- 21. Subcontracts** 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.
- 21.2 Subcontracts must comply with the provisions of GCC Clause 3.

22. Delays in the Supplier's Performance

- 22.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Purchaser 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 Purchaser 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 Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.
- 22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

23. Liquidated Damages

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

24. Termination for Default

- 24.1 The Purchaser, 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 Purchaser pursuant to GCC Clause 22; or
 - (b) if the Supplier fails to perform any other obligation(s) under the Contract.
 - (c) if the Supplier, in the judgment of the Purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

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

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

24.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Purchaser 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 Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

25. Force Majeure 25.1 Notwithstanding the provisions of GCC Clauses 22, 23, and 24, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

25.2 For purposes of this clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Purchaser 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 Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

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

to the Purchaser.

**27. Termination
for
Convenience**

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

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

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

**28. Settlement of
Disputes**

28.1 If any dispute or difference of any kind whatsoever shall arise between the Purchaser and the Supplier in connection with or arising out of the Contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

28.2 If the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

28.2.1 Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

28.2.2 Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC**.

28.3 Notwithstanding any reference to arbitration herein,

- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise

agree; and

- (b) the Purchaser shall pay the Supplier any monies due the Supplier.

29. Limitation of Liability

29.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6,

- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

30. Governing Language

30.1 The Contract shall be written in the language **specified in SCC**. Subject to GCC Clause 31, 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.

31. Applicable Law

31.1 The Contract shall be interpreted in accordance with the laws of the Purchaser's country, unless otherwise **specified in SCC**.

32. Notices

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

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

33. Taxes and Duties

33.1 A foreign Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's country and purchaser's country as **specified in SCC**.

33.2 A local Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

Section V.

Special Conditions of Contract

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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. Performance Security (GCC Clause 7)

GCC 7.1—

A. For goods offered from within Pakistan and abroad by the local agent by Pakistan:

the successful Bidder shall furnish the performance security @ 10% of the value of Supply Order or Contract in shape of CDR in favour of Director (DPIC), UAF for main Campus, and of Principal or Projector Director as the case may be for sub campuses within Seven (07) days from the issuance of acceptance letter from the Purchaser. In case the amount of bid security is equal or greater than the value of the performance security, then the bidder shall not require to furnish the performance security separately.

B. 2% CDR already received in lieu of earnest money in case of general type good(s) will be retained by the office for 3 month from the day of supply of the respective good(s) or fully consumed whichever is earlier.

GCC 7.3 a): Bank Guarantee is not allowed

2. Inspection and Tests (GCC Clause 8)

GCC 8.1- By the concerned purchaser in accordance with the specifications or samples or both as required.

3. Delivery and Documents

- (a) Airway Bill / Bill of Lading as the case may be
- (b) Commercial Invoice
- (c) Packing List
- (d) Certificate of Origin

GCC 10.2: Not applicable

4. Warranty (GCC Clause 15)

GCC15.2&15.4: One year free of cost labour and material etc. at site from the date of commissioning of goods.

5. Payment (GCC Clause 16)

6. Prices (GCC Clause 17)

GCC17.1: No Price adjustment is allowed.

7. Change Orders (GCC Clause 18)

Not applicable

8. Liquidated Damages (GCC Clause 23)

GCC 23.1—Applicable rate:

The liquidated damages, if imposed, will be recovered at the rate of upto0.67% of the value of goods supplied/installed/commission late per day or a part of a period exceeding the original delivery period, subject to the provision that the total liquidated damages thus

imposed will not exceed 10% of the total value of the goods delivered/installed/commission late.

9. Settlement of Disputes (GCC Clause 28)

The settlement of dispute will be settled in accordance with mechanism for redresal of grievances and settlement of dispute as specified below:-

Complaints of bidder/contractor shall be disposed/settled by a committee and arbitration prior to the entry into force and after into force of procurement contract respectively. Accordingly, grievances committee with powers and terms of reference and method of arbitration are as under:-

A. Grievances Committee:

The committee comprises the following to address the complaints of the bidders prior to entry into force of the procurement contract:-

- i. The Treasurer (Email address: treasurer_uaf@yahoo.com) (Convener)
- ii. Dr. Tariq Aziz, Project Director, (Member)
Sub Campus Depalpur
- iii. Resident Auditor or the Technical Expert(s) not (Member)
below the rank of Assistant Professor
- iv. The Director (DPIC) (Secretary)

Any bidder feeling aggrieved by any act of the procuring agency after the submission of his bid may lodge a written complaint concerning his grievances not later than 10 days after the announcement of the bid evaluation report under rule 37 of the UAF Procurement Rules 2014.

The committee shall address the complaints of bidders that may occur prior to the entry into force of the procurement contract. The committee shall investigate and decide upon the complaint within fifteen days of the receipt of the complaint. Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.

Any bidder not satisfied with the decision of the committee may lodge an appeal in the relevant court of jurisdiction.

B. Arbitration:

After coming into force of the procurement contract, all matters of dispute or difference except regarding rejection of goods by the Inspector under GCC clause 8 (Standard Bidding Document) or cancellation of the contract by the Purchaser, under GCC Clause 24 and 27 (Standard Bidding Document) arising out of the agreement between the parties thereto, the settlement of which is not otherwise specially provided for in contract agreement, shall be referred to arbitration as under:-

(a) Foreign Currency Contracts (EXW/FOB/CFR/CPT, etc.) made directly with Foreign Principal / Manufacturer

- i. The dispute shall be referred for adjudication to two arbitrators one to be nominated by each party, who before entering upon the reference shall appoint an umpire by mutual agreement, and if they do not agree, a judge of the Superior Court will be requested to appoint the umpire. The arbitration proceedings shall be held in Pakistan and under Pakistan Law.
- ii. The venue of arbitration shall be the place from which the contract is issued or such other places as the Purchaser at his discretion may determine.
- iii. Arbitration award so given will be firm and final.

(b) Indigenous (FOR) contracts

The settlement of dispute, if not otherwise especially provided for in the contract shall be referred for the decision of Vice Chancellor, University of Agriculture, Faisalabad. His decision shall be final and binding on both the parties. The work under the contract shall if reasonably possible continue, under the proceedings before the Vice Chancellor and no account of such proceeding unless they are subject of the dispute.

Note:

- The arbitration award shall be recorded in writing.
- EXW/FOB/CFR/CPT/CIF, etc., contracts made through local agents would be dealt under sub para-B (b) above.

(c) Prior Notice for arbitration:

If the supplier intends to go for arbitration, he shall have to give 30 days notice in writing informing the purchaser of his intention to refer to the points of differences or dispute of arbitration. He shall have to define clearly the point of difference and or dispute in his notice.

C. Court Jurisdiction

Only the Courts at Faisalabad shall have exclusive jurisdiction to adjudicate upon any “lis” brought by either of the parties in relation to the contract.’

10. Applicable Law (GCC Clause 31)

GCC 31.1—UAF Procurement Rules 2014 and Laws governing in Pakistan

11. Notices (GCC Clause 32)

GCC 32.1: The Supplier shall provide address for notice purposes:

12. Taxes and Duties (GCC Clause 33)**13. Stamp Act**

In accordance with the Stamp Act 1899 amended from time to time, the contractor shall require to affix stamp duty @ 25 paisa per hundred rupees on the value of the contract.

Section VI.

Schedule of Requirements

Schedule of Requirements

Number

Description

Quantity

Delivery schedule:
4 Weeks for FOR Supply
10 weeks for CPT and C&F Supply
Estimated Cost 44.708 Million

Sr. #	Description
1.	Laboratory Equipment Technical specifications and quantity are available at page No.52 of the bidding documents

Section VII.

Technical Specifications

TECHNICAL SPECIFICATIONS FOR LAB EQUIPMENT

The bidder shall quote the goods along with the serial number mentioned below against each and also provide soft copy in Excel sheet without price as technical bid. The quoted goods shall have point to point commentary.

Accessories of all lab equipment necessary for its installation and working, must be quoted as additional/optional, if not mentioned against each equipment.

Certificate of trained/local manpower issued by manufacturer for all major equipment must be attached.

A. HORTICULTURAL SCIENCES

S.#	Nameof Equipment with Specifications	Qty
1.	Laboratory Refrigerator: Refrigerator with freezer(Refrigerator. 300 L, Freezer 50 L OR MORE), Temperature Control: Microprocessor controlled, Temperature display: Digital Type, Exterior. Acrylic finish baked on Galvanized steel, Interior. Acrylic finish baked on Galvanized steel, Power voltage: 220 V, With Stabilizer of 1.5 KVA(copper wiring) or more Origin: Europe, USA, UK, Japan, Australia Minimum Warranty: 1 Year	1
2.	Home Refrigerator: Refrigerator with freezer; Capacity 18CF. Exterior. Acrylic finish baked on Galvanized steel, Interior. Acrylic finish baked on Galvanized steel, Power voltage: 220 V, With Stabilizer of 1.0 KVA. Pakistani or Equivalent Origin Minimum Warranty: 1 years	1
3.	Field Equipment/Machinery: Cutters, 4’ saw with wood handle, bloom, branch cutter Pruning scissors 9” with steel blade Sprayers knapsack, Budding knives. 4”blade with wooden handle and broad end. tractor mounted boom sprayer	2 0 2 0 1 2 0 1
4	DigitalAnalyticalBalance: Capacity 0-300 g withminimum display of 0.001 g. LCD display with microprocessor controlled unit with glass shield with sliding doors. Bench Top. repeatability Linearity < 0.2mg, Power 220 VAC, Origin: Europe, USA, UK, Japan Minimum Warranty: 1 Year Stabilizer: 1.0 KVA	1

5	<p>KJELDAHL DIGESTION AND DISTILLATION APPARATUS</p> <p>Digestion Digestion Block: Six places, simultaneously digestion with Programming through console, increases of Temperature controlled with microprocessor Temperature range ambient to 500°C, stability and precision of heating block temperature ± 0.5 °C, Setting of heating time 1 S to 120 minutes, automatic Switch off, possibility to program upto 4 Increases of temperature and twice of permanence each of them. Including digestion tube set, Well capacity: 250-500 ml, LCD display, programmable reaction time, power: 220 VAC.</p> <p>Distillation Digital LCD Display, with Automatic Sodium Hydroxide addition, manual Distillation residues removal, Manual dilution Water addition, Manual Boric Acid addition. Measuring Range mg N 0.1 to 200; Reproducibility 1% Recovery 99.5% at Nitrogen Levels between 1-200 mg N Detection Limit 0.1mg N Distillation time 5 minutes to collect 100ml Distillate Complete with all standard Accessories Operated on 220-240 V Minimum Warranty: 1 Year Origin: USA/UK/Europe/Japan Stablizer: 2 KVA Certificate of sole distribution from the manufacturer Optional With scrubber and Recirculating Water Vacuum Pump</p>	2
6.	<p>DUAL CHANNEL FLAME PHOTOMETER: FIVE ELEMENT (NA, K, LI, CA, Ba)</p> <p>Digital microprocessor controlled Dual Channel with built in automatic gas Control/optimisation dual channel simultaneously display of Sodium & Potassium results, built in Sodium, Potassium & Lithium Filters, with nebuliser, mixing and burner in one chamber, display results auto peak, able to hold the result built in RS232 for Printer/Computer Option, Basic Safety features including, Optical instant flame-on Detector, Air Pressure Detector, Cool Chimney. include pressure and vacuum regulators, regulator assemblies</p> <p>Sensitivity 0.1 ppm Na, K = 100 Specificity < 0.5% Re-producibility < 0.5% CV Linearity < 1% Aspiration 3 to 6 ml/min Reading Stabilization 15 sec or less Display Dual, Digital Air Supply 6 L/min. @ 11 psi Fuel Supply Propane/Natural Gas Power Supply 220 – 240 VAC Complete unit with standards accessories including Compressors and standards for Sodium, Potassium, Calcium, Barium and Lithium (one each of 1000 ppm) 500 ml each, operated on 220 Volts, With online 2 KVA UPS with maintenance free batteries for a backup of 2 hrs or more and LPG/LNG Cylinder Origin: EUROPE, USA, JAPAN, UK, AUSTRALIA</p>	

7.	<p>DOUBLE BEAMUV/VIS SPECTROPHOTOMETER</p> <p>Double beam spectrophotometer with fixed spectral resolution. Automatic wavelength calibration Quartz coated optics.</p> <p>Highly precise imaging conditions. Second cell position for measuring turbid samples. Possibility to integrate in diverse dissolution systems.</p> <p>Mode: Absorption, Transmission,</p> <p>Wavelength range: 190—900 nm</p> <p>Spectral bandwidth: 2 nm or less</p> <p>Photometric display Range of the software: to 8A</p> <p>Photometric Range: - 4 A to 4 A</p> <p>Photometric accuracy: ± 0.003 A</p> <p>Photometric reproducibility: ≤ 0.0005 A</p> <p>Stray light ≤ 0.03 % T</p> <p>Baseline stability at 500 nm: ≤ 0.0001 (RMS)</p> <p>Long-term stability at 500 nm: ± 0.0005 A/h</p> <p>Scanning speed: 12000 nm/min</p> <p>Display: LCD and on Computer</p> <p>Cuvettes: 5 Quartz & 10 Glass Cells</p> <p>Computer Core i5 (Branded) or better Complete with Software, Laser Jet Printer,</p> <p>2.0 KVA online UPS with maintenance free batteries for a backup of 2 hrs or more.</p> <p>Minimum 1 Yearwarranty</p> <p>Complete unit with standard accessories operated on Power 220 V</p> <p>Origin: USA/JAPAN/France/GERMANY/UK/SWITZERLAND/ITLY</p> <p>Certificate of sole distribution from the manufacturer</p>	1
8.	<p>HorizontalLaminarFlowHood;</p> <p>BenchTop quality all-welded stainless steel with a pharmaceutical grade finish. High Efficiency Particulate Air (HEPA) filter to remove organisms and particulates 0.3 micron in size with an efficiency of 99.99%.</p> <p>The Horizontal Flow Clean Bench shall contain fluorescent lamps hidden from direct operator view that will provide a lighting intensity of 200 foot candles/800 LUX or better on the work surface.</p> <p>LaminarAirFlow Velocity:0.35m/a,Noise Level:<67 dba</p> <p>Body:Scratch ProofStainlessSteel,</p> <p>it shall contain an Instrument Panel providing:</p> <p>a. On/Off Switch for Motor/Blower</p> <p>b. On/Off Switch for Fluorescent Lights</p> <p>c. Speed Control for Blower (recessed to prevent tampering)</p> <p>Complete unit with standard accessories operated on Power 220 V</p> <p>Including</p> <p>Stabilizer 2 KVAOR MORE</p> <p>Warranty 01 Year</p> <p>Origin:USA/UK/JAPAN/EUROPE</p> <p>Certificate of sole distribution from the manufacturer</p>	2
9	<p>pH meter</p> <p>DigitalBenchModelMicroprocessor Controlled with paralleltemperatureindication,pH range:-2.000to +19.999, pH resolution:0.005/0.01, MV range:-999.9to +999.9 mv, Accuracy:±0.5,</p> <p>Temperaturerange:-5to+105°C</p> <p>With standards of 4, 7 and 10 pH (each 500 ml)</p> <p>Warranty: 1 year</p> <p>Origin. Japan, USA, Europe, UK and Australia</p> <p>Power: 220 V</p>	1

10.	<p>Centrifuge Machine</p> <p>Table top high speed range from 200 to 14000 rpm or more, maximum RCF 16163, with brushless motor drive, microprocessor controlled digital. Display of speed or RCF, Pre selection speed or G force,Timer range 10 Sec to 99 minute with short run or continuous run. Last run memory 2 acceleration & deceleration curves soft or fast. Motorized lid lock, Auto Lid openemergency lid lock release,Minimal temperature increase during run, complete with angle rotor capacity 24 x 1.5 ml, complete unit operated on 220 Volts.Automatic imbalance detection, Soft brake function, Noise level< 51 Db(A). Must follow all safety standards.</p> <p>Include 48-place rotors (1.5/2.0 mL), a 16-place rotor for Eppendorf Tubes 5.0 mL and a swing-bucket rotor (24 × 1.5/2.0 mL) Max rotor capacity: 48 × 1.5/2.0 mL, 6 × 50 mL, with related adapters.</p> <p>2 KVA online UPS with maintenance free batteries, Origin: USA, Europe, UK, Japan, Australia. Warranty: 1 Years Power 220 V</p> <p>Certificate of sole distribution from the manufacturer</p>	1
11.	<p>Centrifuge Machine</p> <p>Table Top; maximum speed 8000 rpm or better, with brushless Motor Drive, Microprocessor controlled Digital. Display of Speed or RCF, Pre selection speed or G force, Timer range 10 Sec to 99 minute with short run or continuous run. Last run memory 2 acceleration & deceleration curves soft or fast. Motorized lid lock, Auto lid open emergency lid lock release, Minimal temperature increase during run, complete with Angle Rotor capacity2-7 ml tubes, 4-10 ml tubes, 9-15 ml tubes, 50 ml, 100 ml, complete unit operated on 220 Volts. Automatic imbalance detection, Soft brake function, Noise level< 51 Db(A). Must follow all safety standards.</p> <p>Origin: USA, Europe, UK, Japan, Australia</p> <p>Rotor capacity:All adaptors must be included.</p> <p>With online UPS and maintenance free batteries</p> <p>Warranty: 01 Year, Certificate of sole distribution from the manufacturer</p>	1
12.	<p>FlaskShaker</p> <p>Floor mounted with optional stand or benchtop mounted with suction feet,With 50 lbor more load capacity, with stand for flasks of various sizes, Variable speed 32 to 500 rpms or more, Digital tachometer, Digital timer,protected against overload and intrinsically safe operation</p> <p>Shaking motion: orbital</p> <p>Shaking movement: 20 mm or better</p> <p>Speed display: Digital</p> <p>Complete with Platform and fixing Clips 2-Nos each 100, 250, 500ml</p> <p>European or equivalent standard</p> <p>Stabilizer 1 KVA (Servo ®)</p> <p>Warranty 01 Year Power 220 V</p>	1
13.	<p>Vortex Mixer</p> <p>Fixed speed 0-2500 rpm, Continuous or touch system, Motor type: eccentric, oil less bearings, Die cast base avoiding unnecessary movement during use, Powerful vortex mixing action - for a range of tubes, Integral retort rod fixing.</p> <p>Accessories: Foam test tube insert for various test tube for use with universal adapter. Complete unit operated at 220-240 VAC</p> <p>Origin: European or equivalent</p> <p>Warranty 1 Year</p>	1

14.	<p>Auto Clave; Microprocessor controlled.Vertical Unit <i>Temperature Range 105 to 135° C; Interior Chamber Stainless steel, capacity 85 Lit interior chamber, with Built in Timer 1 to 250 Minutes and Autostart Timer 1 Minute to 7 Days, Pressure Gauge 0 to 0.4 MPa, Modes for Liquid, Solids and Agar Process, Complete with stainless Steel Baskets operated on 220 Volts with following Features:-</i></p> <ul style="list-style-type: none">a. Door safety Lock System.b. Dual Sensing Interlock mechanism.c. Double Sensing System for Air Exhaust.d. Programmable Autostarte. Process Status Displayf. Over Pressure Cutoff. Over Temperature Cutoff. <p><i>Pressure Safety valve.</i> <i>Auto discharge of cool air, and steam discharging automatically after sterilization,Complete Unit as above</i></p> <p>Origin: European, USA, UK, Australia, Japan Warranty: minimum 1 Year 2 KVA Stabilizer (Servo®)</p>	1
15.	<p>Digital Color Meter Colour separator with CIE L*a*b*C*h, CIE L*a*b* - white calibration - determination of reference values and samples - measuring aperture: Ø8 mm Origin: Europe or equivalent Warranty 01 Year</p>	1
16.	<p>WeatherStation complete unit to monitor air temperature, wind speed and direction, relative humidity, rainfall, solar radiation, evaporation, soil moisture. includes following: Wind Speed Sensor, Wind Direction Sensor, Temperature Sensor, Humidity Sensor, Solar Shield, Communication way: RS232, RS485, USB, GPRS (wireless) Power supply system: DC 12~36V, AC 220V, solar cells Software installation disk: Mounting parts (optional): light shutter boxes, field protection case, a tripod. Computer Core i7 (Branded) Complete with Software, Laser Jet Printer, 2.0 KVA online UPS with maintenance free batteries for a backup of 2 hrs or more. Warranty 01 Year 2 KVA Online UPS for 2 hours backup and maintenance free batteries</p>	1

B. DEPARTMENT OF PLANT BREEDING & GENETICS

S. No	Nameof Equipment with Specifications	Qty
1	Compound Microscope 45degreebinocular, observation tube,Quadruplefixed revolving nose piece,FlatField Semi-planobjectives4X,10X,40X spring and 100Xspringoilimmersion,Semi-Plan objectivesextendedclarity to the edgeoftheimage, Coarseand finefocusing,Tension Adjustment with builtin lowdrive,builtinvariablelightsource Halogen Light 12Volt,20Watt. Power 220 V Warranty 01 Year OriginEuropean or equivalent	5
2	CompoundMicroscope: Trinocular Microscope, Complete with 5.0 MP CCD, HDMI Microscope Camera & 32 Inch LCD TV & Software, Quadruple fixed revolving nose piece, flat field semi-plan objective 4x, 10x, 40x spring and 100x spring oil immersion, semi-plan objectives extended clarity to the edge of the image, course and fine. Volt, 20Watt. Power 220 V Warranty 01 Year Origin European or equivalent	1
3	Laboratory Refrigerator Refrigerator with freezer (Refrigerator. 300 L, Freezer 50 L OR MORE), Temperature Control: Microprocessor controlled, Temperature display: Digital Type, Exterior. Acrylic finish baked on Galvanized steel, Interior. Acrylic finish baked on Galvanized steel, Power voltage: 220 V, Origin: Europe, USA, UK, Japan, Australia Minimum Warranty: 1 Year Stabilizer: 2.0 KVA (Servo ®)	1
4	DigitalAnalyticalBalance: Bench top, Digital Microprocessor Controlled. Capacity 0-300 g with minimum display of 0.001 g. LCD display with microprocessor controlled unit with glass shield with sliding doors. Linearity < + 0.001g; Bench Top. Power 220 VAC, Warranty 01 Year Origin: Europe, USA, UK, Japan	1
5	Miscellaneous(Slides, Scissorsetc.) Slides (glass) with upper glass Scissors Large/Small/Medium	10 boxes 12 each
6	DigitalCamera: Digital SLR 22 MP or more; capable of shooting Full High Definition Movies; should be compatible with both EF and EF-S lenses (18-55 mm Lens); LCD of 3” or more; Complete with standard accessories, Memory cards: SD, SDHC, SDXC; shooting mode: Portrait, Landscape, Close-up, Sports, Night Portrait; Flash modes: Auto, Manual flash, Integrated Speedlite Transmitter;lithium ion rechargeable battery packs, Nikon or equivalent Warranty 01 Year	1

C. INSTITUTE OF SOIL & ENVIRONMENTAL SCIENCES

S. No	Name of Equipment with Specifications	Qty
1	Digital Analytical Balance: Digital Microprocessor Controlled. Capacity 0-300 g with minimum display of 0.001 g. LCD display with microprocessor controlled unit with glass shield with sliding doors. Linearity < + 0.001g; Bench Top. Power 220 VAC, Stabilizer 1KVA (Servo ®) Warranty 01 Year Origin: Europe, USA, UK, Japan	4
2	Digital Analytical Balance:	2

	Digital Microprocessor Controlled. Capacity 0-2000 g with minimum display of 0.1 g. LCD display with microprocessor controlled unit. Linearity; Bench Top. Power 220 VAC, Stabilizer1KVA (Servo®) Warranty 01 Year Origin: Europe, USA, UK, Japan	
3	Refrigerator: Capacity or more:Refrigerator.300L,Freezer50L or more; CFC free refrigeration; TemperatureControl: Microprocessorcontrolled,Temperaturedisplay: DigitalType; 3” or more; Thick CFC free PUF Insulation; Power voltage: 220 V, Origin: Europe, USA, UK, Japan, Australia or equivalent, With 2 KVA Stabilizer (Servo ®) Minimum Warranty 01 Year	1
4	KjeldahlDistillation Apparatus: FastDigestion System, Kjeldahl digestions with 6 heaters having heat control to provide precise heat to each flask. Each heating mantle has its own energy regulator incorporating an On/Off switch, Well capacity: 250-500 ml, Heating element temperature: 550-800 0C Case material: Stainless steel, LCD display, programmable reaction and distillation time, Power: 220 V , With 2 KVA Stabilizer (Servo ®) Origin: European, UK, USA, Japan Warranty 01 Year	1
5	pHMeter: Digital Bench-top microprocessor controlled with parallel temperature indication, pH range: -2.000 to +19.999, pH resolution: 0.005/0.01, MV range: -999.9 to +999.9 mv, Accuracy: +0.5, Temperature range: -5 to+105 °C, Origin: UK, USA, Japan, France, Germany, Italy, Switzerland With standards of pH 4.0, 7.0 and 10.0 pH from the same company Origin: Europe, USA, UK, Japan, Australia Power 220 V Warranty 01 Year	4
6	pHMeter: Digital portable MicroprocessorControlled with parallel temperature indication, pH range: -2.000 to +19.999, pH resolution: 0.005/0.01, MV range: -999.9 to +999.9 mv, Accuracy: +0.5, Temperature range: -5 to+105 °C, Origin: UK, USA, Japan, France, Germany, Italy, Switzerland With standards of pH 4.0, 7.0 and 10.0 pH from the same company Origin: Europe, USA, UK, Japan, Australia or equivalent Power 220 V Warranty 01 Year	2
7	ConductivityMeter: Digital Bench Top,Microprocessor Controlled with parallel temperature indication, conductivity range: 0.00 m S/cm to 500 mS/cm or better, accuracy + 0.5, Temperature Range: - 5.0 to +99.9 °C Origin: Europe, USA, UK, Japan, Australia or equivalent Power 220 V Warranty 01 Year Stabilizer 1 KVA (Servo®)	6
8	ConductivityMeter: Digital portable microprocessor Controlled with parallel temperature indication, conductivity range: 0.00 m to 500 mS/cm or better, accuracy + 0.5, Temperature Range: -5.0 to +99.9 oC Origin: Europe, USA, UK, Japan, Australia or equivalent Power 220 V Warranty 01 Year	2
9	Standard HydrometerApparatus along with dispersion cup and stirrer: ForsoiltexturalanalysisconsistingofHydrometer,Plungers, soil dispersion cup with motoretc. Bench type stirrer , speed 13000-18000 rpm; aluminium housing; complete with paddle cup a; Beaker position maintained by column retainer and baffle; 220-240V 50/60Hz 1pH. European or same origin. Warranty 1 Year	5 2
10	Waterbath: Digitalprecision thermostatically controlled upto100°C.interiorand Housing ismadeof stainlessteel with lid,WBoperatedon 220v; Capacity 20 L or more With 1 KVA Stabilizer (Servo ®) Warranty 01 Year	1

11	<p>Soil Sampling Set: Consisting of following items: Elderman auger (10cm dia), Root auger (8cm dia), Sampling tube (3.8cm dia) with adapter for connection with extension rod, Core cutter (10cm inside dia) with driving dolly and hammer. All made of stain less steel or anti corrosive material</p> <p>Warranty 01 Year</p>	1 complete set
12	<p>Mechanical Shaker: Benchtop digital controlled Reciprocal Shakers; brushless induction motor with variable frequency drive; Microprocessor based speed indicator cum controller with digital display; speed 20-250 or more rpm. Speed accuracy above 100 rpm: $\pm 1\%$ of set speed, Stroke 19 mm or more, maximum capacity 30lbs or more. Timer 1 S to 160 hrs. Power 220VA, Unit can be run in cold rooms, incubators and CO₂ environments from -10 to 60°C (14 to 140°F).</p> <p>Accessories</p> <p>Flask holders, utility box carriers and tiered platform systems. Heavy duty stand for shaker, Box carrier with glass cover, dual box carrier adapter, platform for flask holders of various size flasks ranging from 50 ml to 5 L.</p> <p>With 1 KVA stabilizer (Servo ®) Warranty 01 Year</p> <p>Origin: Europe, USA, UK, Japan, Australia or equivalent</p>	2
13	<p>Mechanical Shaker (Orbital): Heavy duty two and three tier orbital shaker; Universal Platform to accommodate interchangeable clamps of assorted sizes for different capacity of flasks; brushless induction motor with variable frequency drive; Microprocessor based speed indicator cum controller with digital display; with different clamps</p> <p>Shaking motion: orbital, Shaking movement: 10 mm, Motor rating input: 45 W, Permissible ON-time: 100%, Speed range infinitely adjustable: 0.250rpm, Time switch clock: 5-100 min or better With 1 KVA stabilizer (Servo ®)</p> <p>Origin: Europe, USA, UK, Japan, Australia Warranty 01 Year</p>	1
14	<p>Compound Microscope: 45 degree binocular, observation tube, Quadruple fixed revolving nose piece, Flat Field Semi-plan objectives 4X, 10X, 40X spring and 100X spring oil immersion, Semi-Plan objectives extended clarity to the edge of the image, Coarse and fine focusing, Tension Adjustment with built in low drive, built in variable light source Halogen Light 12 Volt, 20 Watt., Power 220 V</p> <p>European or equivalent Warranty 01 Year</p>	6
15	<p>Compound Microscope: Trinocular Microscope, Complete with 5.0 MP CCD, HDMI Microscope Camera & 32 Inch LCD TV & Software, Quadruple fixed revolving nose piece, flat field semi-plan objective 4x, 10x, 40x spring and 100x spring oil immersion, semi-plan objectives extended clarity to the edge of the image, course and fine.</p> <p>Volt, 20 Watt. Power 220 V with 1 KVA Stabilizer Warranty 01 Year Origin European or equivalent</p>	1
16	<p>Stereoscopic Microscope: Universal insert for Petri dishes 24-68, Binocular photo tube HC DMILT, with viewing angle 45 degree, beam splitter 0/100%, 100/0% & eyepieces 10x/18 Brightfield condenser S55/0.35, CPLAN (4x, 10x, L20x, L40x), light Filter set, Origin: European Or equivalent Power 220 V</p> <p>Warranty 01 Year</p>	7

17	<p>DUAL CHANNELFLAMEPHOTOMETER: FIVE ELEMENT(NA,K,LI,CA, Ba)</p> <p>Digital microprocessor controlled Dual Channel with built in automatic gas Control/optimisation dual channel simultaneously display of Sodium & Potassium results, built in Sodium, Potassium & Lithium Filters, with nebuliser, mixing and burner in one chamber, display results auto peak, able to hold the result built in RS232 for Printer/Computer Option, Basic Safety features including, Optical instant flame-on Detector, Air Pressure Detector, Cool Chimney. include pressure and vacuum regulators, regulator assemblies</p> <table><tr><td>Sensitivity</td><td>0.1 ppm Na, K = 100</td></tr><tr><td>Specificity</td><td>< 0.5%</td></tr><tr><td>Re-productibility</td><td>< 0.5% CV</td></tr><tr><td>Linearity</td><td>< 1%</td></tr><tr><td>Aspiration</td><td>3 to 6 ml/min</td></tr><tr><td>Reading Stabilization</td><td>15 sec or less</td></tr><tr><td>Display</td><td>Dual, Digital</td></tr><tr><td>Air/ Compressor Supply</td><td>6 L/min. @ 11 psi</td></tr><tr><td>Fuel Supply</td><td>Propane/Natural Gas</td></tr><tr><td>Power Supply</td><td>220 – 240 VAC</td></tr></table> <p>Complete unit with standards accessories including Compressors and standards for Sodium, Potassium, Calcium, Barium and Lithium (one each of 1000 ppm) 500 ml each, operated on 220 Volts, With online UPS with maintenance free batteries for a backup of 2 hrs or more and LPG/LNG Cylinder</p> <p>Origin: EUROPE, USA, JAPAN, UK, AUSTRALIA</p> <p>1 Year warranty:</p>	Sensitivity	0.1 ppm Na, K = 100	Specificity	< 0.5%	Re-productibility	< 0.5% CV	Linearity	< 1%	Aspiration	3 to 6 ml/min	Reading Stabilization	15 sec or less	Display	Dual, Digital	Air/ Compressor Supply	6 L/min. @ 11 psi	Fuel Supply	Propane/Natural Gas	Power Supply	220 – 240 VAC	1				
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Power Supply	220 – 240 VAC																									
18	<p>DUALBEAMUV/VIS SPECTROPHOTOMETERS</p> <p>Double beam spectrophotometer with fixed spectral resolution Features, Holmium oxide filter for automatic wavelength calibration Quartz coated optics.</p> <p>Highly precise imaging conditions. Second cell position for measuring turbid samples. Possibility to integrate in diverse dissolution systems. Mode: Absorption, Transmission,</p> <table><tr><td>Wavelength range:</td><td>190—900 nm</td></tr><tr><td>Spectral bandwidth:</td><td>2 nm or less</td></tr><tr><td>Photometric display Range of the software:</td><td>to 8A</td></tr><tr><td>Photometric Range:</td><td>- 4 A to 4 A</td></tr><tr><td>Photometric accuracy:</td><td>± 0.003 A</td></tr><tr><td>Photometric reproducibility:</td><td>≤ 0.0005 A</td></tr><tr><td>Stray light</td><td>≤ 0.03 % T</td></tr><tr><td>Baseline stability at 500 nm:</td><td>≤ 0.0001 (RMS)</td></tr><tr><td>Long-term stability at 500 nm:</td><td>± 0.0005 A/h</td></tr><tr><td>Scanning speed:</td><td>12000 nm/min</td></tr><tr><td>Display:</td><td>LCD and on Computer</td></tr><tr><td>With Cuvettes:</td><td>5 Quartz & 10 Glass Cells</td></tr></table> <p>Computer Core i7 (Branded) or better Complete with Software, Laser Jet Printer, 2 KVA online UPS with maintenance free batteries for a backup of 2 hrs or more.</p> <p>Minimum 1 Yearwarranty</p> <p>Origin: Europe, USA, Japan, UK, Australia</p>	Wavelength range:	190—900 nm	Spectral bandwidth:	2 nm or less	Photometric display Range of the software:	to 8A	Photometric Range:	- 4 A to 4 A	Photometric accuracy:	± 0.003 A	Photometric reproducibility:	≤ 0.0005 A	Stray light	≤ 0.03 % T	Baseline stability at 500 nm:	≤ 0.0001 (RMS)	Long-term stability at 500 nm:	± 0.0005 A/h	Scanning speed:	12000 nm/min	Display:	LCD and on Computer	With Cuvettes:	5 Quartz & 10 Glass Cells	1
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With Cuvettes:	5 Quartz & 10 Glass Cells																									

19	WaterDistillery: Double Unit, Quartz / Silica Glass based heating tube/metal element, Output: 8L/hr or better, Heaters: Metals with Silica quartz, Power: 220-240 V, Purity of water: 1-3 µS/cm, Presence of low water cut off device for operations safety Origin: Europe, USA, Japan, UK, Australia Warranty 01 Year	1
20	WaterDeionizer: Capacity: 30L, (HPLC Grade) Deionized Water; <1 CFU/ml achievable without point-of-use filter; Type II/Type II+ pure water Purity beyond 18.2 MΩ-cm; Full spectrum UV lamp for low microbial and organic specification; high capacity purification cartridges for longer life and lower running costs; Flexible dispensing options: >> Variable flow – drop by drop or up to 2 liters per minute >>Auto volume dispense from 50 ml to 60 liters TOC <1 ppb, Bacteria < 0.1 CFU/ml, Endotoxins < 0.001 EU/ml, pH Effectively Neutral, Particles ultra-filtration, Built in Conductivity cell, Dual Wavelength UV Lamp, Sterile Filter 0.2 µm, Power Supply 220-240VAC-50Hz With spare columns: Optional: 5 KVA Stabilizer Warranty 01 Year Origin: USA/Japan/France/Germany/UK/Switzerland	1
21	HotPlate Automaticreversal,Temperature range 50-300°C,operatedon220V. Platform to house about 30 conical flasks of 50 ml or 40”X12”. European or equivalent. Warranty 01 Year	2
22	Micropipettes Adjustable Volume single channel, Volume range 1 µl to 10 µl, systematic error ±0.10 µl, Volume range 10 µl to 100 µl, systematic error ±0.80 µl, Volume range 100 µl to 1000 µl, systematic error ±2.40 µl, Fully autoclave able, The pipette must have calibration/adjustment window along with volume window; The Pipette should have 4 digit displays, the pipette should have spring loaded tip cone. Pipette stand for housing of three pipettes. Origin: USA, Europe, Japan, Australia, UK, Warranty: 1 Year	3(1+1+1)
23	PlantSampleGrinder: Continuouslyoperatinguniversalgrinder,powerfuldriveeasytoclean workingsurfacemade ofstainlesssteel,,allmaterials in contact,withoverload protection feature fittedwith impactgrindinghead forcrushing brittle had materials such asminerals,building materials,dry and brittleplantsand soil samplesuptohardnessMohs6 or better Sieves:0.2 to 6mm mesh size, Motor: Wear free three phase motor, Gearless direct drive, Speed range variable:50 to 6000rpm, Complete with device cable, sieve set from 0.2 to 6 mm and related accessories,, Tool set, wooden frame with collection tubes. Origin: USA, Europe, Japan, Australia, UK, Warranty: 1 Year, with 2 KVA Stabilizer (Servo ®) operated on Power 220 V	1

D. DEPARTMENT OF PLANT PATHOLOGY





S.#	Name of Equipment with Specifications	Qty.
1.	Digital Analytical Balance: Digital Microprocessor Controlled. Capacity 0-300 g with minimum display of 0.001 g. LCD display with microprocessor controlled unit with glass shield with sliding doors. Linearity < + 0.001g; Bench Top. Power 220 VAC, Warranty 01 Year Origin: USA/UK/Europe/Japan	2
2.	Slides, Spatula, Scissors Glass slides with lids (18 x 18 mm) Germany/France, Steel spatula Scissors small, medium and large	5 boxes 2 Dozens (Double Pack)

3	Refrigerator: Capacity: Refrigerator.300L,Freezer50L or more; CFC free refrigeration; TemperatureControl: Microprocessorcontrolled,Temperaturedisplay: DigitalType; 3” or more Thick CFC free PUF Insulation; Power voltage: 220 V. Origin: Europe, USA, UK, Japan, Australia or equivalent, With 2 KVA Stabilizer (Servo ®) Warranty 01 Year	1
4	pHMeter: Digital Bench-top microprocessor controlled with parallel temperature indication, pH range: -2.000 to +19.999, pH resolution: 0.005/0.01, MV range: -999.9 to +999.9 mv, Accuracy: +0.5, With standards of pH 4.0, 7.0 and 10.0 pH (500 ml each) Origin: UK, USA, Japan, France, Germany Warranty 01 Year	3
5	pHMeter: Digital portable microprocessor controlled with parallel temperature indication, pH range: -2.000 to +19.999, pH resolution: 0.005/0.01, MV range: -999.9 to +999.9 mv, Accuracy: +0.5, With standards of pH 4.0, 7.0 and 10.0 pH (500 ml each) Origin: UK, USA, Japan, France, Germany Warranty 01 Year	3
6	Plant Disease Specimen Boxes: Wooden/metal box with glass lid on top for mounting of various plant samples. Dimension. 500mmX350 mm X100 mm or more. Glass lid opening from one side or sliding with lock.	2
7	Compound Microscope: 45 degree binocularobservation tube, Quadruple fixed revolving nose piece,FlatFieldSemi-planobjectives 4X, 10X, 40X springand 100X spring oilimmersion,Semi-Plan objectivesextended claritytotheedge oftheimage, Coarse and fine focusing, Tension Adjustment with builtin lowdrive, builtin variablelightsourceHalogen Light12Volt,20Watt. Warranty 01 Year Origin: USA or equivalent Power 220 V	9
8	CompoundMicroscope: Trinocular Microscope, Complete with 5.0 MP CCD, HDMI Microscope Camera & 32 Inch LCD TV & Software, Quadruple fixed revolving nose piece, flat field semi-plan objective 4x, 10x, 40x spring and 100x spring oil immersion, semi-plan objectives extended clarity to the edge of the image, course and fine. Volt, 20Watt. Power 220 V Stabilizer Warranty 01 Year Origin, USA, UK, Germany or equivalent	1
9	StereoscopicMicroscope: Universalinsertfor Petri dishes 24-68, Binocular phototube HCDM ILT,with viewing angle 45 degree, beam splitter 0/100%,100/0%&eyepieces 10x/18, Brightfield condenserS 55/0.35,CPLAN (4x, 10x,L20x, L40x),LightFilterset Warrantv 01 YearOrigin: UK or equivalent	10
10	Micropipette: 10-1000 ul, Fully autoclave able, must have calibration/adjustment window along with volume window; 4 digit displays, with spring loaded tip cone. Origin: USA, Europe, Japan, Australia, UK Warranty: minimum 01 year	1
11	Electrophoresis Apparatus: Vertical Gel Electrophoresis Apparatus able to make and run two gels simultaneously. UV Transparent whole unit included lid to monitor the movement of bands during electrophoresis, easy lid removal, Maximum gel size 8x11 cm, 3combs for gel thickness 0.5, 0.75, 1.0 mm, minimum buffer volume external 500 ml, injection guide unit, compactdesign, complete unit includes: Electrophoresis tank, casting module glass plates, gel plates, alignment cord, glass plate separator. With Electrophoresis Power Supply, Digital Voltage Range: 10-300 V in 01 V step, touch panel, status alarm, 04 parallel outputwith timer control 0–999 minute, operated on 220 Volts, with power backup for 2 hours (online UPS 1 KVA with maintenance free batteries) Warranty: minimum 1 YearOrigin: UK/USA/Japan/France/Germany	1

12	<p>Gel Documentation: Documentation and analysis fluorescence applications. Consist of Monochrome CCD, Camera with Sensor Interline Transfer CCD on Chip Integration to produce images with 16 bit image depth, Resolution RS 170 A, CCIR752x852 (V), Signal Noise 56 DB, Zoom Lens 8-48Mm F1.2 Close Up Filter, Dark Room with Built In Drawer Frame with built in internal LED light, Fixed/Moveable Camera SupportEPI White Light and Trans UV Light Illumination with Safety Switch for UV Light without control panel, latest analysis softwarewith full analysis using Single Window display of all data, images, and histogram simultaneously Multipleexperiments, Zoom control, Automatic track, band and edge finding with manual override Automatic detection and correction for distorted tracks and grimaced or curved bands, Single band/track data, Molecular weight/base pair, Rf, quantity determination, Automatic/manual marker assign Cross gel track profiling (ability to overlay track histograms from different gels) Colony counting (withcoloured colonies) Automatic spot/blot analysis with full distortion detection Image contrast/brightness adjustment User editing of Libraries. Automatic 1D gel, Elisa plate analysis Direct link to Excel, Automatic Band matching.</p> <p>With Computer Core i7 or later (Branded):>2.4 GHz, Intel Original Mother Board, 4 GB RAM, minimum200 GB Hard Disc, 36 GB Flash Drive, Keyboard, Mouse, ATX casing double fan with laser jet printer.</p>	1
13	<p>Water Bath: digital precision thermostatically controlled upto 100°C, Interior and Housing is made of stainless steel series, WB operated on220 V, capacity 22 L or more.</p> <p>European or equivalent with minimum warranty of 1 year.</p> <p>Origin: USA/UK or equivalent</p>	1

E. DEPARTMENTOFAGRICULTURALENTOMOLOGY

S.#	Nameof Equipment	Qty.
1	<p>CompoundMicroscope: 45degreebinocular observation tube,Quadruple fixedrevolvingnose piece,FlatFieldSemi-planobjectives4X,10X,40X springand100Xspringoilimmersion, Semi-Plan objectives extendedclaritytotheedgeofthe image,Coarseandfinefocusing, Tension Adjustment with built in low drive, built in variable light source Halogen Light 12 Volt, 20 Watt.</p> <p>Power 220 V</p>	4
2	<p>CompoundMicroscope: Trinocular Microscope, Complete with 5.0 MP CCD, HDMI Microscope Camera & 32 Inch LCD TV & Software, Quadruple fixed revolving nose piece, flat field semi-plan objective 4x, 10x, 40x spring and 100x spring oil immersion, semi-plan objectives extended clarity to the edge of the image, course and fine.</p> <p>Volt, 20Watt.Power 220 V</p> <p>Warranty 01 Year Origin: UK, USA or equivalent</p>	1
3.	<p>GeneralMicroscope: Quadruplefixedrevolving nosepiece,FlatFieldSemi-planobjectives4x,10x, 40xspringand100xspringoilimmersion, Semi-Planobjectivesextendedclarityto theedgeof the image,coarseandFineFocusing, Tension Adjustment with built in low drive, built in variable light source Halogen Light 12 Vol., 20 Watt. Power 220 V</p>	6
4.	<p>Refrigerator: Capacity: Refrigerator.300L,Freezer50L or more; CFC free refrigeration; TemperatureControl: Microprocessorcontrolled,Temperaturedisplay: DigitalType; 3” or more Thick CFC free PUF Insulation; Power voltage: 220 V.</p> <p>Origin: Europe, USA, UK, Japan, Australia or equivalent, With 2 KVA Stabilizer (Servo ®) Warranty 01 Year</p>	1

5	<p>InsectCollection Boxes:</p> <p>Insect collection box (A) Display Case, 12 X 18" Plastazote Pin. Bottom, Insect catching nets (B) 3 foot wooden handle with aluminum sleeve, Preformed wire net frame, 12", 2-foot net bag, insect killing bottles (C) and insect wing stretch boxes (D) Both boards feature adjustable horizontal pinning grooves, from 0 to 7/8" (0-22mm). Basswood mounting surfaces are angled at 165°. Balsa pinning strip is 3/8" (16mm) thick, 1" (20mm) wide. Boards are 12" (305mm) long, insect pins (E)etc</p> <div></div>	10 each
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F. DEPARTMENT OF AGRONOMY

S.#	Name of Equipment	Qty.
1	<p>Soil Sampling Set: Consisting of following items: Alderman auger (120 cm dia), Root auger (8 cm dia), Sampling tube (3.8 cm dia) with adapter for connection with extension rod, core cutter (10 cm inside dia) with driving dolly and hammer. Warranty 01 Year</p> <p>Complete set.</p>	1
2.	<p>Hand Tools: spade, sickles, khurpas, etc. general specifications, locally made.</p>	LS
3.	<p>Conductivity Meter: Digital Benchtop, Microprocessor Controlled with parallel temperature indication, Conductivity range: 0.00 mS/cm to 500 mS/cm, accuracy ± 0.5, Temperature Range: -5.0 to +99.9°C.</p>	1
4	<p>Leaf Area Meter: User-friendly area resolution of either 1 mm² or 0.1 mm² without having to change optics. Area, Length, Maximum Width, Average Width. A single lens with adjustable resolution of 0.1 or 1 mm². High accuracy and repeatability, and fast, continuous operation for large quantities of samples with individual or cumulative area recorded. Large (25 cm wide, 2.5 cm thick with 1 mm² resolution) or small (<1 cm² area when using 0.1 mm² resolution) leaves or other objects, including needles. Quiet belt system with adjustable press roller to flatten curled leaves. Data on instrument LED display or on the computer screen using Windows® software to collect and store data via RS-232 or USB. Power 220 V, European or equivalent with warranty of 1 Year. Origin: USA, UK, France, etc.</p>	2
5	<p>Environmental Monitoring System/ weather station.</p> <p>Professional weather station meant for agricultural purposes with a standard set of sensors and capable of reading/capturing data from any sensor including a data logger to capture this data, a modem to communicate the information to the Smart Weather software located on the central control computer and a power supply. Standard sensors may include wind speed and direction, relative humidity, air and soil temperature, barometric pressure, rainfall, and solar radiation. With latest software to download and control the data.</p> <p>Wind speed: 0-75 m/s with $\pm 1\%$, Wind Director: 0-358 with ± 2, Air Temperature: -50 to +150°C with $\pm 0.5^\circ\text{C}$ accuracy, Relative Humidity: 0-100% with ± 2 accuracy, Rainfall: 500 mm/hr with 0.2 mm/tip accuracy, Solar Radiation: 0-2000 W/m with ± 3 accuracy, Soil Temperature: -50 to +150°C with ± 1 accuracy. Power: 220 V With online UPS for 2 hours backup and maintenance free batteries.</p> <p>Option to run on Solar panels.</p> <p>WS-PRO2 Weather Station: Rain Bird or equivalent</p> <p>Warranty 01 Year</p>	1

G. DEPARTMENT OF ANIMAL SCIENCES

S.#	Name of Equipment	Qty.
1	Compound Microscope: 45 degree binocular observation tube, Quadruple fixed revolving nose piece, Flat Field Semi-plan objectives 4X, 10X, 40X spring and 100X spring oil immersion, Semi-Plan objectives extended clarity to the edge of the image, Coarse and fine focusing, Tension Adjustment with built in low drive, built in variable light source Halogen Light 12 Volt, 20 Watt. Power 220 V. Warranty 01 Year. Origin: UK or equivalent	2
2	Compound Microscope: Trinocular Microscope, Complete with 5.0 MP CCD, HDMI Microscope Camera & 32 Inch LCD TV & Software, Quadruple fixed revolving nose piece, flat field semi-plan objective 4x, 10x, 40x spring and 100x spring oil immersion, semi-plan objectives extended clarity to the edge of the image, course and fine. Volt, 20 Watt. Power 220 VAC Warranty 01 Year Origin: Europe or equivalent	1
3.	Gerber Machine with tubes: Microprocessor control with an LED display to show speed, run time, temperature and error messages; Automatic brake; Cover lock; Temperature (setting up to 65 °C) and Time (0 to 255 minutes), Centrifuge housing made of stainless steel, speed range 200-1300 rpm, Transparent Lid, Complete with head and Buckets for 24 Butyrometers complete unit operated on 220 V. European, USA, UK or Japan Origin.	1
4.	Water Distillery: Output 8L/hr. Heaters Metals with silica quartz, Power: 220-240 V, Purity of water 1-3µs/cm. Presence of low water cut off device for operations safety with 1 KVA stabilizer. Warranty: 1 Year European, USA, UK or Japan Origin.	1
5.	Hot Plate (Stirrer) Automatic reversal; Speed upto 1200 rpm, Stirring capacity of 15 Liter, Maximum temperature of 370°C, Operated on 220V. Warranty: 1 Year, European, USA, UK or Japan Origin.	1
6.	Digital Analytical balance: Microprocessor controlled. Capacity 0-300g or more with minimum display of 0.001g. Accuracy: 0.001 g, with glass cover and slide. With stabilizer (1KVA). European, USA, UK or Japan Origin. Warranty 01 Year	1
7.	Water bath: Digital precision thermostatically controlled upto 100°C, Interior and Housing is made of stainless steel series, WB operated on 220V capacity 22L or more. European or equivalent Warranty 01 Year	1
8.	Stereoscopic Microscopes: Universal insert for Petri dishes 24-68, Binocular phototube HCDM ILT, with viewing angle 45 degree, beam splitter 0/100%, 100/0% & eyepieces 10x/18, Brightfield condenser S 55/0.35, C PLAN (4x, 10x, L20x, L40x), Light Filter set Warranty 01 Year Origin: Europe or equivalent	2
9.	Wiley Mini-Mill (Grinder) Stainless Steel: Polished chamber; two stationary blades; and a rotor with four cutting edges, 1.6 inch diameter milling chamber capable 1 to 25 gram sample volume, Speed variable upto 3000 rpm, all steel construction along with removable safety glass plate. Origin: UK or Japan OR Equivalent Warranty 01 Year	1

10.	Micro CentrifugeMachine: Capacity: 12x1.5/2 ml tubes. Rotor: Aluminum Metal rotor bowl. Acceleration and deceleration time 20 sec or less. Speed: 13000 Rpm or more (100 Rpm steps), 12000 x g. Noise Level <49 Db(A). Timer: 15 S to 60 min. Separate short-spin key for quick centrifugation. Operational Ventilation flow and Automatic Lid opening at the end of run. Router with different adapters. Stabilizer: 2.5 KVA or better Origin: USA, Europe, Japan, UK	1
11.	Vortex Mixer Motion Orbital, Speed Range (RPM) 0 - 4,500, Operating Mode Touch or Continuous, Power Supply Universal (90 to 230V, 50 / 60 Hz.), Motor Brush-less DC motor, Permissible ambient temperature 4 - 65 °C along with additional heads for microplates, micro-tubes, PCR strip tubes, 15 and 50 ml tubes and blood tubes Accessories: Foam test tube insert for various test tube for use with universal adapter, European or equivalent Warranty 01 Year, Origin: USA/Japan/Germany/France/UK	1
12.	Microscopic slides with cover slips Cover slides (18 x 18 mm) Germany/France,	1 cartoon 2 Dozens (Double Pack)
13.	California Mastitis kit (T-344) or equivalent	2
14.	Tattooing & Branding Kit Tattooing and Branding Kit (T-569) or equivalent (Small and Large animals) Tattooing machine with numbers and alphabet options	2
15.	Semen collection equipment including Artificial Vagina (AV; 30 and 40 cm) for both sheep and bull, Smooth and rough liner, felt covers, semen collection tubes, special cone etc.	1

16.	Tooth cutter & Rasp (Complete unit)	1
17.	Castrator, small and large Castrator 9" 12" 10"	3
18.	Ear tags: Tagging machine, Ear Tags (small and large) Markers (permanent)	2 50 50 2
19	Syringes, Metallic Syringe (10 ml and 20 ml both steel and plastic material), Vaccinator (5 CC capacity), Bird feeding syringe (10 ml) Drenching gun (Automatic) metallic (20 and 30 ml)	20 each 5 20 5
20	Artificial Insemination apparatus complete unit with AI Guns, AI gun cover, inner liner, insemination slit sheath and storage facilities etc.	1
21	Animal health related apparatus, diagnostics apparatus etc. Clinical thermometer (Mercury and digital), Milk Catheter, Teat dilator, Teat structure remover, Teat splitter, Teat plug, Hoof cutter (Cattle and Buffalo), Hoof knife set, Mouth gag vernal, Trocar and cannula with metal handle, Magnet gun metal, Digital scale, Weight Measuring Tape, Nose Rings for bulls, Tail Dockers (cutter), Firing Iron set, Electric dehorner, Catheter for cattle, Castration clumps, Vaginal speculum, Stethoscope, Postmortem set, Obstetric set, Vet. Surgical set, Doctor coat, Heamocytometer, Sahli's Apparatus, ESR stand with tubes, IV needle or intrathecal needle, Steel table for medical accessories without wheels,	2 each
22	Liquid Nitrogen Cylinder A-1 etc. Liquid Nitrogen Cylinder A-1, Tanks of different capacity (3, 6 and 10 Liters) with multi-layer insulation along with maximum static holding capacity: 42 days. Warranty 01 Year Origin USA/UK/JAPAN/France/GERMANY	3 (1 + 1 + 1)

H. FOODSCIENCEANDTECHNOLOGY

S.#	Nameof Equipment	Qty.
1	Refrigerator: Temperature 2to-14°CCapacity: Refrigerator. 300L,Freezer80L,Temperature Control:Microprocessor controlled,Temperature display:Digital Type,Exterior: Acrylic finish baked onGalvanizedsteel,Interior:Powervoltage:220V Stabilizer: 1 KVA, Samsung or equivalent Warranty 01 Year	1
2	MicrowaveOven: Function: Convection, Capacity (Liter): 30, Auto Cook Menu: 60 or more. Electrolux or equivalent Warranty 01 Year	2
3	BakingOven: Size: 50 No. of Trays or more, Temperature: 40° to 250°C ±.075°c, Material: Aluminum coated mild steel chamber, Heating system: Heating circulation system, Power: Electrical/Gas, Parameter control: Digital control system (Air circulation system Heat control), PID: Proportional integral derivative control, Others: Direct Reading Thermostat, easy clean powder coated body European or equivalent with 1 Year warranty	1

4	FillingandCappingMachine: Automatic capping machine, Suitable for soft drinks, carbonated drinks, juices and mineral water, Production capacity: 700 to 3000 bottle/Hour, Power: 25W - 250W (Single Phase , 220V 50HZ), Weight: 8 – 40 kg, Filling system: Single phase/Three phase, Nozzles: Spring loaded, Filling accuracy: Volumetric Piston Filler, Others: suitable for PET, PVC and glass bottles. European or equivalent with 1 Year warranty	1
5	Abrasionpeeler: Suitable for peeling of potatoes, celeriac, carrots (pre-cut) and other tuberous products, Power: Electric 208-480 V, 50 or 60 Hz, Water chamber: Regulated water spraying system, Capacity: Up to 30 kg/per hour depending on kind, size and quality of the product, Hygienic design: Easy to clean and disinfect, 10 abrasive rollers: 5 left and 5 right coated with carborundum European or equivalent with 1 Year warranty	1
6	FinePulper: Capacity: 50 to 100 Kg per hour, Electric Power: Single phase 4-7.5 HP, Sieve size: Filter Sieve (10”Dia x 36” Length) SS 304 L Coarse Screen Sieve 2 mm and Fine Screen Sieve Hole 0.6mm, Hopper: SS304L – 2mm Wall Thickness, Material: Stainless Steel to avoid rusting European or equivalent with 1 Year warranty	1
7	Juiceextractor: Suitable for orange, grapefruit, lemon, lime, Capacity: 6-8 tone per hour, Material: Stainless steel, Washing system: Automatic washing system with piping, Dimension: Length 1740mm, width 1380mm, height 1710mm, or more Power: 4KW as standard European or equivalent with 1 Year warranty	1
8	DoughMixer: Capacity: 50 kg, Material: Stainless steel, Model: Trollex Spiral or equivalent, Power: Powerful 3 HP motor, Speed: upto 300 RPM European or equivalent with 1 Year warranty	1

I. CENTRAL LABORATORY – I (GENERAL SAMPLE PREPARATION)

S.#	Name of Equipment	Qty.
1	Laboratory Refrigerator: Vertical type. Capacity: Refrigerator. 300L, Freezer 80L, Temperature Control: Microprocessor controlled, Temperature display: Digital Type, Exterior: Acrylic finish baked on Galvanized steel, Interior: Power voltage: 220 V, with Stabilizer: 2.5 KVA (Servo ®). Two years minimum warranty. Origin: Australia, USA, UK, Japan, Europe	1
2	Laminar Flow Cabinet: Vertical bench top with digital electronic blower monitor and speed controller. Internal work space 1100X500X500 mm or better, Filter Type: Hepa Filter with 99.999% at 0.3µm, Body: Scratch Proof Stainless Steel, transparent UV-Tempered glass side walls with built in fluorescent light and universal electrical socket outlets, Light: Fluorescent Built in Action, Laminar Air Flow Velocity: 0.35m/a, Noise Level: 67 dba, light intensity: 800 lux. Velocity: 0.5m/sec +/- 0.2. Fluorescent lamp: 20W x 1 ea. Germicidal lamp (UV): 20W x 2 ea or better. Fan motor: 1/3 Hp. complete unit operated on 220 volts 1 Year parts and service warranty	2
3	Autoclave: Vertical type: Working Volume: 80L or better, temperature range: 105-135 oC, interior chamber Stainless steel, built in timer: 1-250 mins, auto-start timer: 1 min to 7 days, pressure guage: 0-0.4, different modes for liquids, solids and agar process, 4 baskets of various sizes stainless steel, voltage: 220Volts. with following Features:- a. Electromechanical Lock System or better. b. Dual Sensing Interlock mechanism. c. Double Sensing System for Air Exhaust. d. Process Status Display e. Over Pressure Cutoff. Over Temperature Cutoff. <i>Pressure Safety valve.</i> <i>With 2 KVA stabilizer</i> Origin: Japan, UK, USA, Europe Minimum warranty of 1 Year	2
4	Water Distillery: Output: 8L/hr, Silica/Glass made, Heaters: Metals with silica quartz, power: 220-240 V, purity of water: 1-3µS/cm, Presence of low water cut off device for operations safety. Japan, USA, UK, Europe or Australia Minimum warranty: 1 Year.	1
5	Digital Orbital Shaker: Heavy duty two and three tier Compact, flat laboratory shakers with orbital motion, adjustable timer, digital display of speed, protected against overload and intrinsically safe operation with shaking motion movement: 20mm, brushless induction motor with variable frequency drive; permissible ON-time: 100%, Speed range infinitely adjustable: 0 to 500rpm, Time switch clock: 0 to 49 hours, 1 second increments or continuous, Complete with Platform and fixing Clips 2-Nos each 100, 250, 500ml, and 1000ml. Power: 220 VAC, with 4 interchangeable plug adapters, Ambient conditions: 2° to 40°C; 20 to 80% RH, non-condensing with 1 KVA Stabilizer (Copper winding), Origin: Europe, UK, Japan, USA. Warranty: 1 Year	1

6	<p>RotaryEvaporators: Evaporation volume: 50-3000 ml, Brushless DC motor with electronic speed control, speed display: LED/LCD; speed input: through control knob at the drive, Head tilt angle: 0-600, Lift Motorized: Drive: Capacitor motor, input power:95 W, lifting height: 150 mm or better, lifting speed: 1.6 cm/sec, Heating Bath Digital: Heating capacity:1000 W, temperature range: 20-200°C, Bath material: Stainless steel or Teflon coated; Bath Volume: 4.5 L or more; rotation speed: 20-280 rpm, bath temperature setting digital, material heating bath: stain less steel.</p> <p>Condenser: vertical or diagonal with 1200 cm²or morecondensing surface; GlassSets: Glass set G-1 with diagonal condenser.with 1Litre, 2.5 and 5 L evaporating and receiving flask as standard. operated on 220 Volts.</p> <p>Vacuum Pump Suitable for Rotary Evaporators, technical Specification Number of Head / Stages2; Maximum Pumping Speed 0.75 m3h/0.9 m3h Ultimate Vacuum12 mbar, Ultimate Vacuum with Gas Ballast 20 mbar Operated on 220 Volts, With Warranty 1 Year; with Stabilizer 5 KVA (Servo®), Origin of complete system: Japan, UK, USA, Europe</p> <p>Additional option Chiller with air cooled refrigeration and built in circulationpump, Evaporator Tank and housing all made of stainlesssteel, digital temperature adjustment and digital temperaturedisplay, built in micro-</p>	1
7	<p>Laboratory Fume Hood:perchloric acid digestion, acid-resistant, high visibility hood; working zone:1120x680x1200 mm or more working area: main body: phenolic Resin Laminates, air foil: Stainless Steel Grade 304 with scrubber. Corrosion free body and working area, with gas and water supply plumbed to top, smooth single piece workspace with drainage point, piping and sprayers for wash-down system, with powerful exhaust, glass door/slide to prevent acid fumes coming out, with all safety features, operated at 220 VA. Complete unitwith Gas &Water Valves, Exhaust fan with installation.</p> <p>With complete scrubber system to neutralize the acid fumes. with stabilizer 2 KVA (Servo®) Japan, USA, UK, Europe Origin, with Warranty 1 Year</p>	1

8	<p>Freeze Dryer: bench top unit. Microprocessor controlled. LCD display parameters include vacuum, condenser temperature etc. Stainless steel worktop, ice condenser (CFC and H-CFC-free), and ice condenser chamber with drain valve for defrosted water, ice capacity max. 4 kg, ice condenser performance max. 4 kg/24 h, ice condenser temperature -60°C or better, ice condenser chamber 6.5 litres, with hot gas defrosting, vertical lay-out, suitable for freeze drying in round flasks, wide neck filter bottles and/or on unheated shelves, also suitable as a cooling trap for rotational-vacuum-concentrators, equipped with process controller, Clearly arranged graphic LC-display showing the process data (ice condenser temperature, process time, section time and vacuum in combination with vacuum measuring sensor. Vacuum pump, with hose and base compatible with the dryer, acrylic chamber, exhaust filter. Rubber valve for connection of vessels, valve to release vacuum, electromagnetic stop valve, vacuum measuring sensor, flask 100 mL (6). Complete unit for working with all related accessories operated at 220 VA. With 2 hrs power back up (online UPS with maintenance free batteries). Certificates of Local team of Factory Trained engineers. Sole supplier certificate from the company. Origin: Australia, UK, USA, Japan, Europe Warranty: 1 Year</p>	1
9	<p>Cooled Incubator: Digital microprocessor programmable control, Insulation: high density CFC free Poly Urethane Foam; electronic thermostat, temperature range: -10 to +50 oC with three shelves, Temperature accuracy: $\pm 0.5 / 0.2$ °C, interior finish: stainless steel, cooling and heating systems forced circulation, capacity 400 L. Number of trays: 4; Digital Temperature setting/indication, Automatic setting of Temperature alarm, CFC Refrigeration, Operated on 220 Volts. Online uninterrupted power supply (2 KVA) with maintenance free batteries. Certificates of Local team of Factory Trained engineers. Sole supplier certificate from the company. Warranty 01 Year Stabilizer 2KVA (Servo®) Origin: USA/Japan/France/Germany/Italy/Switzerland/UK</p>	2
10	<p>Ultra Low Temperature Freezers: Upright. Minimum temperature : - 80°C or less , temperature; control: microprocessor, accuracy: + 1°C, Capacity: 400 L or more with double door; Thick polyurethane foam 120 mm or more; Automatic setting of Temperature alarm; CFC free Refrigeration with dual compressor, Optional CO2 or LN2 backup; Quick Release Valve for Ice Build Up. Noise Level < 55 Db(A) Operated on 220 Volts with online uninterrupted power supply (back up of 2 hours) with maintenance free batteries. Certificates of Local team of Factory Trained engineers. Sole supplier certificate from the company Accessories: Upright freezer rack for 50 mm boxes (qty 2) Upright freezer rack for 75 mm boxes (qty 2) Stabilizer 5 KVA (Servo®) Warranty 01 Year Origin USA/Japan/France/Germany/Italy/UK Certificates of Local team of Factory Trained engineers. Sole supplier certificate from the company</p>	1
11	<p>Vacuum Oven: Vertical type, Temperature range from ambient to 200 °C is controlled by Microprocessor Digital Temp Controller with an accuracy of ± 2°C. Capacity: 400 L or more. Vacuum gauge, see through transparent window of toughened glass, Operated on 220, With 2.5 KVA Stabilizer. Origin: Australia, USA, UK, Japan, Europe Warranty 01 Year</p>	2

12	Magnetic Stirrer with hot Plate: Maximum temperature range upto 370 ⁰ C, variable speed control upto 1200 rpm, stirring capacity 15L and automatic reversal, Operated on 220 V. Origin: Australia, USA, UK, Japan, Europe Warranty 01 Year	2
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J. CENTRALLABORATORY-II(HI-TECHANALYSIS)

S.#	Nameof Equipment	Qty.
1	<p>HPLC(Quaternary Gradient with instrument control and auto sampler with built in 4 channel degasser).</p> <p>HPLC pump System: Quaternary gradient, capable to mix four solvents at a time, programmable dual piston pump head for low pulsation. SampleInjectionRheodyneValve,Flow rateProgrammable 0.001 – 10.000 ml/min, Flow accuracy: ± 1.0% 1.000ml/min, Flow precision:± 0.1% RSD 1.000ml/min, Pressure range : 0 – 40 MPa (0-6000 PSI); Pressure Pulsationl< 0.1 Mpa or < 1.0%; Compressibility user-adjustable for different solvents with 4 channel vacuum degasser integrated in Pump system. Detector: UV/Vis Variable Wavelength Detector Variable UV/Vis Detector with Built In Deuterium and Tungsten lamps; Baseline Drift; 2 x 10⁻⁴ AU/h; Baseline Noise:± 1 x 10⁻⁵ AU (@ 240nm, 2 Sec. Risetime); Wavelength range : 190 - 800nm; Wavelength accuracy : ± 2nm; Linearity : > 2.0 AU; Wavelength program :Programmable 10 steps; Control features; Integrated Peak Detector with +24V solenoid switching output; RS 232 serial interface and digital I/O, With Built in Flow Cell, Complete, Operated on 220 volts Photo Diod Array Detector Photodiode-array (PDA) detector with dual lamp with wavelength range of 190 – 720 nm (256 Diodes) or 190 – 1015 nm (1024 diodes) with a low baseline noise. Baseline Noise: ± 1 x 10⁻⁵ AU (@240 nm, 1 sec. Risetime), Baseline Drift: 2.0 AU Light Source Deuterium Lamp, Tungsten Lamp, Wavelength Program: Programmable, 10 steps, Analog Output: - (optional: 4x 1V) Data Rate: 1 Hz - 100 Hz, Control Features: Internal Peak Detector with +24 V solenoid switching output. Power Supply: 100 - 250 ~V (47 - 63 Hz). InjectorHigh-Pressure Sample injector valve S 6020 with mounting bracket. Sample injection by means of a microliter syringe capacity of sample loop 20µl with NFi (No-Flow-Interruption) Technology. Auto samplerInjector System Self-lubricating bearings, dual needle design to avoid Systems blockages due to spetum particles, Sample capacity: 60 samples (1.5ml), Sample loop: 100µl standard, Carry over:< 0.05% with wash program, RS232 Serial interface and digital I/O Column ovenforhigh temperature stability and accuracy. The columns are mounted inside the column oven in optimized column holder. A high temperature controller for stable column temperature with Temperature Range: ambient +5°C to 150°C, Temperature Accuracy: < 0.1 °C, Safety Features: Temperature Fuse; Leakage Sensor, Operated on 220 V.</p>	1

	<p>Data Processing: Unit Core i7 (branded) with original Windows and Laser Jet Printer (32 page/min), with latest software featuring:manually reintegrate chromatograms, auto sampler queue and batch reprocessing, click and drag retention windows, zoom in on specific area of data, print chromatograms in colours, over lay chromatograms, baseline subtraction, multilevel calibration curves, dynamic data exchange (DDE), data logger mode on any channel, merge results from multiple channels, data smoothing, calibration average, self-validating hardware</p> <p>With followingaccessories.</p> <p>HPLC Column C 18 & C8from USA or equivalent,</p> <p>Online UPS with 3hrs backup, Dry Batteries, Filtration Assembly with suction pump (Imported), nylon filters, syringe and wax columns.</p> <p>Origin:USA, UK, Japan, Germany, France</p> <p>7 days of foreign training</p> <p>Warranty 1 Year: minimum</p>	
2	<p>Climatic TestChamber: Digitalleddisplay, microprocessor PIDcontroloftemperature, lighting and humidity,programmable temperaturerange:0-50°C withlampoffand+10 to50°Cwithlamponposition, temperature accuracy:±0.3°C,lightening: programmable andmanualadjustmentpossible, humiditycontrolrange:55-59%effectivecapacity: 300L or more. Adjustable fan rate (0 – 100%). Complete unit operated at 220V power, with 2 hours online uninterrupted power supply and maintenance free batteries. Graphic LCD for easy operation, automatic data logging, programmable temperature function, data logging function. With online UPS and maintenance free batteries for a back up of 2 hours.</p> <p>Origin: Australia, USA, UK, Japan, France, Germany, Switzerland</p> <p>Warranty 1 Year: minimum</p>	1

3	<p>AtomicAbsorptionSpectrophotometer: High-Resolution Continuum Source Atomic Absorptions Spectrometer, fully automated Flame-AA with continuous light source, for fast, sequential and multi-element analysis, PC controlled, Mono-chromator with CCD array detector, Reflecting optics with protective coating and sealed optical system with special light-proof cover. Wavelength range 185-900 nm, with PC controlled adjustment of wavelength fully automated wavelength accuracy automatically corrected by integrated neon-lamp simultaneous real time background correction.</p> <p>Flame atomizer: - Optimized burner-nebulizer system with adjustable nebulizer and integrated adjustable impact beat. - PC controlled fully automated Total Flow Gas box with integrated safety sensor system for control of all functions like - automatic ignition, monitoring and quenching of the flame, -Highest safety standard with coded burner heads, sensor control of flame, gas type and pressure relief valve in the spray chamber, siphon sensor control, - automatic adjustment and setting of pressure and flow rate of fuel gas and oxidant, -Automated high adjustment of the burner head Control and evaluation software for basic system and accessories.</p> <p>Basic software for device control and data analysis: Modern database structure for high clearness of basic structure Easy and user adapted data transfer to external software for further processing (e.g. MS Excel, MS Word...) and measurement independent preparation of new methods. Maximum operational comfort: Fast retrieval of results by clearness in loading stored methods or sample data clear user interface and ready-for-use cookbook programs for getting started in method development. Optimized sample table with consecutive numbering and the choice of various actions, like entry of user-defined comments or names. Individual storage of all data and peak graphs and comfortable data exchange with Win data processing applications (e.g. Excel).</p> <p>Standard Burner Head for operation with acetylene/nitrous-oxide flame and acetylene/ air flame.</p> <p>Compressed-air compressor, 220V operated ultra-quiet and nearly vibrate free, simple operation, anticorrosion treated, pressure air compressor to supply AAS with water and oil free air including compressed-air tubing with air filter assembly.</p> <p>Hg/Hydride System Flow Injection (VGA) - Basic device Fully PC controlled and integrated in the AAS software, Automatic recognition of installed configuration, Optimized gas-liquid paths and dedicated material selection, Highly efficient gas-liquid-separator with low dead-volume for highest sensitivity and shortest purging times, valve control for short measurement and rinsing times, Base Module for power supply - Function Module "Flow Injection, with complete Installation Start-up Package: - Bottles for reductant and acid, High-performance drying membrane, Tubing kit, complete, Cell unit, electrically heated, temperature control 600-1000°C, Quartz cell with quartz windows for Hg/Hydride analysis, Connecting cables and gas tubing.</p>	1
	<p>With Computer Core i7 branded, Laser Printer and Hood (Locally Supplied), certified Acetylene Gas cylinder with regulator 1 No. (Locally Supplied), Nitrous Oxide Gas cylinder with regulator 1 No. (Locally Supplied), Oxygen as Cylinder with regulator 1 No. (Locally Supplied).</p> <p>ONLINE UNINTERRUPTED POWER SUPPLY (2 hrs back up) with maintenance free batteries. All system operated at 220-240 VAC.</p> <p>Training on site. With Spare Kit, Exhaust kit (Compelte with fan and ducting).</p> <p>Warranty 01 Year</p>	


4	<p>Refrigerated Centrifuge Machine for 1.5/2 ml, 15 ml, 50 ml tubes & PCR Plates. Digital microprocessor control, Maximum speed of 14000 RPM or better, with Max RCF: 20000 or better. Time control range 1 minute to 99 hours, CFC-free refrigerant with an ozone depletion potential (ODP) of zero. Refrigerated range: -9 to 40 °C with Dynamic compressor control technology for optimized cooling. Swing Rotor Capacity: 200x2 ml tubes, 56x15 ml tubes, 28x50 ml tubes,4x750 ml tubes or better. The rotor should be capable of mix loading of Tubes as well as Plates on the same rotor.Built-in condensation drain: Acceleration/braking ramps: 10/10, Noise Level <56 Db(A) or better; Accessories:Fixed angle rotor:48x1.5/2 ml tubes, Adaptors for 15,50 ml tubes, LCD screen, power AC 220, 50 Hz. The noise ≤58dB(A). With 2 KVA online UPS (2 hours) with maintenance free batteries. Origin: Australia, USA, UK, Japan, Europe Warranty minimum of one year</p>	1
5	<p>Micro Centrifuge Machine: Table top high speed: Digital microprocessor control, brushless Motor Drive, maximum speed: 14000 rpm or more, time: 0-99 mins, with short run or continuous run, Last run memory 2 acceleration & deceleration curves soft or fast Motorized Lid Lock, Auto Lid Open, emergency lid lock release, Minimal temperature increase during run, complete with Angle Rotor capacity: 24x1.5/2.0 ml, digital display, noise level < 58 db; complete unit operated on 220 Volts, Complete with all standard Accessories, operated on 220v With online UPS (back up of 2 hours) with maintenance free batteries. Origin: Australia, USA, UK, Japan, Europe Warranty 01 Year</p>	1

6	<p>PCR: Thermal cycler (02) + horizontal gel electrophoresis system (01) + gel imaging system (o1)</p> <p>With Touchsensitive TFT Display (1/4 VGA, Graphic, 16 Colors), 96 Well, Universal Block for 96x0.2ml Tubes, 90 Well PCR Plates or 48x0.5ml Tube with Flat Caps.6 Powerful Peltier elements with Long Life Technology, 6 Control circuits with PT 1000 thermal probes, Max. heating and cooling rate:5 °C /s, Block uniformity (at 72 °C): +/-0.25 °C, Temperature range thermos block : 4 to 105 °C, Regulating accuracy: +/- 0.1 °C, Adjustable ramping: 0.1 to 2.0 °C/s, Increment/decrement time: 0:01 to 9:59 minutes, Increment/decrement temperature: 0.1 to 9.9 °C, Temperature range heatable lid: 70 to 120 °C, Programmable lid locking, 4 x USB, 1 x Ethernet port CMS Windows), Power Supply: 90-260 V AC, 50-60 Hz, Internal Memory for 1000 Typical PCR Protocols in Unlimited, Self-created Directories / Subfolders, PC Software for Convenient creation of PCR Programs in the Office. Up to 99 Steps per Program, Auto-restart after power failure.</p> <p>Gel electrophoresis system:Gel dimension: 100 × 70 (mm), 50 x 70 (mm); Runs up to 8 or 15 samples;Comb thickness: 1.0 and 1.5 (mm); Buffer volume: about 260 (ml);Size (L X W X H):268×116×76 (mm);Weight: about 1.0 kg. + DYY - 6C, Power requirement:A.C. 220V±10% (50Hz ±2%); Input power: about 300 VA; Output voltage: (6-600)V (Increase or decrease:1V/step); Output current: (4-400) mA (Increase or decrease:1mA/step); Output power: 240 W Stability: constant voltage ≤1%; constant current ≤2%; Adjustment rate:constant voltage ≤2%; constant current ≤3%;</p> <p>Gel Documentation: Documentation and analysis fluorescence applications. Consist of Monochrome CCD, Camera with Sensor Interline Transfer CCD on Chip Integration to produce images with 16 bit image depth, Resolution RS 170 A, CCIR 752x852 (V), Signal Noise 56 DB, Zoom Lens 8-48 Mm F1.2 Close Up Filter, Dark Room with Built In Drawer Frame with built in internal LED light, Fixed/Moveable Camera SupportEPI White Light and Trans UV Light Illumination with Safety Switch for UV Light without control panel, latest analysis software with full analysis using Single Window display of all data, images, and histogram simultaneously Multiple experiments, Zoom control, Automatic track, band and edge finding with manual override Automatic detection and correction for distorted tracks and grimaced or curved bands, Single band/track data, Molecular weight/base pair, Rf, quantity determination, Automatic/manual marker assign Cross gel track profiling (ability to overlay track histograms from different gels) Colony counting (with coloured colonies) Automatic spot/blot analysis with full distortion detection Image contrast/brightness adjustment User editing of Libraries. Automatic 1D gel, Elisa plate analysis Direct link to Excel, Automatic Band matching.</p> <p>With Computer Core i5 or later (Branded):>2.4 GHz, Intel Original Mother Board, 4 GB RAM, minimum200 GB Hard Disc, 36 GB Flash Drive, Keyboard, Mouse, ATX casing double fan with laser jet printer.</p> <p>Online UPS with maintenance free batteries for a backup of at least 2 hours.: Warranty: Minimum 1 Year</p> <p>Origin: Australia, USA, UK, Japan, Europe</p> <p>Power 220 V</p>	1
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7.	<p>UV-Vis Spectrophotometer: Double beam spectrophotometer with fixed spectral resolution: automatic wavelength calibration Quartz coated optics.Highly precise imaging conditions. Second cell position for measuring turbid samples. Possibility to integrate in diverse dissolution systems.</p> <p>Mode: Absorption, Transmission, Wavelength range: 190—900 nmSpectral bandwidth: 2 nm or less, Photometric Range:- 4 A to 4 A,Photometric accuracy:± 0.003 A, Photometric reproducibility:≤ 0.0005 AStray light≤ 0.03 % T, Baseline stability at 500 nm: ≤ 0.0001 (RMS)</p> <p>Long-term stability at 500 nm: ± 0.0005 A/h, Scanning speed: 12000 nm/min, Power 220 V, Display:LCD, With extra Cuvettes: 5 Quartz & 10 Glass Cells,</p> <p>Computer Core i7 (Branded) or better Complete with latest spectrophotometer Software for all kind of measurements and system monitoring, Laser Jet Printer, 2 KVA online UPS with maintenance free batteries for a backup of 2 hrs or more.</p> <p>Minimum 1 Yearwarranty</p> <p>Origin: Germany, USA, Japan, UK, France</p>	1
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K. EQUIPMENT FOR DISPENSARY

Sr.No	Item	Quantity
1.	<p>FirstAidBox: First aid box including the following items: Artery 5”, Forceps, Cotton Roll, BP Set Yamasu, Finger Pulse Oximeter, Branulla, Ett Tubes, Stylett for Ett, Air way Adult size, Tape, Stethoscope, Pyodine, Embow Bag silicone, Laryngoscope adult, Sterile adhesive bandages in assorted sizes, Assorted sizes of safety pins, Cleansing agent/soap, Latex gloves (2 pairs), Sunscreen, 2-inch sterile gauze pads (4-6), 4-inch sterile gauze pads (4-6), Triangular bandages (3), Nonprescription drugs, 2-inch sterile roller bandages (3 rolls), 3-inch sterile roller bandages (3 rolls), Scissors, Tweezers, Needle, Moistened towelettes, Antiseptic, Thermometer, Tongue depressor blades (2), Tube of petroleum jelly or other lubricant. Flashlight, with extra rechargeable batteries in a separate bag, Emergency blanket</p> <p>Origin: Imported</p>	5
2.	<p>ENTset: Good Quality including Ophthalmoscope, set of otoscope, throat illuminator, laryngeal mirror, nasal speculum, tongue depressor, +C handle in case set of otoscope, laryngeal mirror, nasal speculum, portable LED head light and rechargeable battery</p> <p>Origin: Imported, or equivalent</p>	1
3.	<p>Weight/HeightScale: Analog operating system upto 200 kg weight capacity with height scale,</p> <p>Origin: Imported or equivalent, with Warranty 1 Year</p>	1
4.	<p>PatientBed: Semi Folar, Steel Cranc, Gauge 16, S.S material, Powder coating.Raises to heights from 8.5 to 26.5 inches with high/low mechanism. Removable headboard and footboard, Size 90”X40” or more, assist rail.</p>	4

5.	<p>OverBedTables/Bed Side Table: MS. Sheet Gauge 16, Single draw, with one open section, Steel Top, Powder coating finish, height 3 feet. Cabinet is mounted on four castors, two swiveling castors with brake-system</p> 	4
6.	<p>IV Stand: Gauge 16 GI pipe, Double Prong, with stand, pole stand with 4 hook, Powder Coating, with 2” nylon casters for easy movement</p>	4
7.	<p>BedMattress: Bed Mattress with highly quality leatherite cover, 4-6” thick, 10 year warranty Origin: Diamond/Master</p>	4
8.	<p>PatientExaminationCouch: general made of Gauge 16 MS sheet/GI pipe, Lever operator with two draws. With Mattress 3” thick, height minimum 30”</p>	1
9.	<p>PatientExaminationStool: Gauge 16, Steel top revolving, with casters 4. with adjustable height</p>	1
10.	<p>MedicineTrolley: Gauge 16, Steel top, two draws, with four casters for easy movement,</p>	1
11.	<p>BPApparatus: Mercury with large size cuff Origin: Germany/Japan/France Warrantv 1 Year</p>	2
12.	<p>OxygenCylinder+ Kit: certified 240 CFT, BOC Tested with medical Regulator (Rchu Italy or equivalent), Oxygen Pipe and Oxygen Mask, with regulator best quality Origin: Japan/USA/Germany/France/Italy or equivalent from same region</p>	1
13.	<p>NebulizerMachine: with complete accessories, 3-in-1 adjustable nebulization kit with 3 positions that allows treatment of upper, mid and lower airways with one single device Origin: Japan/USA/Germany/France Warranty 01 Year</p>	1
14.	<p>UltrasoundMachinewithPrinterrolley: Fully Digital, Portable, 10.4” High resolution CRT monitor with single probe but having double probe socket, Dynamic range 0-100 db, Photo electric key board, main power supply Ac 220 v with video thermal printer latest model with 16 gauge trolley Origin: Europe, USA, Japan Warranty 01 Year</p>	1
15.	<p>Autoclave: for sterilization of medical instruments, Double drum 30L capacity, operative on both gas & electric with all safety measures, Origin: Europe, USA, Japan, UK, Australia Warranty 01 Year</p>	1
16.	<p>OTLight(MinorOTEquipment): maximum light intensity 90000 LUX at one meter, LED lights, LED’s lift time: 40,000, Color readying index: >96, focus adjustment manually, input voltage 220 V, Origin: USA/Equivalent Warranty 01 Year</p>	1

17.	<p>OTTable: Hydraulic OT Table universal can be used in Gynae and general surgery with side tray. height adjustable, reliable and stable, foot pedal for hydraulic pump to lift. Super lower height at 240mm, Equip with high quality castors for easy transfer.</p> <p>Origin: Europe/Equivalent</p> <p>Warranty: 1 year</p>	1
18.	<p>SuctionMachine: for professional aspiration of bodily fluids, gases, tissues or bones of the patient during or after surgery. The state-of-the-art oilless pump suction capacities and max vacuum reachable within a few seconds, Mobile section unit with silicon pipe and auto clavable bottle, with castors for easy movement. Operated at 220V, with 1 KVA UPS and maintenance free batteries. Origin: Europe/USA/Japan</p> <p>Warranty: 1 Year</p>	1
19.	<p>CourtyMachine: 400 watt with cutting, coagulation by polur 99 watt, spray coagulation 100 watt, blend-1 (250 watt), blend-2 (200 watt) with foot switch double foot switch and polar Forcep.</p> <p>Origin: Europe, USA, Japan</p> <p>Warranty 01 Year</p>	1
20.	<p>MinorSurgicalInstruments: Hilbro instruments including ArtryForcep 5 inc (10), plain forcep (5), Tooth forcep (5), AllusForcep 8 inch (5), Scalpal No. 3 and No. 4 (5+5), Dressing drum 12*12 (3), Dressing drum 9*9 (3) Kidney Tray 8 Inch (3), Yanker suction nozel (2), ArtryForcepcurve 5 inch (5), Boll 6 Inch (3), Seizer straight 7 inch (5), Seizer straight 7 inch (5), seizer curve 7 inch (5), Mayo Seizer 8 inch (3), Simspacullum (3), Chetal Jar (3), ChetalForcep (3)</p> <p>Origin: Export/Local Quality</p>	LS

Section VIII.

Sample Forms

Sample Forms

1.	Bid Form and Price Schedules	83,84
2	Manufacturer’s/Distrbutor's/Dealer's Certificate Form	85

1. Bid Form and Price Schedules

Date: _____
Tender No. _____

To:

Dr. Tariq Aziz,
Project Director,
Sub Campus Depalpur.

Gentlemen and/or Ladies:

Having examined the bidding documents including Tender No.150/2016, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver *[description of goods and services]*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 understand that 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 our risk and may result in the rejection of its bid.

If our bid is accepted, we undertake to provide a performance security in the form, in the amounts, and within the times specified in the bidding documents and to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements. Failure to which, the Purchaser reserve the right to take action as per provisions of the bidding documents.

We agree to abide by this Bid for the Bid Validity Period specified in Clause 16.1 of the Bid Data Sheet and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and address of agent	Amount and Currency	Purpose of Commission or gratuity
_____	_____	_____
_____	_____	_____
_____	_____	_____
(if none, state “none”)		

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.

We certify/confirm that we comply with all requirements as per ITB Clause 2 of the bidding documents.

Dated this _____ day of _____ 19_____.

[signature]

[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____

Price Schedule for Goods Offered from within the Purchaser's Country

Prices on FOR, CPT and C&F basis shall be mentioned separately

Name of Bidder _____.Tender Number _____.Page _ of ____.

1	2	3	4	5	6
Item	Description	Country of origin	Quantity	Price with out Sales Tax	Price With Sales Tax

Signature of Bidder _____

Note: In case of discrepancy between unit price and total, the unit price shall prevail.

Manufacturer’s/Distributor’s/Dealer’s Certificate Form

[See Clause 13.3 (a) of the Instructions to Bidders.]

To: *[name of the Purchaser]*

WHEREAS *[name of the Manufacturer/Distributor/Dealer]* who are established and reputable Manufacturer/Distributor/Dealer of *[name and/or description of the goods]* having factories/Warehouse/trading house at *[address of factory]*

do hereby authorize *[name and address of Agent]* to submit a bid, and subsequently negotiate and sign the Contract with you against Tender No. *[reference of the Invitation to Bid]* for the above goods manufactured by us.

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract for the goods offered for supply by the above firm against this Invitation for Bids.

[signature for and on behalf of Manufacturer]

Note: This letter of authority should be on the letterhead of the Manufacturer/Distributor/Dealer and should be signed by a person competent and having the power of attorney to bind the Manufacturer. It should be included by the Bidder in its bid.