

# GOVERNMENT COLLEGE WOMEN UNIVERSITY FAISALABAD



Sealed tenders are invited from Income Tax and Sales Tax registered firms on the basis of Single Stage two envelop procedure for supply of following items.

## INVITATION TO THE BID

**1.1.** Bids/Tenders are invited, for **Equipment for Chemistry and Bio Chemistry Department (Establishment of Labs under HEC funded Project)** from Sales Tax and Income Tax Registered firms.

## 2. INSTRUCTIONS TO THE BIDDERS

**2.1.** Procurement will be made under Punjab Procurement Rules (PPRA) 2014.

**2.2.** It will be clearly understood that the Terms and Conditions mentioned in this document are intended to be strictly enforced.

**2.3.** Bidders must ensure that they submit all the required documents indicated in the Tender / Bid Documents at the time of opening of Technical Bids and no request for submission of missing documents will be entertained after opening of the Technical Bids.

**2.4.** Bids without supporting documents, undertaking, valid documentary evidence, and bids not conforming to terms and conditions given in the Tender Document will be liable for rejection. Bids received after due time and date and bids without Bid Security in shape of CDR or CDR less than required amount shall be rejected.

## 2.5. Mode of Advertisement:

As per Rule 12(2) the advertisement is being placed on [www.gcwuf.edu.pk](http://www.gcwuf.edu.pk), on the website of PPRA Punjab ([www.ppra.punjab.gov.pk](http://www.ppra.punjab.gov.pk)) and on two newspapers English/Urdu.

## 2.6 Type of Open Competitive Bidding

As per Rule No. 38(2) a, Single stage two envelope procedure shall be followed with details given below:

**2.6.1.** The bid shall comprise of a single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal;

**2.6.2.** The envelopes shall be marked as “FINANCIAL PROPOSAL” and “TECHNICAL PROPOSAL” in bold and legible letters to avoid confusion;

**2.6.3.** Initially, only the envelope marked “TECHNICAL PROPOSAL” shall be opened;

The envelope marked as “FINANCIAL PROPOSAL” shall be retained in the custody of procuring agency without being opened;

**2.6.4.** The committee shall evaluate the technical proposal under **PPRA Rule # 32** and in a manner prescribed in this document, without reference to the price and reject any proposal which does not conform to the specified requirements as listed in said Sections. During the technical evaluation no amendments in the technical proposal shall be permitted;

**2.6.5.** The financial proposals of technically qualified bidders shall be opened publicly at a time, and venue announced and communicated to the bidders in advance;

**2.6.6.** After the evaluation and approval of the technical proposal the procuring agency, shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted and qualified bids only. The financial proposal of bids found technically non-responsive shall be returned unopened to the respective bidders.

**2.7. BID DATA SHEET (Information for the Bidders)**

1	Procuring Agency	Government College Women University Faisalabad
2	Tender Number	GCWUF/2020-21/16
3	Name of Tender	“Lab Equipment” (Chemistry and Bio-Chemistry Department) Establishment of Labs under HEC funded Project
4	Tender Document available place	Purchase Section, Government College Women University Faisalabad or GCWUF Website
5	Cost of Tender Document	<b>Rs.2000/-</b> payable at BOP Susan road Madina town branch A/C No. 6580118253000010/BOP <i>or</i> CDR in favour of the Treasurer Government College Women University Faisalabad.
6	Bid Security	2% of Estimated Cost of each participated Category (either quoted single item or more than one item within a category) in shape of CDR, in favor of “Treasurer Government College Women University, Faisalabad”
7	Performance Guarantee	10% of the quoted bid/price
8	Certificate of Authorization	The invitation for bids is open to all original Manufacturers/Authorized Agent of Foreign manufacturer’s in Pakistan for supply of Goods <b>Note:</b> Current financial year Certificate of Authorization must be attached.
9	Tender Addressed to	Convener Tender Committee Government College Women University Faisalabad
10	Contact Number	Ph. 041-9220696
11	Due Date, Time and place of submission of Tender Document	<b>25-03-2021</b> 11:00 AM Purchase Section First Floor Admin Block GCWUF.
12	Date, Time and Place of Technical Bid Opening	<b>25-03-2021</b> 11:30 AM at Video Conference Room of GCWUF

13	Date, Time and Place of the Financial Proposals	Shall be intimated subsequently to Technically Qualified firms
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## **TERMS AND CONDITIONS OF THE TENDER**

### **3. Definitions**

**3.1.**“Purchaser” means Government College Women University Faisalabad.

**3.2.**“GCWUF” means Government College Women University Faisalabad

**3.3.**“Bidder/Tenderer” means the Firm/Company/Supplier/Distributor that may provide or provides the Goods and related services to any of the public sector organization under the contract and have registered for the relevant business thereof.

**3.4.** "Contract" means the agreement entered into between the Purchaser and the Contractor, in form of Supply Order or as recorded in the Contract Form signed by the parties, including all Schedules and Attachments thereto and all documents incorporated by reference therein.

**3.5.** "Contractor/The Successful Bidder" means the person whose Tender has been accepted and awarded letter of Acceptance followed by the Supply Order or Contract by the Purchaser.

**3.6.** "Goods" means equipment, machinery, and/or other materials which the Contractor is required to supply to the Purchaser under the Contract.

**3.7.** "Services" means installation, configuration, deployment, commissioning, testing, training, support, after sale service, etc. of Goods and other such obligations which the Contractor is required to provide to the Purchaser under the Contract.

**3.8.**“PPRA” means Punjab Procurement Regulatory Authority.

### **4. TENDER ELIGIBILITY**

Eligible Bidder/Tenderer is one who:

**4.1.** Who has valid registration certificates for Income Tax, Sales Tax and Professional Tax

**4.2.** is an active Income Tax Payer;

**4.3.** have got the experience in supply of relevant items;

**4.4.** conform to the clause of “Responsiveness of Bid” given in this tender document;

**4.5.** have not been blacklisted.

### **5 AMENDMENT OF THE TENDER DOCUMENT**

**5.1** The Tender Committee of Government College Women University Faisalabad, at any time prior to the deadline for submission of the Tender, at its own initiative or in response to a clarification requested by the Bidder(s), amend the Tender Document, on any account, for any reason. All amendment(s) shall be part of the Tender Document and binding on the Bidder(s).

**5.2.** The Purchaser shall notify the amendment(s) in writing to the prospective Tenderers /Bidders.

**5.3.** The Purchaser may, at its exclusive discretion, amend the Tender Document to extend the deadline for the submission of the Tender, in which case all rights and obligations of the Purchaser and the Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

## **6. BID CURRENCY**

Bidder should quote price in Pak Rupees only and payments shall also be made in Pakistan Rupees only.

## **7. VALIDITY PERIOD OF THE BID**

- 7.1.** Validity period of the bids shall be 180 days.
- 7.2.** In exceptional circumstances, the Tender Committee of University may ask the Bidders for an extension of the period of validity. The request and the responses shall be made in writing. A bidder accepting the request will not be required nor permitted to modify its tender.

## **8. BID SECURITY**

- 8.1.** Bidder will submit Bid Security drawn in the name of Treasurer Government College Women University Faisalabad against each lot/ Category/Items with details given below:
- 8.2.** The Bid Security will be in form of CDR in favour of the Treasurer Government College women university Faisalabad
- 8.3.** Cheque or Cross Cheque shall not be accepted at all.
- 8.4.** The amount submitted as Bid Security shall be refunded to the unsuccessful bidders after the decision for the award of the said tender.
- 8.5** Subject to the award of contract, the Bid Security shall be returned to successful bidder against submission of Performance Guarantee
- 8.6** If the Bid Security is found less than the required amount then the bid will be Rejected Irrespective of the rates and the stage of the bid process.
- 8.7** The Bid Security may be forfeited if a Bidder:
  - a. Refuses to accept Letter of Acceptance of the Bid; or
  - b. Fails to furnish Performance Security.

## **9. BID PREPARATION AND SUBMISSION**

- 9.1.** The Tender shall be filed in / accompanied by the prescribed Forms, Annexes, Schedules, Drawings, Documents, Brochures, Literature, etc. which shall be completely filled in, stamped and signed by the Tenderer or his Authorized Representative. In case of copies, photocopies may be attested.
- 9.2.** The Bids/Tenders should be submitted in two parts (1) **Technical Proposal** and (2) **Financial Proposal**. The Technical Proposal and Financial Proposal shall be submitted in separate covers.

### **9.3. TECHNICAL PROPOSAL**

The Technical Proposal will enable the Technical Tender Committee to evaluate whether the bidder is technically competent and capable of executing the order and the specifications offered by the bidder meet the ones given in the Tender/Bid Documents. Only those bids which qualify in the technical stage will be eligible for the Financial Proposal opening. The Financial Proposals of bidders who failed in the Technical stage will not be opened.

- 9.4.** The Technical Proposal should not strictly contain any Price/Cost indications as such otherwise the bids will be summarily rejected.

9.5. The Bidder should quote only one brand/model/make of each item.

**9.6 Detail and Order of Documents to be furnished with the Technical proposal:**

The documents attached with the Technical Bid must be signed and stamped by the Authorized Representative of the Bidder. The documents attached must be numbered and attached in the following order:

9.6.1. Covering letter *duly* signed and stamped by authorized representative.

9.6.2. Copy of Income Tax Registration Certificate

9.6.3. Copy of Sales Tax Registration Certificate.

9.6.4 Copy of Professional Tax with copy of bank fee Chillan

9.6.5 Detailed specification of items.

9.6.6 Sound financial position of the bidder (At least each available equal to the 50% of quoted value as per bank statement)

9.6.7 At least three relevant Supply Orders/Contracts received in the past

9.6.8 Affidavit/Undertaking Covering Letter on Stamp Paper.

**FINANCIAL PROPOSAL**

9.7 The Financial Proposal of the bidder shall include the price break up of taxes/duties. All taxes/duties as applicable shall be responsibility of the bidders.

9.8 The cost quoted by the bidder shall be kept firm and unchanged for a period specified in the Bid/Tender Documents from the date of opening of the bids. The bidder shall keep the price firm/unchanged during the period of Contract including during the period of extension of time if any.

9.9 The quoted price will be inclusive of all taxes, duties, levies, insurance, freight (transportation charges), etc.

9.10 The Bid is liable for rejection if Financial Proposal contains conditional offer.

**9.11. Details to be furnished with financial proposal**

9.11.1. Financial Proposal Covering Letter

9.11.2. Financial Proposal Form duly filled, signed and stamped by the Bidder

**9.12 Mode of Submission of Bids**

9.12.1 The Bid should be addressed to “Convener Tender Committee, Government College

Women University Faisalabad” and dropped in the Tender Box placed at Purchase Section of University by hand or through courier.

9.12.2. The Bids received after Due Date and Time or Unsealed or incomplete or Submitted by Fax or Email will be summarily rejected.

**10. MODIFICATION/WITHDRAWAL OF THE TENDER**

10.1. The Bidder may, by written notice, modify or withdraw the tender but prior to the deadline for submission of the Tender.

**10.2.** The Tender, withdrawn after the deadline for submission of the Tender and prior to the expiration of the period of the Tender validity, shall result in forfeiture of the Tender Security.

## **11. BID OPENING**

### **11.1. Technical Proposal Opening**

The bid's outer cover and Technical Proposal cover will be opened by the Tender Committee of University on the date and time as specified in the Tender Notice. The bids will be opened in the presence of the bidders/representatives who choose to be present.

### **11.2. Suppression of facts and misleading information**

**11.2.1.** During the bid evaluation, if any suppression or misrepresentation of information is brought to the notice of the Tender Committee, the Committee shall have the right to reject the Bid and if it happens so after selection of the Bidder, the Purchase Committee may terminate the Contract or award of the Contract or further processing of the Bid as the case may be and that will be without any compensation to the Bidder and the Bid Security/Performance Guarantee, as the case may be, shall be forfeited.

**11.2.2.** It is the Bidder's responsibility to prove the Bidder's requisite qualification, Experience and capacity to undertake the project to the entire satisfaction of the Tender Committee failing which the Bid may be rejected.

## **12. PRELIMINARY EXAMINATION**

**12.1.** The Tender Committee shall examine the bids to determine whether they are complete, whether the required documents have been furnished and properly signed, and whether the bids are generally in order.

**12.2.** Financial bids (at the time of opening the financial proposal) the arithmetical errors shall be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Bidders/Suppliers do not accept the correction of the errors, its bid shall be rejected. If there is a discrepancy between words and figures, the amount in words shall prevail.

## **13. DETERMINATION OF RESPONSIVENESS OF THE BID**

**13.1.** The Purchaser shall determine the substantial responsiveness of the Tender to the Tender Document, prior to the Tender evaluation, on the basis of the contents of the Tender itself without recourse to extrinsic evidence. A substantially responsive Bid is one which:

**13.1.1.** To meets an eligibility criterion for the Bidder / the Goods / the Services;

**13.1.2.** To meets all the mandatory requirements of the evaluation criteria.

**13.1.3.** To meets the Technical Specifications for the Goods / the Services;

**13.1.4.** Is accompanied by the required Bid Security;

**13.1.5.** Is otherwise complete and generally in order;

**13.1.6** Which offers one Brand/Model/Make for each item (which does not contain any option)

**13.2 The** Tender determined as not substantially responsive shall not subsequently be made responsive by the Tenderer by correction or withdrawal of the material deviation or reservation. However, the Purchaser may waive off any minor non-conformity or inconsistency or informality or irregularity in the Tender.

#### **14. TECHNICAL EVALUATION CRITERIA**

The Bidders who have duly complied with the Eligibility/Qualification and Evaluation will be eligible for further processing.

The Bids which do not conform to the Technical Specifications or Bid conditions or the Bids from the Bidders without adequate capabilities for supply and maintenance / warranty services will be rejected. The Eligible/Technically Qualified Bidders will be considered for further evaluation.

Under PPRA Rules # 31, Technical Bids will be evaluated on the basis of following criteria and Financial Bids of only those bidders will be opened who have fulfilled the criteria:

<b>Mandatory Requirements</b>	<b>Documents Required</b>
Sales Tax Registration	Certificate of Registration
Income Tax Registration	Certificate of Registration
Conformance to the required specification of items given in Schedule of Requirement	Detailed Specifications with Brand and Model
At least three relevant Supply Orders received in the Past years	Copies of Supply Orders/Contracts received in the past
Certificate of Authorization	The invitation for bids is open to all original Manufacturers/Authorized Agent of Foreign manufacturer's in Pakistan for supply of Goods <b>Note:</b> Current financial year Certificate of Authorization must be attached.
Company Firm is not black Listed	Affidavit/Bidder's Undertaking on stamp paper
Professional Tax	Copy of Professional Tax with copy of bank fee Chillan

The bidder must provide Verifiable documentary proof against all the mandatory requirement and Evaluation Criteria along with the Technical Proposal and no document will be received or considered after opening of the Technical Proposal.

#### **15. FINANCIAL PROPOSAL EVALUATION**

**15.1. Technically** qualified/successful bidder(s) shall be called for opening of the Financial Proposal(s).

The Financial Proposals will be opened in the presence of the Bidders at the time and venue indicated by the University accordingly. The technically Eligible/Successful Bidder(s) or their authorized representatives against shall be allowed to take part in the Financial Proposal(s) opening against their relevant bid.

**15.2. Financial** Proposal evaluation will be conducted under the Punjab Procurement Rules, 2014. The Price evaluation will include all duties, taxes and expenses etc. In case of equipment against which only one financial bid receives / matures, market survey as per PPRA guidelines will be carried out.

## **16. REJECTION AND ACCEPTANCE OF THE TENDER/BID**

**16.1.** The Purchaser shall have the right, at his exclusive discretion, to increase / decrease the quantity of any or all item(s), under PPRA Rules 2014 without any change in unit prices or other terms and conditions,

### **According to PPRA rule 35**

(5) A procuring agency may, for reasons to be recorded in writing, restart bidding process from any prior stage if it is possible without violating any principle of procurement contained in rule 4 and shall immediately communicate the decision to the bidders.

### **16.2. The Tender / bid shall be rejected if:**

**16.2.1.** It is substantially non-responsive; or

**16.2.2.** The bidder does not meet any of the mandatory criteria mentioned.

**16.2.3.** It does not contain the documentary proof against any of the mandatory Criteria.

**16.2.4.** The bid is incomplete, partial, conditional, alternative, late; or

**16.2.5.** The bidder does not attach Bid Security in Shape of CDR; or

**16.2.6.** The bid security is not attached or it is less than the required amount; or

**16.2.7.** The Bidder submits more than one Bids against one Tender; or

**16.2.8.** The Bidder tries to influence the Tender evaluation / Contract award; or

**16.2.9.** The Bidder engages in corrupt or fraudulent practices in competing for the Contract award; or

**16.2.10.** There is any discrepancy between bidding documents and bidder's proposal i.e. any non-conformity or inconsistency or informality or irregularity in the submitted bid; or

**16.2.11.** The Bidder submits any financial conditions as part of its bid which is not in conformity with tender document.

## **17. CONTACTING THE PROCURING AGENCY**

**17.1.** No Bidder shall contact the Tender Committee of University on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.

**17.2.** Any effort by a Bidder to influence the Procuring Agency in its decisions on bid evaluation, bid comparison, or Contract Award will disqualify the bidder and rejection of the bid. Canvass by any Bidder at any stage of the Tender evaluation is strictly prohibited.

## **18. ANNOUNCEMENT OF EVALUATION REPORT**

The Procuring Agency shall announce the results of bid evaluation in the form of a report giving justification for acceptance or rejection of bids at least ten days prior to the award of Contract. The report shall be made available on



PPRA website and all the bidders shall be informed of this.

## **19. AWARD OF CONTRACT**

The Tender will be awarded to the Lowest Evaluated Bidder (item wise) who has been declared Technically Qualified.

## **20. Letter of Acceptance (LOA)**

After acceptance of the Bids by the Tender Committee, Letter of Acceptance (LOA) will be issued only to the Successful Bidder (s).

## **21. REFUND OF BID SECURITY (BS)**

The BS of the unsuccessful Bidder will be refunded on the written request of the Bidder.

## **22. ISSUANCE OF SUPPLY ORDER OR SIGNING THE CONTRACT**

**22.1** The Tender Committee shall issue Supply Order or sign a Contract with the Successful bidder who has meet all requirement.

**22.2** The Successful Bidder will provide the stamp paper of .25% of total order value for issuance of Supply Order or Signing the Contract.

## **23. REDRESSAL OF GRIEVANCES BY THE PROCURING AGENCY**

**23.1** 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.

**23.2.** The grievance committee shall investigate and decide upon the complaint within fifteen days of the receipt of the complaint.

**23.3.** Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.

**23.4.** The decision of the Vice Chancellor of GC Women University Faisalabad would be final & binding on both the parties and not challengeable in any court of law.

## **GENERAL CONDITIONS OF CONTRACT / SUPPLY ORDER**

### **24. DELIVERY OF ITEMS**

**24.1.** Delivery Period will be **120 days ( for import items)** and for **locally produced items delivery period will be 30 days** counted after issuance of Supply Order/Contract Agreement , otherwise 2% penalty per month (not exceeding 10%) of the cost of the item(s) will be imposed if not supplied within stipulated period with details given below:

**24.2.** The Supplier will be responsible for delivery and installation of Goods and services on his own cost.

**24.3** Before delivery of items to the locations, the Bidder must get the items inspected at GCWUF. Payment bill shall be initiated subject to successful Installation and subsequent inspection of the item.

**24.4.** The supplier will bear all costs associated with the preparation, delivery, standards required for testing and installation of the Items. The Purchaser/procuring agency will in no case be responsible or

liable for those costs. The supplier will make such arrangements to ensure safe delivery of goods. Any damage sustained during transportation / delivery / installation will be rectified by the supplier at his cost.

**24.5** For extension in delivery time, the request by the vendor shall be submitted on company letter head 15 days before the expiry of delivery time as per Supply Order/Contract Agreement, explaining the reasons of delay. Any such request will be considered after due deliberation and any additional charges along with penalty (if imposed) will be payable by the vendor.

**24.6** The vendor must ensure that the supplied items are new, in proper shape and meet the technical specifications. The vendor will be responsible for the supply, installation, commissioning of scientific equipments along with on campus training on vendor's cost. The vendor shall provide any up-gradation of the software (if any) without any extra cost or hidden charges during warranty period.

**24.7** The vendor shall provide comprehensive documentation of system deployed including diagrams, configuration and manuals etc at the time of installation and commissioning. The vendor / supplier shall be responsible of providing services for operation and maintenance of the item provided, without any extra cost or hidden charges within warranty period. The bidder should read carefully "Equipment Description and Specifications" before preparing Technical and Financial Proposals. All the accessories, installation supplies (such as gas cylinders, standard kits / reagents, Desktop Computers, UPS etc) that are required for the installation and smooth running of the equipment, will have to be arranged by the vendor at no cost to GCWUF, whether quoted in the specifications or not.

**24.8** The importers may avail the exemptions on Sales Tax and Income Tax as per prevailing rules, on the provision of valid import documents (e.g. AWB / BL, GD, CPR, Packing List, Undertaking etc).The vendor opts to import through its own and request the University for the exemption certificates. However, acceptance / rejection of the documents at custom clearance will be the sole responsibility of the vendor and no claim on the name of demurrage charges, clearance charges etc will be accepted.

**24.9** Performance security @10% of the total worth of Purchase order / Contract agreement will have to be submitted as a Call Deposit Receipt (CDR) on the name of "Treasurer, GCWUF" in original after the issuance of Purchase Order /Contract Agreement, which will be refunded / released after satisfactory performance / after sales service and termination of warranty period.

## **25. LIQUIDATED DAMAGES**

**25.1.** When the supplier fails to deliver or install the goods or both within the time period specified in the contract, the Tender Committee may, without prejudice to any other remedy it may have under the contract, deduct from the contract price, as liquidated damages, a sum equivalent to 2% of the price of the delayed goods per month of delay, maximum up to 10% of the price of total value of the contract.

**25.2.** The Successful Bidder will be responsible to provide the delivery, delivery Challan and Bill within the delivery period in order to avoid Late Delivery Charges.

## **26. INSPECTION AND TESTS**

**26.1** The Inspection Committee of GCWUF shall inspect and test the Goods supplied, the Services provided, under the Contract/Supply Order, to verify their conformity to the Technical Specifications.

**26.2.** Inspection will be done at Government College Women University Faisalabad.

**26.3.** Inspection Committee may verify the authenticity of items from Supplier.

**26.4.** After the inspection or test if the Inspection Committee declared items do not conform to the specification and the criteria then Tender Committee may reject them, and the supplier shall either replace the rejected goods or make all alterations necessary to meet the requirements of the specifications free of cost to University.

## **27. CONTRACT AMENDMENT**

No variation in or modification in the Contract shall be made, except by written amendment signed by both the Purchaser and the Contractor.

## **28. TERMINATION FOR DEFAULT**

The Tender Committee of GCW University may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the tenderer, terminate this Contract in whole or in part if:

**28.1** The bidder fails to provide services within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring entity.

**28.2.** The successful bidder fails to deliver goods and services as per its technical specifications Offered in the bid

**28.3.**The successful bidder fails to perform any other obligation(s) under the Contract.

**28.4.** The bidder, in the judgment of the Tender Committee has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

## **29. BLACKLISTING**

If the Contractor fails / delays in performance of any of the obligations, under the Contract / Letter of Acceptance, violates any of the provisions of the Contract / Letter of Acceptance, commits breach of any of the terms and conditions of the

Contract / Letter of Acceptance or found to have engaged in corrupt or fraudulent practices in competing for the award of contract / Letter of Acceptance or during the execution of the contract / Letter of Acceptance, the University may without prejudice to any other right of action / remedy it may have, blacklist the Contractor, either indefinitely or for a stated period, for future tenders in public sector, as per mechanism provided in Punjab Procurement Rules, 2014.

## **30. Force Majeure**

Majeure means an act of nature or an event beyond the control of the Supplier and not involving the Supplier's fault or negligence directly or indirectly purporting to miss planning, mismanagement and/or lack of foresight to handle the situation. Such events may include but are not restricted to acts of the Procuring Agency in its sovereign capacity, wars or revolutions, fires, floods, earthquakes, strikes, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring Agency in writing with sufficient and valid evidence of such condition and the cause thereof. The Committee constituted for Redressed of grievances, shall examine the pros and cons of the case and all reasonable alternative means for completion of purchase order under the Contract and shall submit its recommendations to the competent authority. However, unless otherwise directed by the Procuring Agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek reasonable alternative means for performance not prevented by the Force Majeure event.

### **31. Warranty**

**31.1.** Supplier shall confirm that the goods supplied under this contract are new and unused. The Supplier shall further warrant that all goods supplied under this contract shall have no defect arising from design materials or workmanship or from any act or omission of the supplier that may arise under the normal use of the supplied goods in the conditions prevailing in the University.

**31.2.** During the warranty period the Successful Bidder will provide comprehensive warranty of the items. The Tender Committee shall notify the supplier in writing of any claim arising under the warranty. Upon receipt of such notice, the supplier shall repair or replace the defective goods or parts within given time, inclusive of, where applicable, the cost of inland delivery of the repaired or replaced goods or parts from the port of entry to the final destination and their installation.

**31.3** Warranty period will be at least one year for all items in tender .Warranty period will be considered/ started from the date of equipment installation with subsequent inspection (not from date of delivery). Custom clearance (wherever applicable) and transportation to destinations within GCWUF campuses will be the sole responsibility of the vendor.

**31.4** After the issuance of Purchase / Supply Order / Contract Agreement, if the vendor is unable / regret to deliver the item(s), bid / performance security equivalent to the worth of item(s) / regretted part of subject purchase / supply order(s) / contract agreement(s) will be forfeited.

**Convener Tender Committee**

**Government College Women University Faisalabad**

**041-9220696 Extension, 2208, 2207**

## Lab Equipment Specifications (Chemistry)

Sr. #	Name of Equipment	Specification
1	Potentiostat Cyclic Voltammetry Instrument (Quantity = 1)	<p>REFERENECE 3000 GAMRY Potentiostat/GAlvanostat/ZRA Electrochemical Workstation for electrochemical measurements requiring lower and higher currents especially in the area of Sensors, corrosion in bioelectrochemistry, coatings on microelectrode, batteries, Fuel cell and super capacitors</p> <p>Specifications                      Maximum Current <math>\pm 3</math> A or better                      Minimum Current Resolution 92 aA or better                      Maximum Applied Potential <math>\pm 32</math> V or better                      EIS 10 <math>\mu</math>Hz - 1 MHz or better, Potential accuracy <math>\pm 0.2\%</math>, Potential resolution 3 <math>\mu</math>V, Current accuracy <math>\pm 0.2\%</math>, Current resolution 0.0003% (of current range), Auxialry outputs, Input port for Thermocouple, Input Port for Current, Output port for Voltage, Input Port for additional Chanel, Internal Signal Generator Output, External Signal Generator Input                      Expansion Connector for Booster, Miscellaneous I/O Connector, software-controlled analog output                      input &amp; output acquisition triggers                      software-controlled digital inputs &amp; outputs,                      Comprehensive suite of electrochemistry software for general physical chemistry                      Impedance spectroscopy, pulsed Voltammetry techniques, corrosion science and charge discharge curve monitoring. 5 port sealed voltammetry cell capable of performing experiments with minimum 1 ml of electrolyte. Pt Working electrode with 3 mm working dimensions, Ag/AgCl reference electrode</p> <p><b>Germany/Japan/UK/USA or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
2	Refillable Nitrogen gas cylinders, regulators, gas pipe lines and cylinder cart. (Quantity = 2)	<p>Nitrogen gas cylinders, regulators, gas pipe lines and cylinder cart.</p> <p><b>Germany/Japan/UK/USA equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
3	Water Aspirator (Quantity = 3)	<p>Two Vacuum Lines                      Two Vacuum Gauges                      S.S Water storage Tank                      High Vacuum Two Aspirators (Moc Brass )                      Vacuum Range up to -700 mmHg.                      Instrument warranty will start after its installation.</p> <p><b>Germany/Japan/UK/USA or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>

4	Rotamantle (Quantity = 5)	<p>Temperature Range Ambient to 220C  Capacity 500ml  Speed Range 50 to 1200rpm  All Fabrication in S.S 304L  RPM Frequency Control system  Instrument warranty will start after its installation.  <b>Germany/Japan/UK/USA or equivalent (Having CE certification).</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
5	Parallel Synthesizers/Multi- Scale Synthesis Workstation (with all accessories) (Quantity =1)	<p>Locating onto the Stirring Hotplate, the 12 Plus will simultaneously heat up to 12 reactions from ambient to 180 °C (220 °C for short periods) with an accuracy of <math>\pm 1</math> °C and coupled with high performance stirring bars provides powerful magnetic stirring from 30 to 1400 rpm. Rapid heating to 220 °C and cooling to -78 °C. The temperature can be controlled using the hotplate's integral digital control or for greater accuracy, via an optional Pt1000 temperature sensor. The Pt1000 temperature sensor allows users to control by block or solution temperature. Either insert the temperature sensor into the aluminium base or through the Suba-Seal in the cap, directly into</p>

	<p>the reaction solution.</p> <p>Tubes are 150 mm x 24 mm <math>\phi</math> and manufactured from heavy walled borosilicate glass and feature a unique quick-thread for fast attachment to the caps</p> <p>The reduced volume tube has a working volume of 1 to 5 ml (the lower part of these tubes tapers to 16 mm)</p> <p>The reduced volume tubes require the aluminium insert to reduce the well size accordingly.</p> <p><b>Accessories</b></p> <p>Support stand, magnetic stirring bars, septa, Reaction tubes, caps and tube racks.</p> <p><b>Support stand</b></p> <p>The stand support the reflux/inerting head either with or without reaction tubes. The heavy duty metal stand is fluoropolymer coated for improved chemical resistance and ease of cleaning. The integral tray catches any dripping condensation from tubes and gives excellent stability.</p> <p><b>PTFE magnetic stirring bars</b></p> <p>Cross Shaped Rare Earth bar creates a deep vortex and is ideal for stirring resins and viscous samples.</p> <p>Elliptical Rare Earth stirring bars facilitate powerful stirring with a good vortex even in viscous samples. Available in both small and large sizes.</p> <p>General purpose octagonal stirring bars in both small and large sizes.</p> <p>Small Cross Shaped stirring bar creates a vortex at slow speeds.</p> <p>Medium Cylindrical Rare Earth stirring bar, a small, powerful, general purpose stirring bar.</p> <p>Stirring bar evaluation kit contains 3 of each of the above.</p> <p>PTFE stirring bar retriever. Retrieve stirring bars from reaction tubes. 350mm long.</p> <p>PTFE stirring bar restrainer. Hold your stirring bar within your tube when dispensing liquids.</p> <p><b>Glass reaction tubes and inserts</b></p> <p>150mm x 24mm <math>\phi</math> tubes manufactured from heavy walled borosilicate glass feature a unique quickthread for fast attachment to the caps. The reaction tube has a reaction volume of 5ml to 20ml and reduced volume tube has a working volume of 1 to 5ml. The lower part of these tubes tapers to 16mm OD. The reduced volume tubes require the aluminium insert to reduce the well size accordingly.</p> <p>Quick-Thread glass reaction tube, pk 6</p> <ul style="list-style-type: none"> <li>• Quick-Thread glass reaction tube, pk 12</li> <li>• Quick-Thread reduced volume reaction tube, pk 6</li> </ul> <p>Carousel 12 Plus reduced volume aluminium inserts, pk 6</p> <p><b>Easy-On PTFE reaction caps</b></p> <p>PTFE caps are attached to the reaction tube using a quick thread and feature an Easy-On push connection to the radial gas system. The cap features a Suba-Seal septa and on/off valve for isolation and removal from the inert gas system. The Easy-On storage cap features the quick-thread and Suba-Seal septa, but with no sidearm or valve. Caps include a replaceable Nitrile o-ring with an optional Viton replacement. Replaceable septa allow the addition of reagents or removal of samples. All septa are silicone as standard (Viton is available).</p> <ul style="list-style-type: none"> <li>• Easy-On cap with valve, pk 6</li> <li>• Easy-On storage cap, pk 6</li> <li>• Silicone Suba-Seal for caps, pk 100</li> <li>• Viton Suba-Seal for caps, pk 100</li> </ul>
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		<p>Tube racks and Lab Marker pen</p> <ul style="list-style-type: none"> <li>• RR98901 Zinc plated wire rack for 36 x 24mm tubes</li> <li>• RR98902 Zinc plated wire rack for 40 x 24mm tubes</li> <li>• RR98903 Zinc plated wire rack for 80 x 24mm tubes</li> <li>• RR98906 Black Lab Marker, pk 10 (writes on glass, metal and plastic). Instrument warranty will start after its installation.</li> </ul> <p><b>Germany/Japan/UK/USA or equivalent (Having CE certification)</b></p> <p><b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
6	Flame Photometer (Quantity = 1)	<p>Industrial Model digital single channel with unobstructed samples work area with following features</p> <ul style="list-style-type: none"> <li>- Safety features including Fail safe flame detection and shut off, with low air pressure indicator.</li> <li>- High sensitivity with fine manual control of air, and stable Flame design.</li> <li>- With ease of use resulting from auto ignition and flame optimization. Peak picker for presenting unambiguous readings with selected filter indicator.</li> </ul> <p>With built in Sodium, Potassium, Lithium, Calcium and Barium Filters.</p> <p>Minimum Detection Level @ 3 x noise</p> <p>Na 0.1 ppm K 0.1 ppm Li 0.1 ppm Ca 2 ppm Ba 20 ppm</p> <p>Specificity Na, K and Li interference is &lt;0.5% value of element under analysis, Aspiration rate 3 – 6 mL/min, Speed of Analysis/Time to stability 20 seconds, complete with compressor (but without Gas Cylinder), Operated on 220 Volts.</p> <p>Provided with Compatible online UPS(Sine wave) and Stabilizer as well. Local Training is complementary. Instrument warranty will start after its installation.</p> <p><b>Germany/Japan/UK/USA or equivalent (Having CE certification)</b></p> <p><b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>



7	Automated Reaction Stations (Quantity =1)	<p><b>4 independently controlled reaction zones</b>  Use 1, 2, 3 or 4 zones  Operate zones in parallel or individually by multiple users  <b>Precise temperature control</b>  Temperature range from -30 °C to +180 °C  Up to 200 °C difference between adjacent positions  Control the temperature of each zone independently  Choose to control by block (internal) or solution temperature  Provide with chiller  , uses powerful Peltier technology to provide rapid cooling to -30 °C.  Peltier cells require tap or chilled water to dissipate heat.  Peltier cooling source Tap water at 15 °C Chilled water at 5 °C  Minimum block (internal) temperature Tap water at -25 °C Chilled water at -30 °C  Minimum solution temperature Tap water at -20 °C Chilled water at -25 °C  Magnetic or optional overhead stirring  Integrated magnetic stirring – from 100 to 1000 rpm  Optional overhead stirring – from 100 to 1000 rpm  Control the stirring speed of each position independently  Use magnetic or overhead stirring in adjacent zones.  Provided with Compatible online UPS (Sine wave) and Stabilizer as well.  Instrument warranty will start after its installation.  <b>Germany/Japan/UK/USA or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
8	GC-FID (with various accessories) (Quantity =1)	<p>System Capabilities  A PC controlled system with software.</p> <p>The Gas Chromatograph must have ambient temperature and pressure compensation feedback for electronic pneumatic control for all inlets and detectors Supports simultaneously: Two inlets and Three detectors  Retention time repeatability &lt; 0.008% or &lt; 0.0008 min  Area repeatability &lt; 1%RSD  split/splitless injector for capillary columns  <b>Injector</b>  Suitable for all capillary columns (50 µm to 530 µm id)  Split ratios: up to 7,500:1 to avoid column overload  Temperature range: room temperature to 400°C  Flow Controller : Electronic Flow Control  (PC controlled gas flows).  Flow accuracy: 0.001psi  <b>Gas chromatograph-  Column Oven</b>  Operating Temperature range: + 4°C to 450°C  Temperature set point resolution: 0.1 °C.  Temperature program steps/ramps: minimum 20  Maximum achievable temperature ramp rate: 120 °C/min  Oven cool down Time: 450 to 50 °C in 4.0 min  <b>Flame Ionization  Detector</b>  Flame ionization Detector that responds to most organic Compounds.  Minimum detectable level for (for tridecane ): &lt; 1.5 pg C/s  Linear dynamic range: &gt;10<sup>7</sup> (±10%) full range digital data path enables peaks to be quantified over the entire 10<sup>7</sup> concentration Range in a single run.  Data Rate; data rate upto 500Hz accommodate peaks as narrow as 10msec at half height.  EPC: standard electronic pneumatic control for three gases:  Air: 0 to 800 MI/min</p>

	<p>H<sub>2</sub> : 0 to 100 mL/min          Makeup gas (N<sub>2</sub> or He): 0 to 100 mL/min          Maximum operating Temperature: 450 C  <b>Carrier gas flow system</b> Electronically controlled system, Preferably Electronic Pneumatic control system          Temperature does not affect the linear velocity of carrier flow.          Advance pressure settings with programmable steps          Pressure reading in multiple units.          Flow accuracy: 0.001psi  <b>Auto Injector for Liquid Sampling</b>          Auto injector Includes transfer turret, 16-sample turret, mounting post, parking post for GC.10ul syringe and sample vials  <b>Accessories Standard</b> accessories should be included          Consumables, columns, ferules &amp; nuts          Compatible computer system with printer.          Provided with Compatible online UPS(Sinewave) and Stabilizer as well.          Local Training is complementary. Instrument warranty will start after its installation.  <b>Germany/Japan/UK/USA</b> or equivalent (Having CE certification)  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
<b>TOTAL</b>	<b>19.565 MILLION</b>

### Bio Chemistry

Sr. No.	Item	Specifications
1	<b>Incubator Co2 Fixed (Quantity =1)</b>	<p>The CO<sub>2</sub> Incubator should be a mid-sized, 48 liter incubator designed to optimize performance in applications that require a higher level of isolation and can be used in small labs. The incubator's feature a large backlit display with on screen help menu, control and data logging of temperature, CO<sub>2</sub>, door openings, alarms, and optional O<sub>2</sub> gas and humidity monitoring.</p> <p>The incubator should have the following features; 40 Liter or better (1.7 ft<sup>3</sup>) provides mid-sized capacity within a small footprint. Options: High Temp. Disinfection (4 hour at 120 °C), O<sub>2</sub> control (e.g. for hypoxic studies), 2- split inner glass door Fanless design offers more usable space, Six-sided direct heating system provides a uniform incubated environment, Deep-drawn, easy-to-clean stainless steel chamber without seams or welds, Low gas consumption, Integrated alarm relay BioCommand® software optional, Display readout Temperature and CO<sub>2</sub> level, 72-hour data/chart logger, alarm settings, In-line gas regulator standard, Outside door viewing window standard Perforated shelves standard, Seamless chamber standard,• Capacity 48 L (1.7 ft<sup>3</sup>)          Display standard display          Dimensions (W × D × H) 48.3 × 47.5 × 64.5 cm / 19.0 × 18.7 × 25.4 in           Weight w/o accessories 31.8 kg / 70.1 lb          High temperature disinfection (HTD) –          Sealed inner glass doors –          Segmented doors 2 segments          Temperature control increment ±0.1 °C          Temperature stability at 37 °C ±0.1 °C          Temperature range Ambient +4 °C to 50 °C          Temperature uniformity ±0.3 °C          CO<sub>2</sub> range 0.1 – 20 %</p>

		<p>CO2 control increment           ±0.1 %  CO2 stability at 5 % CO2       ±0.2 %  CO2 uniformity               ±0.1 %  Number of shelves (standard/max)  3/6  Data export interface RS-232, VisioNize® box  Benchtop (B), Under Bench (U), Floor (F) or Stackable (S)    B, U, F, S (x2)  Access port            1  On-board data logging            standard  Water/Humidity monitoring    –BMS relay    standard  <b>Made: Germany/UK/Japan or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
2	<b>Lyophilizer (Quantity =1)</b>	<p>LCD,touch screen With historical data inquiry function. With USB interface to export the data, " Large capacity ice conserve trap and without coil inside , With cascade refrigeration technology l:' Pre - freezing shelf cab be used as guide barrel to speed up, Ice condenser trap and operation panel made by stainless " Drying chamber is transparent which is visual and safe , Shelve are stainless steel, which can be adjustable per the drying rate steel requirements  Freeze Drying Area 0.12m2, Tray 4pcs, Height Between Trays 50mm, Cold Trap Temperature -56C, Cold Trap Capacity 9.5 L, Vacuum Degree &lt;10Pa * Water Capture 3kg/24h, Freeze Drying Time 24h * Loading capacity/Shelf (Liquid) 0.3L, Total Loading Capacity (Liquid) 1.2L.  External Size (W*D*H), mm 640"610"550/810 mm.  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
3	<b>Refrigerator -80C<sup>0</sup> (Quantity =1)</b>	<p>ULT Freezer -86°C should be vertical, HC Refrigerant, Climate N Class, Direct Cooling Type, Manual Defrost Mode, Should be cooling performance(°C)-86, Temperature Range(°C)-60~-86°C. Power supply should be 220/50 Hz, Power (W) 845 W. Capacity should be 408 L, Net/Gross Weight(kg) 215/245, Internal Size(W*D*H)mm 606×575×1180, External Size(W*D*H)mm 872×940×1945.5, Packing Size(W*D*H)mm 950×960×2110. Should be high and low temperature alarms, sensor error alarm Should have caster &amp; testing hole. Include back CO2/N2 backup system and freezing rack 100-well with attached lid (Fluorescent color) fifty (50) Nos, Voltage stabilizer  <b>Made: USA /UK/ Europe or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
4	<b>Real Time PCR (Quantity =1)</b>	<p>System capacity of well should be <b>96 or 384</b>. System should be able to handle the volume of as under quantities; <b>ell (0.1 ml block; 10-30 ul), (0.2 ml block; 10-100 ul) 384 well (5-20 ul)</b>, System must contain at least 1 dedicated detection channel for FRET probe based chemistry. System must be HRM compatible. Gradient operational range must be 30-100°C. Excitation source should be bright white LED.  Configurations for optical detection should be as under; <b>96 wells (6 decoupled filters) lls (5 coupled filters),</b>  <b>Excitation/ Detection range</b> (96 wells; 450-680nm/ 500- 730nm), (384 wells ; 450-650 nm/ 500- 700nm),  <b>Multiplexing;</b> 96 well up to 6 targets &amp; 384 well up to 5 targets),  <b>2D Barcode reading;</b> Optional.  <b>Heating / Cooling method;</b>Peltier  <b>Temperature Zone Function;</b> 96-wells, 6 isolated sample block segments by insulation.  <b>Maximum block ramp rate;</b> 9.0 with 0.1 ml block C/sec  <b>Maximum block ramp rate;</b> 5-7 C/sec  <b>Average sample ramp rate;</b> 3.66 C/ Sec</p>

		<p><b>Temperature uniformity;</b> 0.4 C or better  <b>Temperature accuracy;</b> 0.25 or better C.  <b>Run time;</b>&lt; 30 minutes  <b>Chemistries capabilities;</b> Fast/ Standard modes.  <b>Features to assist with 21CRF Part 11 compliance;</b> Yes with No additional fees.  <b>Number of copies;</b> 1 Copy.  <b>Sensitivity;</b> Detect differences as small as 1.5-fold in target quantities in single plex reaction.  Passive Reference Dye (ROX Dye)  <b>Essential accessories:</b> Data analysis software compatible with the system,Compatible online UPS( Imported APC or equivalent, with dry batteries) with at least 4 hours backup time.  <b>Made: USA /UK/ Europe/Singapore or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
5	<p><b>NanoDrop (Quantity =1)</b></p>	<p>Nanodrop should be Nucleic Acid A260, A260/A280, A260/A230 and Labeled Nucleic Acids; Protein A280 and A205, Protein Pierce 660, Protein Bradford, Protein BCA, Protein Lowry, Labeled Proteins, OD600, Kinetics, UV-Vis, and Custom Methods. Wavelength Accuracy-±1 nm, Wavelength Range-190–850nm. Compatibility should be DYMOLabelWriter 450 printer, Bluetooth keyboard, mouse and barcode reader. Concentration should be Maximum dsDNA: Pedestal: 27,500 ng/μL, BSA (IgG): Pedestal: 820 (400) mg/mL.Connections should be Three USB-A ports and Ethernet enabled, NanoDropMicrovolume UV-Vis Spectrophotometer, no Wi-Fi. Detection Range should be dsDNA: Pedestal: 2.0 ng/μL; Cuvette: 0.2 ng/μL, BSA (IgG): Pedestal: 0.06 (0.03) mg/mL; Cuvette: 0.006 (0.003) mg/mL, Detector Type should be 2048-element CMOS linear image sensor. Dimensions (L x W x H) 20 x 25.4 x 32.3cm (8 x 10 x 12.7 in.). Display should be 7-inch, 1280 x 800 high-definition color display, Built-in touchscreen, multipoint capacitive touch, Xenon flash lamp, Measurement and Data Processing Time 8 seconds. Operating system should be Android™. Pathlength (Metric) should be 0.030 to 1.0 mm auto-ranging, Photometric Accuracy Instrument-3% at 0.97 A, 302 nm (Absorbance expressed at Abs/mm at 25°C), Photometric Range-10 mm equivalent: Pedestal: 0–550 A; Cuvette: 0–1.5 A, Power Consumption- Operating: 12–18 W, Standby: 5 W, Repeatability- Measurement repeatability: Typical: 0.002 A (1.0 mm path) or 1%CV, whichever is greater (SD of 10 individual measurements at 0.97 A), Sample Temperature- Temperature Control (cuvette only) 37 °C, Sample Volume (Metric)- Minimum 1μL, Spectral Bandwidth-≤1.8nm (FWHM at Hg 254nm). System Requirements should be Windows™ 8.1 and 10, 64 bit, Voltage-12 V (DC). Dry bath should be light in weight, LCD display of both temperature and time, Rapid calibration support, Overheating protection, Safe and stable., USB interface to save the data, with hot lid provided to preserve the generated heat. Display should be LCD, Temperature setting range[°C] 0-100, Temperature range [°C] Room temperature -23~100, Temperature control accuracy[°C] ±0.5, Temperature display accuracy[°C] 0.1, Minimum time taken for heating(25°C-100°C, ≤20min, Max. Heating Rate 8°C /min, Max. Cooling Rate 3°C /min, Time setting range 0-999min/0-999sec, No. of programs in memory 9(2steps for each, Rapid calibration Support, USB interface, Support Error code reminder, Support, External dimension [mm] 110x162x140, Overall weight [kg] ≤1, Power supply should be DC12V,100-240V, 50/60Hz, Power 60W, operating temperature[°C] +10-40 &amp; Operating humidity [% RH] ≤80.  <b>Essential Accessories:</b>Data analysis software (for all type of analysis) compatible with the system.</p>

		<p><b>Made: USA / UK/Europe or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
6	<p><b>Western Blot Transfer System (Protein blot transfer) (Quantity =1)</b></p>	<p>Mini System transfers should have up to 4 Mini gels, Complete run-time flexibility from overnight to as short as a couple of hours, Cool pack for environmentally friendly low-cost cooling during high-intensity transfers, Open design, rigid cassettes maximize current transfer and eliminate shadow band formation, Cassettes colour-coded prevent polarity reversal to ensure transfer in the correct orientation The Mini Blot systems are complete stand-alone units for submarine blotting. Unit Dimensions (cm) 19 x 13 x 15, Capacity 4 Gels, Typical Running Conditions 100V, 1-2 hr, Gel Dimensions 8 x 8.5, Maximum Buffer Volume (ml) 1200 and Blotter Type Wet Blot. Gel electrophoresis mini unit 10 x 10cm incl. Glass Plates with bonded 1 mm thick spacers, 2x12 sample combs, cooling pack, dummy plate and casting base Unit Dimensions (cm) 19 x 13 x 15, Capacity 1 - 4 Gels, Maximum Sample Capacity 80, Base Buffer Volume 250ml Gel Dimensions 8 x 8.5, Maximum Buffer Volume (ml) 1200, Plate Dimensions 10 x 10 x 0.2. Power supply should be touch 120W Power Supply is a medium-throughput power supply with a 4.3-inch backlit LCD touch screen. This power supply should ideal for DNA/RNA electrophoresis, SDS-PAGE, and native PAGE. Input Power should be 115 VAC, 50/60Hz-230 VAC, 50/60Hz, Fuses-One T4A 250VAC, one extra fuse is provided, Output power in watts 120 W-Output voltage range 2 VDC - 300 VDC, Output current range, 1 mA – 500 mA Terminal pairs 4 (4 positive voltage and 4 negative voltage) Operating Modes ConstantVoltage, ConstantCurrent ConstantPower, 1 Vstep, 1 mA step, 1 wattstep, timerUp to 999 min per step, Crossover Automatic, Display type Backlit TFT-LCD Graphic type, Display area 95 mm x 54 mm (W x H) (4.3 inch), Display colors 16.7M colors, Pause function Yes, Safety features No Load Detection Load Change Detection, OverloadDetection, Ground Leak Detection, Programmable-Yes, should be Store up to 100 runmethods and Program up to 20 steps permethod.</p> <p><b>Made: Europe/UK/USA or equivalent (Having CE certification)</b>  <b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
7	<p><b>Western Blot Detection/Imaging System (Quantity =1)</b></p>	<p>Imaging system should have 9.1 MP cooled CCD camera: high sensitivity and dynamic range to helpenable the detection of subtle differences in samples, Smart Exposure technology: provides rapid determination of optimal exposure time to help minimize the need to repeat exposures to acquire the desired signal. Display Interface should have 12.1 inch capacitive LCD touch screen, Field 22.5cm x 18.0cm (WxD), For Use With (Application), Chemiluminescent western blot imaging,DNA gel imaging,Protein gel imaging, Format, Image formats: G2i (proprietary), TIFF, JPG, PNG, PDF, Includes Imaging Sample Blot,Preinstalled filter sets,Safe Imager Viewing Glasses,White Screen for stained SDS-PAGE gel analysis,iBright Imager Quick Start Guide, Dimensions: 68 x 38 x 60cm. Variable Volume Single Channel Pipettes should have distinctive handle with ejector push button located on the top of the finger rest, PVDF shafts ensuring the increased chemical and mechanical durability of the product.Easy operation for right- and left-handed users, Low pipetting forces, Highly durable shaft, UV resistant, Recalibration system, Supply with Autoclaveable pipettes with 4-digit 0.5to10µl-±4.0 to0.5,±2.8 to 0.4, 2to20µl-±3.0 to0.8, ±1.5 to 0.3, 10to100µl-±1.6 to0.8,±0.8 to 0.2, 20 to 200µl-±1.2 to 0.6, ±0.6 to 0.2 &amp;100 to 1000µl-±1.6 to 0.6,±0.4 to 0.15. Horizontal gel electrophoresis 15 x 15cm UV Tray, 2x20 sample comb, loading guides and dams. Gel Dimensions (W x L) should be 15 x 15 cm, unit dimensions (WxLxH) should be 17.5x26.5x9 cm, maximum Sample 15 x</p>

		<p>15 UV Tray-210 samples and buffer volume should be 500 ml. system should have Comb 10 sample, 1 mm thick, Comb 16 sample MC, 1 mm thick, Comb 10 sample, 1.5 mm thick, Comb 16 sample MC, 1.5 mm thick, Comb 10 sample, 2.0 mm thick and Comb 16 sample MC, 2.0 mm thick</p> <p><b>Essential Accessories:</b> Data analysis software compatible with the system</p> <p><b>Made: UK/ Europe/USA or equivalent (Having CE certification)</b></p> <p><b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
8	<b>Bioreactor (Quantity =1)</b>	<p>Batch, Semi-batch, fed batch reactions.</p> <p>Glass or Stainless-Steel vessel, Observation Window for visualizing the reaction case of stainless steel.</p> <p>Material of Stainless steel: 316</p> <p>Vessel of 5-8 Liter volume or above,</p> <p>The Bioreactor should support standard fixed or variable peristaltic pumps</p> <p>Stirring Mechanism along with impeller,</p> <p>Speed: Max 1000 rpm,</p> <p>Liquid inlets Ports: 3 x Liquid addition ports,</p> <p>Sampling ports: Outlet port for sample collection</p> <p>Sensors: Equipped with pH, CO<sub>2</sub>, temperature sensor</p> <p>Automatic pH dosing system: Equipped with automatic pH adjustment and system with pump.</p> <p>Drain Valve: Equipped with valve for complete drain</p> <p>Gas control Mechanism: By gas flow rotameters</p> <p>Gas Inlet Ports: 3 x gas inlet ports, 1 x outlet port</p> <p>Heating: Max. 150 °C</p> <p>Temperature sensor, Thermocouple: PT-100 Type</p> <p>Temperature Controller: Automatic temperature controller</p> <p>Temperature Sensor / Thermocouple: PT-100 type</p> <p>Pressure Range: upto 3-5 Bar</p> <p>Automatic low temperature chiller for rapid cooling</p> <p><b>Equipped with built in autoclave system</b></p> <p><b>Equipped with Nitrogen and Oxygen Cylinders</b></p> <p><b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
9	<b>Temperature controlled Incubator Shaker (Quantity =1)</b>	<p>Benchtop, Temperature Range: +25°C ... + 45°C, No. of Flasks: 2 – 4, Speed control range: 0–250 rpm, Automatic Temperature Controller, Acrylic / Glass Incubation Chamber, Timer 0-99 hours, Overheat protection safety, Maximum load 2.5 Kg</p> <p><b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>

10	<b>Biological Safety Cabinet</b> <b>(Quantity =1)</b>	<p>Cabinet air speed should be automatic adjustable with filter, HEPA Filter and UV Life indicator, Motorized Front Window, Time Reserve Function, safety in work area from radionuclides, volatile chemicals and negative pressure, should be audio and visual alarm, remote control, microprocessor Control System, Safety Height = 200 mm (8'') Max Opening 420mm(17''), 0.53±0.025 m/s Inflow Velocity, 0.33±0.025 m/s Down flow Velocity ≥1000Lux illumination. Airflow System should have 0% air recirculation, 100% air exhaust, HEPA pre-filter-Washable, two, 99.999% efficient at 0.3 um. Two-layer laminated toughened glass ≥ 5mm. Anti UV, Noise NSF49 ≤ 61 dB / EN1246949 ≤ 58 dB, UV Lamp 30W*1, UV timer, UV life indicator, emission of 253.7 nanometers for most efficient decontamination. Illuminating LED Lamp should be 12W*2, 700W Consumption two waterproof sockets, total load of two sockets: 500W, LCD display: exhaust filter and down flow filter pressure, filter and UV lamp working time, inflow and down flow velocity, filter life, humidity and temperature, system working time etc. Alarm-Abnormal airflow velocity; Filter replacement; Front window at unsafe height, Exhaust Duct 4 meters PVC duct, Diameter:300mm, Material Work Zone: 304 stainless steel, Main Body: Cold-rolled steel with anti-bacteria powder coating, Foot master caster. Power Supply should be AC 220V±10%, 50/60Hz; 110V±10%, 60Hz Standard Accessory should be Illuminating lamp, UV lamp*2, base stand, remote control, foot switch, exhaust blower, exhaust duct, drain valve, waterproof sockets*2, pipe strap*2, minimum Class 11B2 type</p> <p><b>Essential accessories: Voltage stabilizer, extra filters.</b></p> <p><b>Made: USA / EUROPE or equivalent (Having CE certification)</b></p> <p><b>Note: Warranty will start from date of installation and subsequent inspection.</b></p>
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**Total Estimated Price**

**18.275 Million Rupees**