



**NED UNIVERSITY OF ENGINEERING & TECHNOLOGY  
PROCUREMENT CELL**

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**“Say No to Corruption”**



No. DP/RGT-153889/8118/  
June 22, 2022

434

**Notice Inviting Tender**

NEDUET invites sealed bids on single stage one envelope procedure from firms having registration with Income Tax, Sales Tax and Sindh Revenue Board (whichever is applicable) to carry out following:

S#	Tender / Number	Tender Schedule – Date and Time				Tender Fee Rs
		Issue / Sale		Submission	Opening	
		From	To			
1.	Procurement of Laboratory Equipment for Upcoming Semester for Department of Civil Engineering at TIEST, Tharparkar. Tender No. PC/NED/RGT/LAB Equip/8118/2022	27.06.2022	14.07.2022	15.07.2022 10:00 A.M.	15.07.2022 10:30 A.M.	3000/-

**Eligibility Criteria**

- The bidder must have at least 3 years of experience in the relevant field
- Details of turn-over (Including in terms of Rupees) of at least last three years  
that average turnover of last three years should not be less than Rs 124 million per year.
- Registration with FBR / SRB (whichever is applicable).

Tender Fee and Bid Security @ 5% of bid cost in shape of Payorder should be in favor of Director Finance. Bidding documents can be obtained and shall be submitted in the office of ADP – II as per above schedule. Bidders are requested to give their Best and Final Price as “No Negotiations” is permitted. Bidding Documents containing detailed terms and conditions are available at Websites [www.neduet.edu.pk](http://www.neduet.edu.pk) and [www.ppms.pprasinidh.gov.pk](http://www.ppms.pprasinidh.gov.pk).

  
22.6.2022  
Director Procurement

ISSUED ON: \_\_\_\_\_

ISSUED TO: \_\_\_\_\_

## **PROCUREMENT CELL**



## **BID DOCUMENTS**

**“Procurement of Laboratory Equipment for Upcoming Semester for Department of Civil Engineering at TIEST, Tharparkar.”**

**TENDER NO. PC/NED/RGT/LAB Equip./8118/2022**

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## **PART-II**

### **INSTRUCTION TO BIDDERS**

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| <b>i Source of Funds</b>               | Funds would be arranged from Thar Campus budget of NED University of Engineering & Technology. The eligible payment under the contract is to be made from this approved project.   |
| <b>ii Eligible Bidders</b>             | <p>ii.a This Invitation for Bids is open to all suppliers from eligible source as defined in the SPP Rules, 2009 and its Bidding Documents except as provided hereinafter.</p> <p>ii.b Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Procuring agency to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation for Bids.</p> <p>ii.c Government-owned enterprises in the Province of Sindh may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Government of Sindh.</p> <p>ii.d Bidders shall not be eligible to bid if they are under a declaration of ineligibility for corrupt and fraudulent practices issued by the any government organization.</p> |
| <b>iii Eligible Goods and Services</b> | <p>iii.a The origin of all the goods &amp; related services to be supplied under the Contract should be mentioned.</p> <p>iii.b Origin means the place where the goods are mint, grown or produce or the place from which the related services are supplied.</p> <p>iii.c The Origin of goods and services is distinct from the nationality of bidders.</p>  |
| <b>iv Cost of Bidding</b>              | iv.a The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring agency named in the Bid Data Sheet, hereinafter referred to as “the Procuring agency,” will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.  |

## B. The Bidding Documents

### v Content of Bidding Documents

v.a The bidding documents include:

- (a) Instructions to Bidders (ITB)
- (b) Bid Data Sheet
- (c) General Conditions of Contract (GCC)
- (d) Special Conditions of Contract (SCC)
- (e) Schedule of Requirements
- (f) Technical Specifications
- (g) Bid Form and Price Schedules
- (h) Bid Security Form
- (i) Contract Form
- (j) Performance Security Form
- (k) Manufacturer's Authorization Form

v.b 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.

### vi Clarification of Bidding Documents

vi.a A interested Bidder requiring any clarification of the bidding documents may notify the Procuring agency in writing. The Procuring agency will respond in writing to any request for clarification of the bidding documents which it receives no later than three working days prior to the deadline for the submission of bids prescribed in the Bid Data Sheet. Written copies of the Procuring agency's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all interested bidders that have received the bidding documents.

### vii Amendment of Bidding Documents

vii.a At any time prior to the deadline for submission of bids, the Procuring agency, for any reason, whether at its own initiative or in response to a clarification requested by a interested Bidder, may modify the bidding documents by amendment.

vii.b All interested bidders that have received the bidding documents will be notified of the amendment in writing, and will be binding on them.

vii.c In order to allow interested bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring agency, at its discretion, may extend the deadline for the submission of bids.



### **C. Preparation of Bids**

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| <b>1. Scope</b>                        | 1.1 The NED University of Engg. & Tech., Karachi intends the subject procurement through National Competitive Bidding Single Stage one Envelope Procedure as per SPPRA Rules-2010 (Amended 2019).  |
| <b>2. Language of Bid</b>              | 2.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring agency shall be written in the English language.   |
| <b>3. Documents Comprising the Bid</b> | 3.1 The bid prepared by the Bidder shall comprise the following components: <ul style="list-style-type: none"> <li>a) Price Schedule completed in accordance with ITB Clauses 4, 5 and 6.</li> <li>b) bid security furnished in accordance with ITB Clause-9.</li> </ul>   |
| <b>4. Bid Prices</b>                   | 4.1 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.<br><br>4.2 The prices shall be quoted on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location specified in the schedule of Requirements. No separate payment shall be made of the incidental services.<br><br>4.3 Prices quoted by the 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.<br><br>4.4 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet. |
| <b>5. Bid Form</b>                     | 5.1 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.  |
| <b>6. Bid Currencies</b>               | 6.1 Prices Shall be quoted in Pak Rupees.  |
| <b>7. Bidder's Eligibility</b>         | 7.1 As defined in Bid Data Sheet.  |

- 8. Documents Establishing Goods' Eligibility and Conformity to Bidding Documents**
- 8.1 The documents evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and Data, and shall consist of:
- (a) a detailed description of the essential technical and performance characteristics of the goods;
  - (b) the Bidder shall note that standards for workmanship, material ,and equipment, as well as references to brand names or catalogue numbers designated by the Procuring agency in its Technical Specification are intended to be descriptive only and not restrictive :till stated otherwise in Technical Specifications or Bid Data Sheet .The Bidder may substitute alternative standards, brand names , and /or catalogue numbers in its bid , provided that demonstrates to the Procuring agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the in the Technical Specifications
- 9. Bid Security**
- 9.1 The bid security is required (in the amount specified in the bid data sheet) to protect the Procuring agency against the risk of Bidder's conduct, which would warrant the security's forfeiture The bid security shall be denominated in the currency of the bid:
- a) at the Bidder's option, be in the form of either demand draft/call deposit or an unconditional bank guarantee from a reputable Bank;
  - b) be submitted in its original form: copies will not be accepted;
  - c) remain valid for a period of at least 14 days beyond the original validity period of bids, or at least 14 days beyond any extended period of bid validity.
- 9.2 bid security shall released to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.
- 9.3 The successful Bidder's bid security shall be discharged upon the Bidder signing the contract, and furnishing the performance security.
- 9.4 The bid security may be forfeited:
- a) if a Bidder withdraws its bid during the period of bid validity or
  - b) in the case of a successful Bidder, if the bidder fails:
    - (i) to sign the contract in accordance or
    - (ii) to furnish performance security

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| <b>10. Period of Validity of Bids</b>      | <p>10.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Procuring agency. A bid valid for a shorter period shall be rejected by the Procuring agency as non responsive.</p> <p>10.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security shall also be suitable extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required not be required nor permitted to modify its bid.</p> |
| <b>11. Format and Signing of Bid</b>       | <p>11.1 The Bidder shall prepare an original bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" as appropriate. In the event of any discrepancy between them, the original shall govern.</p> <p>11.2 The original bid shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract.</p> <p>11.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.</p>   |
| <b>D. Submission of Bids</b>               |  |
| <b>12. Sealing and Marking of Bids</b>     | <p>12.1 The Bidder shall seal the original bid in envelope, duly marking the envelope as "ORIGINAL BID". The envelope shall then be sealed in an outer envelope. The inner and outer envelopes shall be addressed to the Procuring agency at the address given in the BDS, and carry statement <u><b>"DO NOT OPEN BEFORE<br/>at A.M"</b></u></p> <p>12.2 If the outer envelope is not sealed and marked as required, the Procuring agency shall assume no responsibility for the bid's misplacement or premature opening.</p>  |
| <b>13. Deadline for Submission of Bids</b> | <p>13.1 Bids must be received by the Procuring agency at the address specified in Bid Data Sheet, not later than the time and date specified in Bid Data Sheet.</p> <p>13.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents, in such case all rights and obligations of the Procuring agency and bidders previously subject to the deadline will thereafter be subject to the deadline.</p>   |
| <b>14. Late Bids</b>                       | <p>14.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribes by the Procuring agency shall be rejected and returned unopened to the Bidder.</p>   |



- 15. Modification and Withdrawal of Bids**
- 15.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the deadline prescribed for submission of bids.
- 15.2 No bid may be modified after the deadline for submission of bids.
- 15.3 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security.

#### **E. Opening and Evaluation of Bids**

- 16. Opening of Bids by the Procuring agency**
- 16.1 The Procuring agency shall open all bids in the presence of bidder's representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register/attendance sheet evidencing their attendance.
- 16.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presences or absence of requisite bid security and such other details as the Procuring agency, at its discretion, may consider appropriate, will be announced at the opening.
- 17. Clarification of Bids**
- 17.1 During evaluation of the bids, the Procuring agency may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.
- 18. Preliminary Examination**
- 18.1 The Procuring agency shall 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.
- 18.2 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 correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.

- 18.3 Prior to the detailed evaluation, the Procuring agency will determine the substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Procuring agency's determination of a bid's responsiveness is to be based on the contents of the bid itself.
- 18.4 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.
- 19. Evaluation and Comparison of Bids**
- 19.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive.
- 19.2 The Procuring agency's evaluation of a bid will be on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location and shall exclude any allowance for price adjustment during the period of execution of the contract.
- 20. Contacting the procuring agency**
- 20.1 No Bidder shall contact the procuring agency on any matter relating to its bid, from the time of bid opening to the time the announcement of Bid Evaluation Report. If the Bidder wishes to bring additional information to the notice of the procuring agency, it should do so in writing.
- 20.2 Any effort by a Bidder to influence the Procuring agency in its decision on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

### **Award of contract**

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| <b>21. Post – Qualification</b>   | <p>21.1 In the absence of prequalification, the procuring agency may determine to its satisfaction whether that selected Bidder having submitted the lowest evaluation responsive bid is qualified to perform the contract satisfactorily.</p> <p>21.2 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 Claus-7 as well as such other information as the Procuring agency deems necessary and appropriate.</p> <p>21.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to perform satisfactorily.</p> |
| <b>22. Award Criteria</b>   | <p>22.1 The Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.</p>  |
| <b>22 a Procuring Agency's right to vary quantities at the time of award</b>        | <p>The Procuring Agency reserves the right to increase/decrease the quantity of the required items and /or purchase part items already tendered either in full or in part. The Procuring Agency reserves the right to accept or reject any or all of the Tenders; divide business amongst more than one bidder.</p>  |
| <b>23. Procuring agency's Right to Accept any Bid and to Reject any or All Bids</b> | <p>23.1 Subject to relevant provisions of SPP Rules 2010 (Amended 2019), the Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award.</p> <p>23.2 Pursuant to Rule 45 of SPP Rules 2010 (Amended 2019), Procuring agency shall hoist the evaluation report on Authority's web site, and intimate to all the bidders seven days prior to notify the award of contract.</p>  |
| <b>24. Notification of Award</b>  | <p>24.1 Prior to the expiration of the period of bid validity, the Procuring agency shall notify the successful Bidder in writing, that its bid has been accepted.</p>   |

- 24.2 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 26, the Procuring agency will promptly notify each unsuccessful Bidder and will discharge its bid security.
- 25. Signing of Contract**
- 25.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 25.2 Within fourteen (14) days, or any other period specified in BDS, of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.
- 26. Performance Security**
- 26.1 Within seven (07) days, or any other period specified in BDS, of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.
- 26.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 25 or ITB Clause 26.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.
- 27. Corrupt or Fraudulent Practices**
- 27.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPP Act, 2009 and Rules made there under:
- (a) **“Corrupt and Fraudulent Practices”** means either one or any combination of the practices given below;
- (i) **“Coercive Practice”** means any impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;

(ii) **“Collusive Practice”** means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;

(iii) **“Corrupt Practice”** means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;

(iv) **“Fraudulent Practice”** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

b) **“Obstructive Practice”** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under the Rules.

## **Part-III**

### **General Conditions of Contract**

#### **1. Definitions**

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

- (a) **“The Contract”** means the agreement entered into between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (b) **“The Contract Price”** means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) **“The Goods”** means all of the equipment, machinery, and/or other materials, which the Supplier is required to supply to the Procuring agency under the Contract.
- (d) **“The Services”** means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
- (e) **“GCC”** mean the General Conditions of Contract contained in this section.
- (f) **“SCC”** means the Special Conditions of Contract.
- (g) **“The Procuring agency”** means the Sindh Public Procurement Regulatory Authority (SPPRA), Government of Sindh.
- (h) **“The Supplier”** means the individual or firm supplying the Goods and Services under this Contract.
- (i) **“SPP Rules 2010”** means the Sindh Public Procurement Rules 2010 (Amended 2019).
- (j) **“Day”** means calendar day.



- 2. Standards** 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.
- 3. Patent Rights** The Supplier shall indemnify the Procuring agency against all third- party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Islamic Republic of Pakistan.
- 4. Performance Security**
- 4.1 Within seven (07) days, or any other duration as specified in SCC, of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.
- 4.2 The proceeds of the performance security shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 4.3 The performance security shall be denominated in the Pak rupees and shall be an unconditional bank guarantee, pay order, call deposit as, provided in the bidding documents or another form acceptable to the Procuring agency;
- 4.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.
- 5 Inspections and Tests**
- 5.1 The Procuring agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring agency. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 5.2 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring agency.
- 5.4 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Manufacturer.

- 5.5 Nothing in GCC Clause 5 shall in any way release the Supplier from any warranty or other obligations under this Contract.

**6. Packing**

The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. 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.

**7. Delivery and Documents**

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/ transportation and/or other documents to be furnished by the Supplier are specified in SCC.

**8. Insurance**

No need of Insurance for Local Supplies, However Supplier is responsible to deliver the goods in perfect condition to the end user.

**9. Transportation**

The Supplier is required under the Contract to transport the Goods to a specified place of destination and shall be arranged by the Supplier, and related costs shall be deemed to have been included in the Contract Price.

**10. Incidental Services**

- 10.1 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

**11. Spare Parts**

- 11.1 The Supplier should provide any or all of the notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and

- (b) in the event of termination of production of the spare parts:
  - (i) advance notification to the Procuring agency of the pending termination, in sufficient time to permit the Procuring agency to procure needed requirements; and
  - (ii) following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.

## **12. Warranty**

- 12.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of desired models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 12.2 This warranty / maintenance period shall remain valid for six (06) 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
- 12.3 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Procuring agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.

## **13. Payment**

- 13.1 The firm should submit stamp duty as per Government Rule before execution of work.
- 13.2 Within 30 days after the issuance of inspection certificate and consignee's receipt certificate as mentioned in SSC clause 6.
- 13.3 If the supply is not according to the specifications or unsatisfactory, the Contract will be rejected and cancelled at the risk and cost of Firm
- 13.4 If the firm fails to execute the contract/supply order as per condition, action will be taken against them which may be their black listing and Earnest Money. / Security Deposit will be forfeited.

13.5 In case of late delivery @ 0.1% per day will be charged on bid amount deducted from the bill, but not more than 10% of contract value.

13.6 The currency of payment is Pak. Rupees.

**14. Prices**

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,

**15. Contract Amendments**

No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

**16. Delays in the Supplier's Performance**

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

16.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions obstructing timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

16.3 Except as provided under GCC Clause 19 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 17 unless an extension of time is agreed upon pursuant to GCC Clause 16.2 without the application of liquidated damages.

## 17. Liquidated Damages

Subject to GCC Clause 19, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring agency may consider termination of the Contract pursuant to GCC Clause 18.

## 18. Termination for Default

18.1 The Procuring agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring agency pursuant to GCC Clause 16; or
- (b) If the Supplier fails to perform any other obligation(s) under the Contract.
- (c) If the Supplier, in the judgment of the Procuring agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

18.2 In the event the Procuring agency terminates the Contract in whole or in part, pursuant to GCC Clause 18.1, the Procuring agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and supplier shall be liable to the Procuring agency for any excess costs for such similar Goods or services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

## 19. Force Majeure

19.1 Notwithstanding the provisions of GCC Clauses 16, 17 and 18, 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.

19.2 For purposes of this clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

- 19.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 20. Termination for Insolvency** 20.1 The Procuring agency may at any time terminate the Contract by giving written notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the procuring agency.
- 21. Termination for Convenience** 21.1 The Procuring agency, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring agency's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 21.2 The Goods that are complete and ready for shipment within thirty (30) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring agency at the Contract terms and prices. For the remaining Goods, the Procuring agency may elect:
- (a) to have any portion completed and delivered at the Contract terms and prices; and / or
  - (b) To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Suppliers
- 22. Resolution of Disputes** Resolution of dispute shall be through Mechanism for Redressal of Grievances as provided in the rules or through Arbitration Act 1942.
- 23. Governing Language** The Contract shall be written in English language all correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.
- 24. Applicable Law** The Contract shall be interpreted in accordance with the SPP Rules 2010 (amended 2019).



- 25. Taxes and Duties** Supplier shall be entirely responsible for all taxes, duties (including stamp duty), license fees, etc., incurred until delivery of the contracted Goods to the Procuring agency.
- 26. Overriding effect of Sindh Public Procurement Rules 2010 (Amended 2019)** In case of conflict or primacy of interpretation the provisions of SPP Rules 2010 (amended 2019) shall have an overriding effect notwithstanding anything to the contrary contained in these bidding documents

### **Part-IV [Bid Data Sheet]**

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

<b>Introduction</b>	
<b>ITB 1</b>	<b>Name of Procuring Agency:</b> Office of The Assistant Director Procurement – II, NED University, Karachi. Tel # 99261261-68, (Ext: 2291), Fax: 99261255
	Name of Contract. <b>Procurement of Laboratory Equipment for Upcoming Semester for Department of Civil Engineering at TIEST, Tharparkar</b>
<b>Bid Price and Currency</b>	
<b>ITB 4</b>	Prices quoted by the Bidder shall be <i>“fixed” and in” Pak Rupees”</i>
<b>Preparation and Submission of Bids</b>	
<b>TB 7</b>	<b>Selection / Eligibility / Responsiveness criteria:</b> <ol style="list-style-type: none"> <li>1. Bidder should quote price only in PKR. With all corrected applicable taxes and duties.</li> <li>2. Having local presence in Karachi.</li> <li>3. Bid should be accompanied with client list.</li> <li>4. Bidder should strictly compliant with technical specification; no optional /alternative item will be accepted.</li> <li>5. The bidder must have at least 3 years of experience in the relevant field.</li> <li>6. Income Tax Certificate (NTN)</li> <li>7. GST Registration Certificate.</li> <li>8. Details of turn-over (Including in terms of Rupees) of at least last three years that Average turn-over of at least last three years should not be less than 124 Million per year</li> <li>9. Affidavit confirming that the firm has not been black listed by any Government, Semi Government or Autonomous Bodies on non-judicial stamp paper.</li> </ol>
<b>ITB 9</b>	<b>Amount of bid security.</b> 5% of Bid Value
<b>ITB 10</b>	<b>Bid validity period.</b> 90 days
<b>ITB 11</b>	<b>Number of copies.</b> One original - - -
<b>ITB 13</b>	Deadline for bid submission. As notified in NIT
<b>ITB 19.1</b>	<b>Bid Evaluation:</b> Lowest evaluated responsive bid

	<p><b>Other Terms &amp; Conditions:</b></p> <ol style="list-style-type: none"> <li>i. In case of any unforeseen situation or government holiday resulting in closure of office on the date of opening. Bid shall be submitted / opened on next working day at the given time</li> <li>ii. Tender documents can also be obtained by post against Pay Order/Bank Draft of Rs-800/- as courier charges in addition of tender fee.</li> <li>iii. NEDUET may reject all or any bid subject to relevant provision of SPP Rules and may cancel the bidding process at any time prior to acceptance of bid or proposal as per Rule 25(1) of said rules.</li> <li>iv. Incomplete, conditional and tender without required earnest money in the specified form/format shall be rejected.</li> <li>v. Bidders are advised that before filling the bidding documents all pages of bidding documents should carefully be rechecked. If any page(s) / paper(s) of bidding documents are missing that can be downloaded from the official website of this University and SPPRA, and also can be obtained from the office of the ADP-2 in Procurement Cell, NEDUET, Karachi. Bid(s) with incomplete bidding documents will straightaway be rejected.</li> <li>vi. Bidders are required to provide their valid e-mail Ids and contact numbers (s) for effective and timely communication</li> <li>vii. Affidavit that firm has never been blacklisted.</li> <li>viii. All Bidding documents must be signed, named &amp; stamped by authorized person of the firm/ Companies along with authorized letter.</li> <li>ix. Incomplete, conditional and tender without required bid security as specified in the bidding documents, shall be reject. Each page of bidding documents should be signed and stamped.</li> <li>x. Contract Agreement and Integrity Pact both are mandatory for successful bidder.</li> <li>xi. Prescribed Sales Tax Invoice, payment of Stamp Duty at rate specified by Government of Sindh, Valid Professional Tax Certificate and Job Completion / Inspection Certificate duly issued by Indenting Department will be required for payment. However, withholding of all government Taxes shall apply as rates specified in relevant Government Schedule.</li> </ol>
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Signature & Stamp of Tenderer

**Part-V****Special Conditions of Contract**

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

**1. Definitions (GCC Clause 1)**

GCC 1 (g)—The Procuring Agency is: Office of the Procurement Cell, NED University of Engineering & Technology, Karachi.

**2. Performance Security (GCC Clause 4)**

GCC 4—The amount of performance security, as a percentage of the Contract Price, shall be: 5%.

**3. Inspections and Tests (GCC Clause 5)**

Inspection of NEDUET shall inspect the procured good and ensure that it meets the tender specifications before its acceptance

**4. Delivery and Documents (GCC Clause 7)**

GCC 10—Supplier shall supply and install the good within \_\_\_\_ Days after signing the contract and shall submit the following.

- (i) Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- (ii) Packing List identifying the contents of Supply;
- (iii) Delivery note.
- (iv) Warranty and guarantee certificate;

**5. Warranty (GCC Clause 12)**

The equipment shall bear Standard warranty (with free parts & labor) from the date of installation / acceptance. Upon expiration of warranty, Purchaser at its option may enter into a Service Level Maintenance Agreement upon expiry of the warranty period in accordance with terms embodied in Appendix-A hereto

**6. Payment (GCC Clause 13)**

100% of the Contract Price shall be paid upon 100% delivery, and satisfactory Installation, integration and testing of the products at the Project site (s), subject to the production of installation and Operational Acceptance Certificates duly signed by authorized Inspection Committee of NEDUET.

**7. Liquidated Damages (GCC Clause 17)**

If the Supplier fails to deliver the goods or perform the services within the time 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 0.1 percent of the Contract Price for each day of delay until actual delivery or performance, up to a maximum deduction of 10% of the Contract Price. Once the maximum is reached, the purchaser may consider termination of the contract.

**8. Resolution of Disputes (GCC Clause 22)**

In the case of a dispute between the Procuring agency and the Supplier, the dispute shall be referred to the dispute resolution mechanism as defined in rule 31, 32 and 34 of the (SPPR 2010) Amended 2019

**9. Applicable Law (GCC Clause 24)**

GCC 24 Contract shall be interpreted in accordance with the Sindh Public Procurement law of Sindh.

**Part-VI**  
**SCHEDULE OF REQUIREMENTS**

The delivery schedule hereafter expressed the date of delivery required.

<b>S. No</b>	<b>Items/Quantity</b>	<b>Time of Delivery from date of Award</b>	<b>Location of Supply</b>
1.	[As specified in Part – VIII of this bidding documents at from P-33 to 79].	Preferably within 30 Days	for Thar Institute of Engineering Sciences & Technology, Tharparkar NEDUET

**Note:** **specifications of above items are attached**



**PART-VII**  
**SAMPLE FORMS**

**Form-I**

**Letter of Acceptance**

Date: \_\_\_\_\_

To:

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NED University of Engineering & Technology,  
Karachi,

Dear Sir:

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

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

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

We agree to abide by this Bid for a period of 90 days from the date fixed for Bid opening under Clause 10 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

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

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

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2022\_\_\_\_\_.

\_\_\_\_\_  
*[signature]*

\_\_\_\_\_  
*[in the capacity of]*

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_

## Form-II

### Price Schedule in Pak. Rupees

Name of Bidder \_\_\_\_\_. IFB Number \_\_\_\_\_. Page of \_\_\_\_\_

[illegible]

Total Bid amount in words: \_\_\_\_\_

Total Bid amount in figure: \_\_\_\_\_

Signature of Bidder \_\_\_\_\_

*Note:*

- (i) In case of discrepancy between unit price and total, the unit price shall prevail.
- (ii) The unit and total prices Delivered at Civil Engineering Department Thar Institute of Engineering, Sciences and Technology (TIEST) a NED University Constituent College should include the price of incidental services. No separate payment shall be made for the incidental services.

### **Experience of Similar Supply and Installation**

[illegible]

**Form-IV****Contract Form**

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ 2022\_\_\_\_\_ between *NED University of Engineering & Technology, Karachi*. (hereinafter called “the Procuring agency”) of the one part and *[name of Supplier]* of *[city and country of Supplier]* (hereinafter called “the Supplier”) of the other part:

WHEREAS the Procuring agency invited bids for certain goods and ancillary services, viz., Procurement of \_\_\_\_\_ for \_\_\_\_\_, NEDUET, Karachi. Has accepted a bid by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

4. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - (a) the Bid Form and the Price Schedule submitted by the Bidder;
  - (b) the Schedule of Requirements;
  - I the Technical Specifications.
  - (d) the General Conditions of Contract;
  - I the Special Conditions of Contract; and
  - (f) the Procuring agency’s Notification of Award.
3. In consideration of the payments to be made by the Procuring agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring agency to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract
5. The Procuring agency hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Procuring agency)

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Supplier)

**Form-V****Performance Security Form**

To:

---

**NED University of Engineering & Technology,  
Karachi.**

WHEREAS *[name of Supplier]* (hereinafter called “the Supplier”) has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated \_\_\_\_\_ 2022\_\_\_\_\_ to supply *[description of goods and services]* (hereinafter called “the Contract”).

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Supplier’s performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a guarantee:

THEREFORE, WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the \_\_\_\_\_ day of \_\_\_\_\_ 2022\_\_\_\_\_.

Signature and seal of the Guarantors

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*[name of bank or financial institution]*

---

*[address]*

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*[date]*

**Form-VI****Manufacturer's Authorization Form**

To:

---

**NED University of Engineering & Technology,  
Karachi.**

WHEREAS *[name of the Manufacturer]* who are established and reputable manufacturers of *[name and/or description of the goods]* having factories at *[address of factory]*

do hereby authorize *[name and address of Agent]* to submit a bid, and subsequently sign the Contract with you against NIT 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 12 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 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.


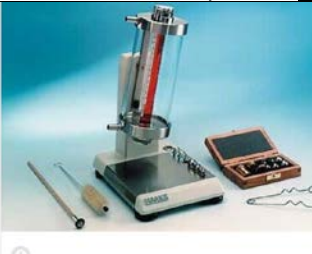




**PART-VIII**  
**NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY**  
**CIVIL ENGINEERING DEPARTMENT (TIEST)**  
**SPECIFICATIONS AND QUANTITIES**



**Tender No. PC/NED/RGT/LAB EQUIP/8118/2022**




Item Code No.	Description of Items/Specifications	Unit	Total Qty. Reqd.	Price in Pak. Rupees			
				Total Amount			
				Unit Price	Without GST/SRB	Add GST/SRB	With GST/SRB
					1	2	3 = (1+2)
<p><b>As specified at from Page No. 33 to 79</b></p>							




\_\_\_\_\_  
Signature & Stamp of Tenderer


FLUID MECHANICS LAB							
S. NO.	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Require	Unit Price in Pak Rupees Only	
						Unit Price	Total Amount
1	Digital Viscometer		Measuring Range 20 ~ 2,000,000 (MPa) No. of Speeds 0.3, 0.6, 1.5, 3, 6, 12, 30, 60 RPM (8 speeds) or above Spindles #1, #2, #3, #4 is standard configuration Accuracy $\pm 1.0\%$ Full Scale Repeatability $\pm 0.5\%$ Full Scale Display LCD Temp. Reading Option (separate probe TM-220 optional) Functions with auto range function Liner Calibration Sound Alarm at under 20% Torque Time Function High quality Stepping Motor Power Source 100V-240V	Nos.	4		
2	Falling Ball Viscometer along with thermometer and circulating bath		Meet the requirements of DIN 53015 and ISO 12058 Viscosity range: 0.5 mPa.s (CP) To 70000 mPa.s	Nos	4		


FLUID MECHANICS LAB							
S. NO.	Instrument/Apparatus Name	Images	Technical Specification	Unit	Total Quantity Require	Unit Price in Pak Rupees Only	
						Unit Price	Total Amount
3	Laminar Flow Analysis table		<ul style="list-style-type: none"> <li>Working section and end tanks made of glass-reinforced plastic (GRP)</li> <li>Working section dimensions 606mm x 892mm</li> <li>Actual viewing area 495mm x 755mm</li> <li>Lower glass plate incorporates eight sinks/sources in cruciform pattern and viewing reticule</li> <li>A system of pipes, valves and manifolds enables any configuration of sinks and sources to be used</li> <li>Includes dye injection system 19 hypodermic needles and adjustable knife-edge weir for rapid, accurate adjustment of table flow</li> <li>Comprehensive instruction manual with illustrations</li> </ul>	Nos	2		
4	Losses in Bends and Fittings apparatus		<p>Net dimensions and weight: 2600 mm x 800 mm x 1700 mm, and 95 kg</p> <p>Parts:</p> <ul style="list-style-type: none"> <li>• Small-bore straight pipe (nominally 13.6 mm bore copper)</li> <li>• Larger-bore straight pipe (nominally 26.2 mm bore copper)</li> <li>• Sudden expansion (13.6 mm to 26.2 mm)</li> <li>• Sudden contraction (26.2 mm to 13.6 mm)</li> <li>• 90-degree mitre bend (no radius)</li> <li>• Elbow (13.6 mm radius)</li> <li>• Small radius, smooth 90° bend (50 mm radius)</li> <li>• Medium radius, smooth 90° bend (100 mm radius)</li> <li>• Large radius, smooth 90° bend (150 mm radius)</li> <li>• Gate valve and Globe valve</li> </ul>	Nos	3		

FLUID MECHANICS LAB							
S. NO.	Instrument/Apparatus Name	Images	Technical Specification	Unit	Total Quantity Require	Unit Price in Pak Rupees Only	
						Unit Price	Total Amount
5	Fluid Friction Apparatus		<p>Net dimensions and weight of main unit: 2.8 m long (assembled) x 1.85 m high x 0.8 m front to back and 130 kg Net dimensions and weight of Piezometer Set: 500 mm wide x 500 mm front to back x 1.7 m high (assembled) and 27 kg</p> <ul style="list-style-type: none"> <li>• Smooth pipes of various lengths and internal diameters from 4 mm to 17 mm</li> <li>• Artificially roughened pipe</li> <li>• 90-degree mitre and elbow</li> <li>• 90-degree smooth bends (up to 150 mm radius)</li> </ul>	Nos	3		
6	Osborne Reynolds Apparatus		<p>700 mm base width x 400 mm base front to back x 1500 mm high and 21 kg.</p> <p>Electrical supply: (Specify on order) For optional Heater Module (H215a): 1 Phase, 220 - 240 VAC, 50/60 Hz, 32 Amp or 2 Phase, 220 - 240 VAC, 50/60 Hz, 32 Amp</p> <p>Space needed: Approximately 700 mm x 700 mm</p> <p>Specifications – Heater Module Net dimensions and weight: 360 mm wide x 450 mm high x 330 mm front to back; 10 kg</p>	Nos	4		



FLUID MECHANICS LAB							
S. NO.	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Require	Unit Price in Pak Rupees Only	
						Unit Price	Total Amount
7	Impact of a jet apparatus		Net dimensions and weight: 740 mm high x 420 mm wide x 310 mm and 7 kg Flat plate: 74 mm diameter, normal to and coincident with the jet axis Hemispherical plate: 60 mm diameter Conical plate: 75 mm diameter 120° Angled plate: 75 mm diameter 30° Ancillaries (included): All necessary pipe clips and tubing	Nos	4		
8	Water Hammer apparatus		Single-phase, 110 VAC or 240 VAC, 50Hz to 60 Hz (specify on order) Water supply: Minimum 5 L.min <sup>-1</sup> at 3 bar Operating Conditions Operating environment: Laboratory Storage temperature range: -25°C to +55°C (when packed for transport) Operating temperature range: +5°C to +40°C Operating relative humidity range: 80% at temperatures < 31°C decreasing linearly to 50% at 40°C. Net dimensions: 700 mm x 950 mm x 1000 mm	Nos	2		
9	Metacentric height and stability		Dimensions: Net: 650 mm x 450 mm x 350 mm Water tank: Moulded plastic, nominally 600 mm x 400 mm x 120 mm Floating pontoon: 363 mm x 203 mm x 80 mm Clinometer Scale: ±30° Angular tilt of pontoon: Nominally 8° each side of the vertical centre line Adjustable sail weight: 394 g Total weight of floating assembly: Nominally 3.2 kg	Nos	4		


FLUID MECHANICS LAB							
S. NO.	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Require	Unit Price in Pak Rupees Only	
						Unit Price	Total Amount
10	Hydrology and rainfall apparatus		<p>Net dimensions and weights: 2400 x 1080 x 2050 mm  dimensions and weights: 5.77 m<sup>3</sup> and 600</p> <p>Main parts:</p> <ul style="list-style-type: none"> <li>Catchment area: Stainless steel tank 2 m x 1 m Normal depth of permeable medium 180 mm</li> <li>Spray nozzles: Eight, in two banks of four, with adjustable spray direction</li> <li>Reservoir tank: Capacity approx 220 litres</li> <li>Recommended medium: Approx 800kg of washed sand graded 0.5 mm to 1.5 mm</li> <li>Single-phase 220 - 240 V</li> </ul>	Nos	2		
11	Friction loss in pipes		<ul style="list-style-type: none"> <li>Main unit net dimensions: 1000 mm long x 840 mm high x 240 mm front to back</li> <li>Header tank net dimensions: 400 mm high x 250 mm outside diameter and 800 mm overflow/support pipe</li> <li>Test pipe internal diameter (nominal): 3 mm</li> <li>Water manometer range: 0 to 530 mm water</li> <li>Pressure meter range: 0 to 20 m</li> <li>water A 0.5m water differential manometer and</li> <li>0.5m mercury manometer are included for pressure drop across the bed.</li> </ul>	Nos	4		
12	Sprinkler test rig		<p>Short, ½" galvanized, threaded nipple (4" maximum)</p> <p>Two ½" x 1" galvanized, threaded bushings</p> <p>1" full-port ball valve</p> <p>Appropriate sprinkler orifice You can add an optional gauge trim consisting of an additional short, galvanized threaded nipple, a ½" galvanized threaded tee, a ½" x ¼" galvanized threaded bushing and a 30psi or 60psi pressure gauge.</p> <p>The flow test bucket can be anything that can hold 30 gallons of water.</p>	Nos	4		



TRANSPORTATION LAB						Price in Pak Rupees only.	
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Unit Price	Total Amount
1.	Bitumen centrifuge extractor		<p>Complies with International Standards - ASTM D 2172, AASHTO T 58, T 164.</p> <ul style="list-style-type: none"> <li>Accessories: Bowl and cover 1500 g capacity</li> <li>Bowl and cover 3000 g capacity</li> <li>Filter disc, 1500 g capacity</li> <li>Filter disc, 3000 g capacity</li> <li>1/8hp DC motor equipped with an electrical braking system.</li> <li>Twenty-five 613 grade paper Filter Rings are included. 1,500g models use rings 9.75in diameter with 2.5in center holes. 3,000g model rings are 11.63in diameter with 2.5in diameter holes. Dimensions for 1,500g units: 12x20x22in (305x508x559mm), WxDxH. Est. Ship Wt.: 115lb (50kg). Dimensions for 3,000g units: 14x20x22in (356x508x559mm). Est. Ship Wt.: 98lb (45kg).</li> </ul>	Nos	2		


TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
2.	Marshall Compactor, Automatic, Heavy-Duty Rotating 4 in Mold		<p>Marshall Compactor, Automatic, Heavy-Duty Rotating 6in Mold (230V/50Hz), ASTM-compliant Oak Pedestal with steel plate, Automatic Counter, Package of Paper Discs, hammer, 04/06 in. 6in mold, base, and collar assembly</p> <p><b>Accessories:</b></p> <p>MSA-101 4in Indexing Marshall Compaction Mold Set needed to use compactor with 4in mold</p> <p>MSA-106 6in Indexing Marshall Compaction Set as an extra mold set to increase sample preparation</p> <p>Circular Paper Discs help prevent asphalt samples from sticking</p> <p>Marshall Compactor Hammer Assemblies (Heavy-Duty Indexing) for use with 4 or 6in molds</p> <p>HM-516 Sample Ejector for 4in or 6in Molds for easy removal of samples</p> <p>Meets Standard(s): AASHTO T 245, ASTM D5581, ASTM D6926, AASHTO R 68, PTM 705</p>	Nos	3		






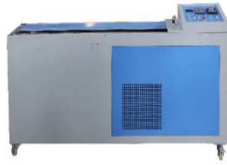


TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
3.	Marshall stability system		<p>Systems must be configured for Marshall or Lottman testing of 4in (102mm) or 6in (152mm) samples.</p> <p><b>Marshall Stability Load Frame</b> is available with a 10,000lbf (44.5kN) or 20,000lbf (89kN) capacity and a fixed loading rate at 2in (50.8mm) per minute for Marshall Testing.</p> <p><b>Load Frame, 0.02—2.0in/min for Asphalt Testing</b> is a versatile unit with 10,000lbf (44.5kN) capacity and variable speed ranges from 0.02-2.0in (0.508-50.8mm) per minute for Marshall, Lottman, and also CBR, unconfined compression, soil-cement, and basic soil triaxial tests, all on a single unit.</p> <p><b>Marshall Stability Component Sets</b> adapt appropriate Gilson Load Frames to test Marshall Stability specimens and include analog Load Rings and Dial Indicators or digital load cells, transducers, and readout displays, along with Mounting Brackets.</p> <p><b>Marshall Data Acquisition Software</b> records and graphs data to determine the peak stability and flow of asphalt pavement mixtures. The software is well-suited for use with the MSA-860D Digital Component Set, which includes an HM-418 two-channel Data Readout.</p>	Nos	2		
4.	Asphalt laboratory mixer		<p><b>Mixer must meet EN 12697-35, AASHTO TP53, ASTM D6307</b></p> <p><b>The mixer must produce representative samples to perform:</b></p> <p>Gyratory compaction tests (EN 12697-10, EN 12697-31)</p> <p>Marshall stability tests (EN 12697-34, EN 13108)</p> <p>Wheel tracking wet and dry tests (EN 12697-22)</p> <p>Slabs compaction laboratory tests (EN 12697-33)</p> <p>Beam fatigue and Stiffness tests (EN 12697-26, EN 13108)</p> <p>Asphalt general purpose tests.</p> <ul style="list-style-type: none"> <li>▪ Mixer must consist of: <ul style="list-style-type: none"> <li>▪ Main frame holding a horizontal stainless steel bowl with a helical mixing shaft.</li> </ul> </li> </ul>	Nos	2		



TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
			<ul style="list-style-type: none"> <li>The bowl, double wall insulation made of stainless steel AISI 316, contains an electric heater with probe sensor granting constant and uniform temperature control.</li> <li>An electromechanical motion allows to tilt the bowl to get easy the unloading operation, with total rotation up to 130°.</li> </ul> Heating power: 3000 W, Power supply: 230V 1ph 50/60Hz 4500 W Dimensions: 1280x700x1210 mm				
5.	Digital Hot Plate		Must be designed to meet laboratory daily heating requirements. Digital hot plate must have: <ul style="list-style-type: none"> <li>digital temperature controller and aluminum heating surface.</li> <li>Large heating surface.</li> <li>Fast and uniform heating.</li> <li>Microprocessor chip for precise temperature control</li> <li>Constant heating and no electromagnetic interference</li> <li>Special high resistant coatings prevent corrosion and guarantee long life</li> <li>Compact design combined with an elegant look</li> </ul>	Nos	4		



TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
6.	Lab Asphalt Permeability Testing Equipment Along with Manometer		Must meet FM 5-565 standard and must have <ul style="list-style-type: none"> <li>• Lab Asphalt Permeameter, 4" (102 mm) dia, specimens</li> <li>• 2000 cc Manometer for Lab Asphalt Permeameter</li> </ul>	Nos	4		
7.	Heavy Duty Digital Platform Scale (Floor Type)		Standard Capacity: 500 kg Number of characters on Display: 7 Power: Mains/Battery (6V/4Ah) Function: Power On, Power Off, Tare, Func Required Features <ul style="list-style-type: none"> <li>* Bright Led Display.</li> <li>* Precision Load Cell.</li> <li>* Advanced Micro Processor.</li> <li>* Full Capacity Tare Function.</li> <li>* Auto Calibration Facility Selectable.</li> <li>* Selectable Auto Zero Tracking.</li> <li>* Battery Backup.</li> <li>* Buzzer in Battery Operation.</li> <li>* Low Battery Indication.</li> <li>* Auto Off Function to save Battery Life.</li> <li>* Optional: Second Display.</li> </ul>	Nos	5		

TRANSPORTATION LAB								
S#	Instrument/ Apparatus Name	Images	Technical Specification		Unit	Total Quantity Required	Price in Pak Rupees only.	
							Unit Price	Total Amount
8.	Gilsonic UltraSiever® Sonic Sifter Or Equivalent		Sieve Frame Diameter	8in (203mm), 200mm	Nos	3		
			Particle Size Range	No.4—5μm (4.75mm—5μm)				
			Motion/Agitation	Sonic/Tapping				
			Sieve Capacity with Pan	Full Height: (7) 8in or 200mm Sieves				
			Timing Capacity	Up to 99 Minutes				
			Memory Capacity	10 Preset options				
			Electrical	115 or 230V selectable / 50 or 60Hz, 5 Amps				
			Product Dimensions	19 x 23 x 45in (482.6 x 584.2 x 1,143mm), WxDxH				

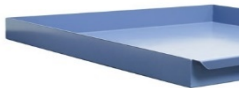

TRANSPORTATION LAB							Price in Pak Rupees only.	
S#	Instrument/ Apparatus Name	Images	Technical Specification		Unit	Total Quantity Required	Unit Price	Total Amount
9.	Asphalt penetration test apparatus (including penetrometer, penetrometer needles and sample container )	  	<b>Electrical</b> HM-322: 110V / 60Hz / 3Amps HM-322F: 220 V / 50-60Hz / 1.5Amps HM-322D: 110V / 60Hz / 3.5Amps HM-322DF: 220V / 50-60Hz / 1Amps	<b>Product Dimensions</b> 10.5 x 13 x 22in (267 x 330 x 559mm), W x D x H Two stainless steel rods support the cast aluminum head with coarse/fine adjustments Digital timer stopping the plunger when the preset time from 0.1—9.9 seconds expires and the indicator can be instantly reset to zero. needle or cone with a standard 1/8in (3mm) diameter stem may be mounted to the 47.5g plunger assembly. The penetrometer is supplied with a standard 2.5g <b>ASTM D 5</b> Needle and two additional Loading Weights (50g and 100g).	Nos	5		


TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
10.	Asphalt Ductility Tester/Tensile Testing Machine/Bitumen Ductility Testing Apparatus		Temperature Accuracy: $\pm 0.1^{\circ}\text{C}$ Cooling Power: 1200w Electronic Power supply: 220V Temperature Range:: 0-40 $^{\circ}\text{C}$ Displacement Accuracy:1mm Test Speed: 10-50 mm / min Heating Power: 4200W	Nos	01		
11.	Automatic Asphalt Softening Point Tester		Power Supply: 220 V (Tolerance: -5%~+10%), 50 Hz Temperature Resolution: Temperature Resolution Heating Rate: $5.0 \pm 0.5^{\circ}\text{C/Min}$ After 3 Min Heating Power: 600 W Cubage of Beaker: 1000 MI	Nos	03		
12.	Specific gravity and water absorption test of aggregates apparatus		Apparatus must contain: <ul style="list-style-type: none"> <li>A wire basket of not more than 6.3 mm mesh or a perforated container of convenient size with thin wire hangers for suspending it from the balance.</li> <li>A container for filling water and suspending the basket</li> <li>An air tight container of capacity similar to that of the basket</li> <li>A shallow tray and two absorbent clothes, each not less than 75x45cm</li> </ul>	Nos	2		

TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
13.	Vacuum Pycnometer for Asphalt Testing		Meeting AASHTO AASHTO T209, T283 Standard Capacity: 10 L Inner size: 300x300mm Gauge Vacuum: 0-0.1MPa Power: 150 W	Nos	3		
14.	Aggregate Impact Testing Machine,		Automation Grade: Automatic Weight: 50-52 kg Voltage: 230 V Frequency: 50 Hz	Nos	4		




TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
15.	Aggregate Crushing Value Apparatus		<p>Equipment must meet BS 81211 standard Specification:</p> <ul style="list-style-type: none"> <li>Consists of Case hardened Mild steel cylindrical container of 150mm dia + 0.5mm x 130mm to 140mm high with base plate 200 to 230mm square x 6mm thick. A plunger of 148mm + 0.5mm dia x 100 to 115mm high. All parts directly coming in to contact with the specimen during the test are made of mild steel duly case hardened. Supplied complete with tamping rod, 16mm dia x 600mm long, one end rounded.</li> <li>Cylindrical Metal measure 11.5cm dia x 18cm height with handle.</li> <li>Electronic Balance 3 kg. X 1 gm</li> <li>Compression Testing Machine Capacity: 500 kN</li> <li>Test Sieve 2.36mm, 10mm, 12.5mm and 14mm.</li> </ul>	Nos	5		
16.	Digital Los angles Abrasion equipment		<p>Equipment must meet following standards:</p> <p>EN 1097-2, 12697-17, 13450  AASHTO T 96  ASTM C535  ASTM C131/131M  AASHTO TP 108  Capacity: 5 kg of aggregates and charge  Drum Speed: 30-33 rpm  Welded Structural Steel Frame  Adjustable  Automatic Shut off  Push-button reset and adjustable counter  Magnetic motor starter with overload protection and integral on-off switches  Power: 220-240 V, 60 Hz &amp; 440 V, 3 Phase, 50 cycle AC supply</p>	No	01		

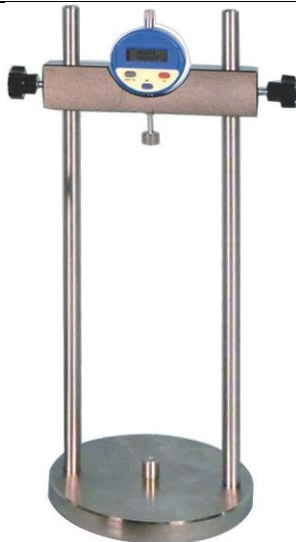






TRANSPORTATION LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupees only.	
						Unit Price	Total Amount
17.	Extra steel Catch- Pan for LA Abrasion		Product Dimension: 24 x 26 x 2.5in (610 x 660 x 63mm), WxDxH Material: Painted Steel	Nos	6		
18.	Automatic Ring and Ball Tester along with accessories		<p>Main Features</p> <ul style="list-style-type: none"> <li>7'' color touchscreen displays with multiple preset and custom testing procedures, allowing real-time display of the temperature / time graph on display or PC (with optional software)</li> <li>Inbuilt cooling fan, automatically enabled at the end of the test, to reduce the beaker cooling time.</li> <li>probe holder and drip tray for specimen holder, complete with handle, improving beaker positioning operations.</li> <li>Possibility to perform user-defined tests with maximum temperature up to 250°C.</li> </ul> <p>Accessories</p> <ul style="list-style-type: none"> <li>steel balls</li> <li>heat-resistant beaker</li> </ul> <p>Meets Standard(s):</p> <ul style="list-style-type: none"> <li><b>AASHTO T 53</b></li> <li><b>ASTM D36/36M</b></li> </ul>	Nos	3		

ENVIRONMENTAL LAB							
S#	Instrument/ Apparatus Name	Images	Technical Specification	Unit	Total Quantity Required	Price in Pak Rupee only	
						Unit Price	Total Amount
1.	Sulphate Soundness Apparatus as per ASTM C88		<p>The Apparatus must include:</p> <ul style="list-style-type: none"> <li>Sulfate Soundness Test Sieves meeting ASTM requirements and opening sizes include No. 5, No. 10, and No. 70.</li> <li>Sample Sieve Holder accommodates up to seven stacked sample sieves (depending on sieve frame height) for immersion in sulfate solution for optimum fluid circulation.</li> <li>Solution Bucket accommodates one Sieve Holder to immerse the sample stacked sieves into a sulfate solution for testing.</li> <li>Washing Bucket designed to allow water to flow in through the bottom and out through top overflow to rinse off sulfate solution out of the specimens after the immersion cycles.</li> <li><b>Hydrometer</b> to measure the specific gravity of the magnesium or sodium sulfate solution <math>\pm 0.001</math> SG, available for either magnesium or sodium solution testing.</li> <li><b>Water Bath Tank</b> is used for circulating warm or cool tap water around the Solution Buckets when additional temperature regulation is required, can hold up to four Solution Buckets.</li> <li><b>Platinum RTD Datalogging Thermometer</b> is a digital thermometer that ensures precise temperature measurement of the solution during testing by direct transfer of recorded data to PC or Mac using a USB flash drive as CSV files.</li> <li><b>ASTM S63F Non-Mercury Thermometer</b> is used to check temperatures while mixing solution and for periodic checks of water bath temperatures.</li> </ul>	Nos	3		

2.	Portable Precision Turbidimeter		Method: 90 scattering method Range: 0-1000NTU Resolution: 0.01NTU Accuracy: $\leq \pm 5\%$ ( $\pm 2\%$ F.S)	Nos	5		
3.	Digital Multimeter along with test lead probes		<b>Specification:</b> <ul style="list-style-type: none"> <li>3 ½ inches Digital LCD display with backlighting.</li> <li>Data hold</li> <li>Transistor Diode test</li> <li>Overload protection</li> <li>Low battery indicator</li> </ul>	Nos	6		
4.	Cement Autoclave		<b>Description</b> <b>Working Pressure, kPa</b> <b>Weight, kg</b> <b>Dimensions (l x w x h) mm</b> <b>Power Supply</b> <b>Power Supply</b>	Nos	3 Autoclave 21 ± 1 kg/cm <sup>2</sup> at 215° C 70 480 (W) x 580 (D) x 1100 (H) 2000 Watts 220 V, 50 Hz, 1 phase		

5.	Autoclave		<ul style="list-style-type: none"> <li>Capacity: 18 L</li> <li>Chamber Size: p245x350 Pressure: 0.1bar</li> <li>Sterilization Class: Class N (As per EN 13060 Standard)</li> <li>Drying Procedure: Heat Drying</li> <li>Sterilization Temperature: 121 – 134 °C</li> <li>Display: LED Display</li> <li>Control Precision: Temperature: 1 °C</li> <li>Pressure 0.1 bar</li> <li>Safety System: hand lock door, relief valve in case of over pressure, pressure or temperature overload protection, Alarm for system failure, finish reminding</li> <li>Tray Holder: 3 pcs ss trays on Ss shelf</li> <li>Chamber: Maximum working pressure: 2.3 bar</li> <li>Min. working pressure: 1.1 bar</li> <li>Max. temperature: 145 °C</li> <li>Ambient temperature: 50dB</li> <li>Power: 1600 W for 220 V</li> <li>Power Supply: Standard: 220V±10%,50/60Hz</li> </ul>	Nos	3		
16.	Soundness of Cement Moulds		Moulds of 25 x 25 mm size and 282 mm internal length and other accessories conforming to ASTM C151	Nos	5		
7.	Drying Shrinkage Prism Mould (50x50x200 mm)		Material and size for the moulds should be as per ASTM C490 Standard	Nos	5		


8.	Digital Length comparator		<ul style="list-style-type: none"><li>• Must meet the requirement for ASTM C151, ASTM C490, EN 12617-4, EN 1367-4</li><li>• Used to determine the length change in hardened cement paste, mortar, and concrete prisms</li><li>• Equipped with Digital Gauge – 12.7 / 0.001 mm (DI/D-12/0.001)</li><li>• Height adjustable to suit specimens up-to 300 mm</li></ul>	Nos	3										
9.	Glass Beakers		<table><tr><td>Volume</td><td>Quantity</td></tr><tr><td>100ml</td><td>6</td></tr><tr><td>250ml</td><td>6</td></tr><tr><td>500ml</td><td>6</td></tr></table>	Volume	Quantity	100ml	6	250ml	6	500ml	6	Nos	18		
Volume	Quantity														
100ml	6														
250ml	6														
500ml	6														
10.	Auto-Shrink system component/mould as per ASTM C1698		<p>Auto-Shrink digital dilatometer is composed of the following basic elements:</p> <p>A corrugated plastic mold with tight-fitting plugs to prepare a slender test specimen</p> <ul style="list-style-type: none"><li>• A rigid frame to support the specimen</li><li>• A digital dial gauge with remote control to measure change in specimen length</li><li>• A reference bar</li></ul>	Nos	3										



11.	Total Dissolved Solid (TDS) meter		<ul style="list-style-type: none"><li>Size: 2000 mg/L</li><li>LCD Screen: 0.5</li></ul>	Nos	6										
12.	Le Chatelier Soundness Kit Apparatus		The Le Chatelier Soundness Kit is supplied complete with; <ul style="list-style-type: none"><li>Le Chatelier moulds 3 pcs.</li><li>50×50 mm glass plates 6 pcs.</li><li>300 gr Weights 1 pcs.</li><li>100 gr Weight, 3 pcs.</li><li>Tamping Rod 17 mm dia. x 70 gr</li><li>Steel Ruler</li><li>Plastic Carrying Case</li></ul>	Nos	6										
13.	Graduated Cylinders		<table><tr><th>Volume</th><th>Quantity</th></tr><tr><td>1000ml</td><td>6</td></tr><tr><td>500ml</td><td>6</td></tr><tr><td>100ml</td><td>6</td></tr></table>	Volume	Quantity	1000ml	6	500ml	6	100ml	6	Nos	18		
Volume	Quantity														
1000ml	6														
500ml	6														
100ml	6														
14	Glass Stirrer rod			Nos	7										


15	Burette stand with clamp			Nos	6		
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16.	Incubator		<ul style="list-style-type: none"> <li>• <b>Capacity</b> 100L</li> <li>• <b>Temp. Range</b> 0~60 °C</li> <li>• <b>Temp. Fluctuation</b> ±0.5°C</li> <li>• <b>Temp. Uniformity</b> ±1°C at 37°C</li> <li>• <b>Shelves</b> 2pcs/adjustable</li> <li>• <b>Time Range</b> 0~99h</li> <li>• <b>Refrigerant</b> R134a (CFC free, eco-friendly)</li> <li>• <b>Consumption</b> 1450W</li> <li>• <b>Power Supply</b> AC110/220V±10%, 50/60Hz</li> <li>• <b>Internal Size (mm)</b> 500*350*580</li> <li>• <b>External Size (mm)</b> 644*647*1170</li> <li>• <b>Package Size (mm)</b> 734*767*1400</li> <li>• <b>Gross Weight (kg)</b> 102</li> </ul>	Nos	02		
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17.	pH Meter		<ul style="list-style-type: none"> <li>• <b>pH Range</b> 0.00~14.00pH</li> <li>• <b>pH Accuracy</b> ±0.05pH</li> <li>• <b>Resolution</b> 0.01pH</li> <li>• <b>Calibration Points</b> 2 points</li> <li>• <b>Calibration Solutions</b> (pH4.01/7.00/10.01)</li> <li>• <b>Temperature Compensation</b> 0~100°C, Manual</li> <li>• <b>mV Range</b> -1999~1999mV</li> <li>• <b>mV Accuracy</b> ±10mV <ul style="list-style-type: none"> <li>• <b>Resolution</b> 1mV</li> <li>• <b>Connector</b> BNC</li> <li>• <b>Display</b> LCD</li> <li>• <b>Power Requirements</b> DC9V/400mA power adapter</li> <li>• <b>Dimensions(mm)</b> 210*205*65mm</li> <li>• <b>Net Weight(kg)</b> 1.5kg</li> <li>• <b>Package Size(W*D*H)mm</b> 310*240*180mm</li> <li>• <b>Gross weight(kg)</b> 1.7kg</li> </ul> </li> </ul>	Nos	06		
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18.	Flame Photometer		<ul style="list-style-type: none"> <li>• <b>Size:</b> 580*540*400mm</li> <li>• <b>Weight:</b> 18kg</li> <li>• <b>Wavelength Range:</b> 190~1100nm</li> <li>• <b>Repeatability:</b> 1 % CV for 20 consecutive samples</li> <li>• <b>Response Time:</b> &lt;8s</li> <li>• <b>Sample Uptake:</b> &lt;6L/min</li> <li>• <b>Ambient Temp:</b> 10 °C~35°C</li> <li>• <b>Humidity:</b> ≤85%</li> <li>• <b>Power Supply:</b> AC220V±22V 50±1 Hz</li> <li>• <b>Consumption:</b> 250W</li> <li>• <b>Standard Accessories:</b> Air compressor ,USB interface</li> <li>• <b>Packing Size:</b> 580*540*400mm 18kg</li> <li>• <b>Product name:</b> Digital Flame Photometer</li> <li>• <b>Supply Ability</b> 10000 Unit/Units per Year Digital Flame Photometer</li> </ul>	Nos	3		
19.	Single beam UV visible spectrophotometer		<p><b>1. Photometry</b> Test Abs., Transmittance by fixed wavelength</p> <p><b>2. Quantitative</b></p> <p>a. C Mode: Establish <math>C=K*A</math> curve, test sample concentration</p> <p>b. F Mode: Establish <math>A=K1*C+K0</math>, test sample concentration</p> <p>c. Display and save curve, test data.</p>	Nos	3		




20.	DJI Mavic 3 Or Equivalent		<ul style="list-style-type: none"> <li>• <b>Takeoff Weight</b> Mavic 3: 895 g</li> <li>• <b>Dimensions (Folded/Unfolded)</b> Folded (without propellers) 221×96.3×90.3 mm (Length×Width×Height) Unfolded (without propellers) 347.5×283×107.7 mm (Length×Width×Height)</li> <li>• <b>Diagonal Length</b> 380.1 mm</li> <li>• <b>Max Ascent Speed</b> 1 m/s (C mode) 6 m/s (N mode) 8 m/s (S mode)</li> <li>• <b>Max Descent Speed</b> 1 m/s (C mode) 6 m/s (N mode) 6 m/s (S mode)</li> <li>• <b>Max Flight Speed (at sea level, no wind)</b> 5 m/s (C mode) 15 m/s (N mode) 19 m/s (S mode)</li> <li>• <b>Max Service Ceiling Above Sea Level</b> 6000 m</li> <li>• <b>Max Flight Time (no wind)</b> 46 minutes</li> <li>• <b>Max Hovering Time (no wind)</b> 40 minutes</li> <li>• <b>Max Flight Distance</b> 30 km</li> <li>• <b>Max Wind Speed Resistance</b> <ul style="list-style-type: none"> <li>• 12 m/s</li> </ul> </li> <li>• <b>Max Tilt Angle</b> 25° (C mode) 30° (N mode) 35° (S mode)</li> <li>• <b>Max Angular Velocity</b> 200°/s</li> <li>• <b>Operating Temperature</b> -10° to 40° C (14° to 104° F)</li> </ul>	Nos	3		
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			<ul style="list-style-type: none"> <li>• <b>GNSS</b> GPS + Galileo + Bei Dou</li> <li>• <b>Hovering Accuracy Range</b> Vertical: <math>\pm 0.1</math> m (with Vision Positioning); <math>\pm 0.5</math> m (with GNSS Positioning) Horizontal: <math>\pm 0.3</math> m (with Vision Positioning); <math>\pm 0.5</math> m (with High-Precision Positioning System)</li> <li>• <b>Internal Storage</b> Mavic 3: 8 GB (available space is approx. 7.2 GB)</li> </ul>				
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21.	Concrete/Asphalt drill core drill with petrol driven motor 5.5HP		<ul style="list-style-type: none"> <li>• <b>Maximum cutting depth</b> 300 mm depth</li> <li>• <b>Blade size (Drill Bit size) diameter</b> 100 mm/150 mm diameter</li> <li>• <b>Water tank material</b> Plastic</li> <li>• <b>Engine power</b> 5.5 HP</li> <li>• <b>Overall Dimensions in Inches (L x W x H)</b> 29 x 35 x 43</li> </ul>	Nos	2		
22.	Concrete diamond cutting disk along with cutting wheel concrete cutter			Nos	2		


SOIL LAB EQUIPMENTS				Unit	Total Quantity Required	Price in Pak Rupee only	
S#	Instrument/Apparatus Name	Images	Technical Specification			Unit Price	Total Amount
1	Proctor Compaction Test Set		<ul style="list-style-type: none"> <li>• <b>Compaction Rammer:</b> 2.6kg x 310mm fall.</li> <li>• <b>Compaction Mould:</b> 100mm Internal Dia x 127.3mm Height, 1000ml volume (Gun Metal)</li> </ul>	Nos	4		
2	Proctor Compaction Test Set (Modified)		<ul style="list-style-type: none"> <li>• <b>Compaction Rammer:</b> 4.89kg x 450mm fall.</li> <li>• <b>Compaction Mould:</b> 150mm Internal Dia x 127.3mm Height, 2250ml volume (Gun Metal)</li> </ul>	Nos	4		


3	CBR Test Apparatus		<ul style="list-style-type: none"> <li>• Dimensions: 480 x 650 x 1150 mm</li> <li>• Weight (approx.): 110 Kg</li> <li>• Power: 370 W</li> </ul> <p><b>Features:</b></p> <ul style="list-style-type: none"> <li>• Calculates corrected CBR value at 2.5 and 5 mm the digital unit saves the load value at user defined displacement values such as 0.625, 1.25, 1.875, 2.5, 3.75, 5, 7.5, 10, 12.5 mm</li> <li>• The load corresponds to the displacements corrected respect to the linear region of the data has also saved</li> <li>• The % CBR at 2.5 mm and % CBR at 5 mm is also automatically calculated and saved</li> <li>• Can make test with displacement and limited load control.</li> <li>• Real time display of test graph.</li> <li>• CPU card with 32-bit arm RISC architecture</li> <li>• Permanent storage capacity up to 10000 test results</li> <li>• 4 analog channels, 2 channels are active for CBR</li> <li>• 1/256000 points resolution per channel</li> <li>• 10 data per second sample rate for each channel</li> <li>• Ethernet connecting for computer interface</li> <li>• 800×480 resolution 65535 color TFT-LCD industrial touchscreen</li> <li>• 4 main function keys</li> <li>• Multi-language support</li> <li>• 3 different unit system selection; KN, ton and lb</li> <li>• Real-time clock and date</li> <li>• Test result visualization and memory management interface</li> <li>• Remote connection through Ethernet</li> <li>• USB flash disc for importing test results and for firmware</li> <li>• USB printer support for inkjet and laser printers (ask for compatible models)</li> <li>• Camera support for real-time video recording during test (ask for compatible models)</li> </ul>	Nos	2		
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			<ul style="list-style-type: none"> <li>Free of charge PC software for the test control and advanced report generation.</li> </ul>				
4	Field Density Sand Cone apparatus		<ul style="list-style-type: none"> <li>The sand pouring cylinder 115 mm Dia is fitted with conical funnel and shutter 3-liter capacity,</li> <li>Cylindrical calibrating container 100 mm Dia * 150 mm hit, a metal tray 300*300*40 mm with 100 mm central hole</li> </ul>	Nos	5		
5	Field Density Core Cutter apparatus		<ul style="list-style-type: none"> <li>The core cutter is made of steel protected against corrosion. The set includes core cutter, driving dolly and driving rammer. Two versions available: dia. 100x 130 mm high and dia. 150x180 mm core.</li> </ul>	Nos	5		
6	Field Density Rubber Balloon Method		<ul style="list-style-type: none"> <li>Used to determine the in-situ density of compacted or firmly bonded soils. The test set consists of a graduated cylinder 1596 ml capacity, housed inside an aluminum guard, a reversible rubber aspirator pump, a density plate 9" square and 12 rubber balloons.</li> <li>Weight approx.: 6 kg</li> </ul>	Nos	5		








7	Augers		<ul style="list-style-type: none"> <li>• Standard Soil Augers are used for sampling most soil types, have an open bit design, and are available in 3in (76mm) and 4in (102mm) diameters.</li> <li>• Clay Augers have an open bit design and work well for sampling cohesive soils. Available in 3in (76mm) and 4in (102mm) diameters.</li> <li>• Sand Augers are designed for sampling looser, granular soils and have closed bits to retain cuttings. They are available in 3in (76mm) and 4in (102mm) diameters.</li> <li>• Mud (Dutch) Augers are best-suited for sampling muck-like, boggy, and root-bound soils. This auger offers an open design and is available only in 3in (76mm) diameter.</li> <li>• One-Piece Soil Samplers are available with 11in (279mm) or 14in (360mm) lengths. They have a T-handle and steel construction that allows penetration into sampling tougher soils.</li> <li>• Quick-Connect Auger Adapter is required to connect augers and older-model extensions with threaded connections to quick-connect components.</li> <li>• Quick-Connect Pins are required for connecting Augers and Extensions in quick-connect configurations.</li> <li>• Handles &amp; Extensions connect to augers and help achieve greater depth penetration into the soil. They range in length from 2 to 5ft (610 to 1,524mm). Handles have a T-design to help easily guide the extensions deeper.</li> </ul>	Nos	6		
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8	Consolidation Testing Apparatus		<ul style="list-style-type: none"> <li>• Overall dimensions (l x d x h): 1300x800x970 mm</li> <li>• Weight approx.: 145 kg</li> <li>• To perform simultaneously the anisotropic consolidation stage of three Triaxial specimens</li> <li>• To reduce the testing time where only one Triaxial compression machine is available</li> <li>• For Triaxial cells up to 100 mm dia. specimens</li> <li>• Ergonomic design for better use of space in the laboratory</li> <li>• Suitable for other make of Triaxial cells (with little adjustment)</li> </ul> <p>Accessories: Dial Gauge 0.002 mm x 10 mm. Extension piece, 40 mm long. Test forms pad of 50 for "Consolidation Test Plot" Test forms pad of 50 for one Dimensional Consolidation.</p> <p>Set of weights to give a pressure of 10 kg/cm. sq. on 60 mm dia specimen, comprising: 7 Nos. 0.05 kg/sq.cm, 5 Nos. 0.1 kg/sq.cm. 6 Nos. 0.2 kg/sq.cm., 6 Nos. 0.5 kg/sq.cm., and 5 Nos. 1.0 kg/sq.cm. Supplied complete as above but with dial gauge.</p>	Nos	2		
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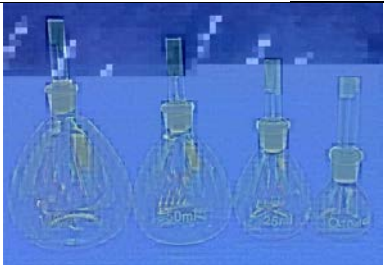

9	Direct Shear Box Apparatus		<p><b>Loading Unit:</b> Supplied with load yoke with direct and lever system for applying load. Normal stress capacity 8 kg/sq. cm. Load is applied either directly or through a counter balanced detachable lever. Provision is made for the load to be applied either through a steel ball recessed in the loading pad or direct through a boss on the pre calibrated loading yoke. The loading unit is provided with V strips and roller strips for frictionless movement of shear box housing.</p> <p><b>Shear Box Assembly:</b> Comprising direct shear box in two halves for a square specimen size 60 x 60 x 25mm one pair of plain gripper plates, One pair of perforated gripper plates, one pair of porous stones, one top of loading pad.</p> <p><b>Shear Box Housing:</b></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Accommodates the direct shear box assembly.</li><li><input type="checkbox"/> Complete with two ball roller strips.</li><li><input type="checkbox"/> Specimen cutter: for cutting 60 x 60 x 25 mm.</li></ul> <p>Specimen form larger samples. Set of weights to give a normal stress of 3kg/sa.cm. Through larger as following:</p> <table><tr><td>To give kg/cm. sq.</td><td>Qty.</td></tr><tr><td>0.05</td><td>4 nos.</td></tr><tr><td>0.1</td><td>1 no.</td></tr><tr><td>0.2</td><td>1 no.</td></tr><tr><td>0.5</td><td>3 nos.</td></tr><tr><td>1.0</td><td>1 no.</td></tr></table> <p>Complete set as above but without proving ring. Net weight 140 kg.</p> <p><b>Essential Accessories:</b> High sensitivity compression proving ring. Cap 200kg. One consolidation dial gauge 0.01mm x 25mm and one strain dial gauge 0.01mm x 25mm Additional set of weights to give a normal stress of 5 kg/cm<sup>2</sup>. Soil sampler for 60mm x 60mm specimen and test forms pad of 50.</p> <p><b>Spares:</b> Porous stone for 60mm x 60mm size sample available in pairs. Unit is electrically operated to give the following 12 rates or strains. 1.25, 0.625, 0.25, 0.125, 0.05, 0.025, 0.01, 0.005, 0.002, 0.001, 0.004 and 0.0002 mm/min.</p>	To give kg/cm. sq.	Qty.	0.05	4 nos.	0.1	1 no.	0.2	1 no.	0.5	3 nos.	1.0	1 no.	Nos	4		
To give kg/cm. sq.	Qty.																		
0.05	4 nos.																		
0.1	1 no.																		
0.2	1 no.																		
0.5	3 nos.																		
1.0	1 no.																		

			The apparatus is suitable for operation on 230 Volts Single Phase A.C. Supply.				
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10	Unconfined Compression Testing Machine (EES)		<ul style="list-style-type: none"> <li>Comprises a screw operated load frame, cap.5000kg with a gear box and motor drive giving 1.25, 1.5, 2.5mm/min. Rates of strain, a pair of cone seating, adaptor for proving ring, and stain dial gauge bracket. Supplied with one pair of male/female coning tools for 38mm dia samples but without ring and dial gauge. Suitable for operation on 230 V, Single Phase A.C. Supply.</li> </ul>	Nos	3		
11	Heavy duty pocket penetrometer		<p>It has following specifications:</p> <ul style="list-style-type: none"> <li>Stainless steel construction.</li> <li>Tip Diameters: 4.5 mm dia. for very hard soil, 6.35 mm for medium and soft soil, 8.98 mm for soft soil.</li> <li>Measuring range: 0 to 1000 kPa</li> <li>Dimensions (assembled): 210 mm length x 20 mm dia. approx.</li> <li>Weight approx.: 0.5 kg</li> </ul>	Nos	5		
12	Lab Van Shear Test Apparatus		<ul style="list-style-type: none"> <li><b>Easy preliminary test:</b> a rapid method of determining soft soil shear strength, when an immediate value is required.</li> <li><b>Ready to use:</b> Supplied with a 12.7 x 12.7mm Standard Vane and set of four calibrated springs.</li> <li><b>Easy to upgrade:</b> Simple upgrade from manual to motorized versions.</li> <li><b>Alternative configurations:</b> Supplied with a 200mm base plate for standard specimen molds and sample containers. The optional attachment will also firmly hold sample tubes up to 100 mm, sample jars or a special container.</li> </ul>	Nos	4		




13	Hydrometer Analysis Test		<p>The complete set must comprise:</p> <ul style="list-style-type: none"> <li>Sedimentation Cylinder, 1000 ml capacity (6pieces) with rubber bungs. Soil Hydrometer, 151H, range 0.995 to 1.038g/ml with div. 0.001. Glass Tank, dimensions: 600x300x380 mm</li> <li>Heater completes with thermostat, circulation unit. 230V Single Phase 50Hz 1000W</li> <li>Glass Thermometer, range -10 to 50° C., Sub-div. 0.5° C.</li> <li>Beaker, Borosilicate Glass, 250 ml capacity</li> <li>Sodium Hexametaphosphate, 1000 g</li> <li>High Speed Stirrer, 4000 R.P.M, complete with baffle cup, for dispersing soil particles in water.</li> </ul>	Nos	4		
14	Relative Density Apparatus		<ul style="list-style-type: none"> <li>The equipment consists one each of: Vibratory table, with a cushioned steel vibrating decks about 75cm x 75cm. It has a frequency of approximately 3600 vibratory table, minute under a 11.5kg load. Amplitude is variable in between 0.65mm in step of 0.05 to 0.25mm, 0.25 to 0.45mm and 0.45 to 0.65mm. Suitable for operations on 415V, Three Phase supply. Cylindrical metal unit weight mould, 3000ml capacity. Guide sleeve with clamp assembly. Surcharges base plate for mould. Handle for surcharge base plate. Surcharge weight. The total weight together with surcharge base plate and handle is equipment to 140 kg. / cm2. For mould. Cylindrical metal unit weight mould 15000 ml. capacity. (Total weight together with the above mould &amp; surcharge weight is equivalent to 140 kg. / cm2) dial gauge 0.01mm x 50mm travel. Extension piece 25mm for dial gauge.</li> </ul>	Nos	4		



15	Triaxial Testing Machine		<ul style="list-style-type: none"> <li><b>Load frame:</b> <ul style="list-style-type: none"> <li>- <i>TRIAx</i> specifically designed for triaxial applications is ideal for commercial laboratories that need a versatile machine capable of performing a wide range of tests. (Max sample sizes: 70 mm)</li> <li>- <i>TRITECH 50 kN or 100 kN</i>: TRITECH original high-performance load frames for triaxial tests, ideal solution for advanced and research laboratories that perform high quality tests at high productivity levels.</li> </ul> </li> <li><b>Triaxial cell with accessories:</b> standard triaxial cell with dedicated accessories for performing and preparing samples from 35 mm to 100 mm diameter.</li> <li><b>Analogue measuring system:</b> in a standard triaxial system</li> <li><b>Pressure system:</b> Air/water interface with air compressor and air filter, generally used for effective stress (two pressure lines are required for cell and back pressure) Oil/water interface is also available, suggested when only total stress test (UU) is required.</li> </ul>	Nos	2		
16	Data Logger		<ul style="list-style-type: none"> <li><b>Size</b> 4.70" by 2.40" by 0.95" 120 mm x 61 mm x 24 mm</li> <li><b>Weight</b> 6 ounces; 156 grams (includes battery)</li> <li><b>Operating ambient temperature range</b> -40°C to 60°C. (-40°F to 140°F)</li> <li><b>Operating ambient humidity range</b> 0 to 90% relative humidity (non-condensing)</li> </ul>	Nos	2		



17	pH meter for soil		<ul style="list-style-type: none"> <li>The 3 in 1 soil pH meter (soil moisture, pH value, and sunlight level)</li> <li>Stick the sensor probe about 4 inches deep into the soil.</li> </ul>	Nos	5		
18	Pycnometers (50ml, 100ml, 500 ml)		<ul style="list-style-type: none"> <li>Pycnometers having capacity 50ml, 100ml, 500 ml are utilized for specific gravity of soils.</li> </ul>	Nos	10		
19	Constant Head Permeability Test Apparatus (EES) Or Equivalent		<ul style="list-style-type: none"> <li>The constant head method is particularly suitable for relatively coarse-grained soil such as sands and gravel. For fine grained soils such as clay-like or silty soils see Falling head permeability apparatus.</li> <li>The apparatus consists of a Perspex permeability cell mounted on a detachable aluminum base and head. The cylinder has pressure points at different levels, which have to be connected to the manometer stand and to the constant level tank. Two models available: 75- and 114-mm cell nominal diameter. The maximum particle size of the soil which can be tested in the mould is 10mm.</li> </ul>	Nos	3		







20	Falling Head Permeability Test Apparatus (EES) Or Equivalent		<ul style="list-style-type: none"> <li>This test is recommended for soils with coefficient permeability in the range of <math>0.10^{-3}</math> to <math>10^{-7}</math> cm/sec. The maximum particle size of the soil which can be tested in the mould is 10mm.</li> </ul>	Nos	3		
21	Riffle Box		<ul style="list-style-type: none"> <li>Includes 12 slots each with a 13 mm slot width and an overall approximate capacity of 2 liters.</li> </ul>	Nos	3		
22	Speedy Moisture Tester		<ul style="list-style-type: none"> <li>The unit consists of a pressure vessel with clamp for sealing cap, capacity is 20 gms. Rubber sealing gasket, pressure gauge calibrated in percentage moisture content <math>0-25\% \times 0.25\%</math> on the wet weight basis, an electronic balance for weighing sample, a scoop for measuring carbide reagent, a bottle of reagent, one cleaning brush and a set of 4 steel balls for thorough mixing. Complete in highly polished wooden carrying case with handle.</li> </ul>	Nos	4		




23	Digital Hot Plate		<p>Must be designed to meet laboratory daily heating requirements. Digital hot plate must have:</p> <ul style="list-style-type: none"> <li>digital temperature controller and aluminium heating surface.</li> <li>Large heating surface.</li> <li>Fast and uniform heating.</li> <li>Microprocessor chip for precise temperature control</li> <li>Constant heating and no electromagnetic interference</li> <li>Special high resistant coatings prevent corrosion and guarantee long life</li> </ul> <p>Compact design combined with an elegant look</p>	Nos	5		
24	Liquid Limit (Casagrande apparatus)		<ul style="list-style-type: none"> <li>The set consists of:</li> </ul> <p>1 Liquid Limit Device with ASTM Grooving Tools (24-0435).  1 Graduated Cylinder 100 ml (88-6007).  1 Mixing Dish (88-6712).  2 Doz. Moisture Content Cans (88-7002).  1 Flexible Spatula (88-7500).</p>	Nos	5		
25	Soil Cone Penetrometer		<ul style="list-style-type: none"> <li>The apparatus is suitable for operation on 220V, Single Phase, 50Hz, AC Supply</li> <li>Stainless steel penetration test cone 35mm long</li> <li>Angle: 30°</li> <li>Penetration test cup: 55mm x 40mm</li> </ul>	Nos	5		


26	Electric Furnace		<ul style="list-style-type: none"> <li>Digital muffle furnace</li> <li>Temperature 1000-1300 °C</li> <li>Chamber size 36 x 36 x 36 inches</li> </ul>	Nos	2		
27	Shrinkage Limit set		<ul style="list-style-type: none"> <li>The apparatus can be used to determine shrinkage limit and to calculate other shrinkage ratio, shrinkage index and volumetric shrinkage. Set consists of one each:               <ol style="list-style-type: none"> <li>Porcelain evaporating dish</li> <li>Shrinkage dish</li> <li>Glass cup</li> <li>Perspex plate with three metal prongs</li> <li>Flexible spatula 100mm</li> <li>Glass cylinder</li> <li>25ml x 1ml, supplied without mercury</li> <li>Plastic wash bottle 500ml</li> <li>Mercury supplied in bottle of 500 gms.</li> </ol> </li> </ul>	Nos	5		

28	Plastic Limit set		<ul style="list-style-type: none"> <li>The complete set consists of one each:               <ol style="list-style-type: none"> <li>Glass plate 20cm x 15cm having round ends</li> <li>Brass or stainless-steel rod 3mm dia x 150mm long</li> <li>Flexible spatula 15 cm</li> <li>Set of 6 moisture containers</li> <li>Porcelain basin 150mm dia</li> <li>Plastic wash bottle 500ml</li> </ol> </li> </ul> <p>Note: glass plate size 500 x 500 x 10mm can be used if available.</p>	Nos	5		
29	Electromagnetic digital sieve shaker		<ul style="list-style-type: none"> <li>Electromagnetic Digital Sieve Shaker performs a vertical sieving motion and by removing the upper plate it can also be used as a vibrating table for one concrete specimen. The vertical sieving motion is provided by a very effective electromagnetic unit which is designed to obtain the best results with sand and aggregates. Supplied complete with timer.</li> <li><b>Sieve Capacity</b> 12 pieces of 200 mm (8") sieves + pan and cover 8 pieces of 300 mm (12") sieves + pan and cover</li> <li><b>Dimensions:</b> 495x405x945mm <b>Weight(approx.):</b> 30kg <b>Power:</b> 400 W</li> </ul>	Nos			

30	Brass Frame Sieves		<b>Specifications:</b> <ul style="list-style-type: none"> <li>Manufactured as per various standards such as ISS, BSS, ASTM, DIN etc.</li> <li>Sieves are made of Brass frame and G.I. frame of dia, 300 mm &amp; 450 mm</li> <li>Normally Brass Sieves are manufactured in 200 cm dia and frame is spun brass, joint less</li> <li>The Sieve cloth used is standard SS or phosphor bronze wire mesh. Lid and Receiver</li> <li>Made of brass for 20 cm or 8" dia. sieves</li> </ul>	Nos	5		
31	Stainless steel pans		<ul style="list-style-type: none"> <li>round pan with a tapered side is 14.2in (260.7mm) in diameter and 1.9in (48mm) high</li> </ul>	Nos	10		
32	Stainless steel bowls		<ul style="list-style-type: none"> <li>The external dimensions of the bowl are 9x3.2in (229x81mm) Dia x H.</li> </ul>	Nos	10		

33	Planetary Ball Mill		<b>Material feed size:</b> < 10 mm <b>Final fineness:</b> < 1 µm, for colloidal grinding < 0.1 µm <b>Batch size / feed quantity:</b> max. 1 x 220 ml, max. 2 x 20 ml with stacked grinding jars <b>No. of grinding stations</b> 1 <b>Speed ratio</b> 1 : -2 <b>Sun wheel speed</b> 100 - 650 min-1 <b>Effective sun wheel diameter</b> 141 mm <b>G-force</b> 33.3 g <b>Grinding jar sizes</b> 12 ml / 25 ml / 50 ml / 80 ml / 125 ml / 250 ml / 500 ml <b>Setting of grinding time</b> digital, 00:00:01 to 99:59:59 <b>Interval time</b> 00:00:01 to 99:59:59 <b>Pause time</b> 00:00:01 to 99:59:59 <b>Storable SOPs</b> 10 <b>Drive</b> 3-phase asynchronous motor with frequency converter <b>Drive power</b> 750 W <b>Electrical supply data</b> different voltages <b>Power connection</b> 1-phase <b>Protection code</b> IP 30 <b>Power consumption</b> ~ 1250W (VA) <b>W x H x D closed</b> 640 x 480 (780) x 420 mm <b>Net weight</b> ~ 86 kg	Nos	3		
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34	Extensometer for the testing of metals		Measuring Range: 20% Gage Length: 50mm Direction: Longitudinal Standard: ASTM E83	Nos	2		
35	3-point / 4-point Bend Fixtures		Fixtures must meet ASTM C393, C1161, D790 standard requirement.  Designed for 3-point and 4-point bend testing Accommodate a broad sample size range Rugged design Dual graduated rulers - in and mm Recommended for use with a motorized test stand. May be used with eye end adapters or mounted to test stands with mounting screws (except anvil - eye end mounting only).	Nos	3		
	Tensile splitting device (Lottman breaking head)		Tensile splitting device (Lottman breaking head) for 100 mm and 150 mm dia compacted bituminous samples. (ASTM D6931) FOR 4" and 6" DIA MARSHAL SPECIMEN. COMPLETE WITH LOADING STRIPS. The fixture Breaking head assembly with Guide rods and loading strips is required	Nos	3		

36	Laboratory Pan Mixer		<ul style="list-style-type: none"> <li>• Automatic Grade Automatic</li> <li>• Batch Capacity 100 to 1000 kg</li> <li>• Chassis Material MS</li> <li>• Discharge Bottom Discharge</li> <li>• Free Size 8 mm</li> <li>• Motor Power 5hp to 40hp</li> <li>• Portable Yes</li> <li>• Speed of Mixing 30r/min</li> <li>• Wheel Provided</li> <li>• Frequency 50/60 hz</li> <li>• Voltage 415 V</li> </ul>	Nos	2		
37	Strain Gauges		Embedment strain gauges measure strain in concrete. Typical applications include: <ul style="list-style-type: none"> <li>• Measuring strains in mass concrete.</li> <li>• Measuring curing strains.</li> </ul>	Nos	10		
	<b>Total Amount:</b>						
	<b>Add GST:</b>						
	<b>Total Bid Amount including all Provincial and Federal taxes &amp; duties etc.,</b>						

**Signature & Stamp of Bidder**



# Integrity Pact

## **DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS/CONSULTANTS.**

Contract Number: \_\_\_\_\_

Dated: \_\_\_\_\_

Contract Value: \_\_\_\_\_

Contract Title: \_\_\_\_\_

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

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

\_\_\_\_\_  
[Name of Supplier/Contractor/Consultant] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

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

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

\_\_\_\_\_  
[Procuring Agency]

\_\_\_\_\_  
[Supplier /Contractor/Consultant]

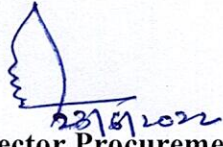


**NOTIFICATION**

With reference to this University Office Order No. DR(Estab)/(1193)Vol-II/6331 dated: 16.06.2016, the Procurement Committee under Rule 7 of the Sindh Public Procurement Rules (as amended) comprising of the following Members has been constituted for Procurement of Laboratory Equipment for Upcoming Semester for, Civil Engineering Department (TIEST) (vide Case File No. PC/NED/RGT/Lab. Equip./8118/2022, as follows:

- |  |                  |
|--|------------------|
| 1. Syed Ghazanfar Hussain<br>Registrar<br>NEDUET, Karachi  | Convener         |
| 2. Mr. Muhammad Mabroor Khan<br>Administrative Officer<br>Center for Excellence in Marine Biology<br>University of Karachi | Member           |
| 3. Mr. Fawad ul Hasan Kamran<br>Assistant Director Procurement-II<br>NEDUET, Karachi                                       | Member/Secretary |

The TOR / functions / responsibilities of the aforesaid Procurement Committee will be in accordance with Rule-8 of SPP Rules. The tender will be opened on 15-07-2022 at 10:30 AM in the office of Assistant Director Procurement-II.

  
23/6/2022  
Director Procurement

Email:

- I. [registrar@neduet.edu.pk](mailto:registrar@neduet.edu.pk)
- II. [mabroork@hotmail.com](mailto:mabroork@hotmail.com)
- III. [adfp2@neduet.edu.pk](mailto:adfp2@neduet.edu.pk)

# NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

No. DR (Estab)/(1003)/5730

Dated: 27/05/2016

## OFFICE ORDER

In supersession of this office order No. DR (Estab)/(1003)/11418 dated 02-11-2015, the University Administration has constituted the Complaint Redressal Standing Committee comprising of the following officers to address complaints regarding all procurement issues in the University in pursuance of Clause 31(1) of the SPPRA rules:

- |    |   |          |
|----|---|----------|
| 1. | <b>Prof. Dr. Saad Ahmed Qazi</b><br>Dean (ECE)          | Convener |
| 2. | <b>Independent Professional from the relevant field</b> | Member   |
| 3. | <b>Nominee of Accountant General Sindh</b>              | Member   |

  
Ag. REGISTRAR 27/5/2016

To:

**The Convener & all members**

Copy for information to:

- 1 Dean (ECE)
- 2 Director Planning & Projects
- 3 Director Finance
- 4 Director, Procurement Cell
- 5 Ag. Resident Auditor





# NED UNIVERSITY

## OF ENGINEERING & TECHNOLOGY

### PROCUREMENT CELL

University Road, Karachi-75270

Tel: 3928 1261 - 55 (Ext: 2471 & 2501) Fax: 3928 1255  
 Email: [dp@neduet.edu.pk](mailto:dp@neduet.edu.pk) Website: <http://www.neduet.edu.pk>  
 No. DP/NET/153566/8118/22 Date: June 23, 2022

SAY NO TO CORRUPTION

## NOTICE INVITING TENDER (NIT)

NEDUET invites Sealed Bids on Single Stage One Envelope procedure from Firms having Registration with Income Tax, Sales Tax and Sindh Revenue Board (whichever is applicable) to carry out following:

### PROCUREMENT OF LABORATORY EQUIPMENT for Upcoming Semester of Department of Civil Engineering at TIEST Tharparkar

Tender No. PC / NED / RDT / LAB Equip / 8118 / 2022

Issuance of Documents from	Last Date of Receipt of Tender Documents	Tenders Submission Deadline	Tenders Opening Date / Time
27 JUNE 2022	14 JULY 2022	15 JULY 2022 10:00 am	15 JULY 2022 10:30 am

Tender Fee (Rs.): 3,000/-

#### ELIGIBILITY CRITERIA

- (i) The Bidder must have at least 3 years of Experience in the relevant field
- (ii) Details of Turn-Over (including in terms of Rupees) of at least Last 3 years while the Average Turnover of Last Three years should NOT be Less than Rs. 124 Million Per Year
- (iii) Registration with FBR / SRS (whichever is applicable)

**Tender Fee and Bid Security** @ 5% of Bid Cost in shape of Pay Order should be in favor of **Director Finance**. Bidding Documents can be obtained and shall be submitted in the Office of **ADP-II** as per above schedule. Bidders are requested to give their **Best and Final Price** as "No Negotiations" is permitted. Bidding Documents containing detailed Terms and Conditions are available at Websites [www.neduet.edu.pk](http://www.neduet.edu.pk) & [www.pdma.ppraisindh.gov.pk](http://www.pdma.ppraisindh.gov.pk)

Director Procurement

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FRIDAY JUNE 24, 2022

**NED UNIVERSITY**  
OF ENGINEERING & TECHNOLOGY  
PROCUREMENT CELL  
University Road, Karachi-75270

Tel: 9926 1261 - 68 (Ext: 2471 & 2501) Fax: 9926 1255  
Email: [dp@neduet.edu.pk](mailto:dp@neduet.edu.pk) Website: <http://www.neduet.edu.pk>  
No DP/RGT-153889/8118/434 Date: JUNE 22, 2022

**SAY NO TO CORRUPTION**

**نوٹس برائے طلبی ٹینڈر (NIT)**

**NEDUET** کو مندرجہ ذیل کی فراہمی کے لئے اکم ٹیکس، سیلز ٹیکس اور سندھ ریونیو بورڈ (جی اے ڈی) سے رجسٹرڈ فروغ سے سنگل اسٹیج ایک لحاظ سے طریقہ کار کے تحت سربراہ ریونیو کے پاس درخواستیں منظور ہیں۔

**PROCUREMENT OF  
LABORATORY EQUIPMENT**  
for Upcoming Semester of  
Department of  
Civil Engineering  
at **TIEST** Tharparkar

Tender No. PC / NED / RGT / LAB Equip / 8118 / 2022

27 جون 2022	14 جولائی 2022	15 جولائی 2022	15 جولائی 2022
دستبرد است ہاری کے آواز	دستبرد است ہاری کی آخری تاریخ	نیز دست برد گرائے کی آخری تاریخ است	نیز دست برد گرائے کی آخری تاریخ است
3:00 بجے	10:00 بجے	10:30 بجے	10:30 بجے

منیٹر فیس = 3,000/- روپے

الحيث كما معيار:

- (i) دیہی رہنماؤں کی طور پر مختلف شعبے میں 3 سالہ تجربہ رکھتے ہوں  
(ii) ان کم از کم گزشتہ 3 سالوں کے مالیاتی اور انوکھی تعلیمی (بشمول روپوں میں) اور گزشتہ 3 سالوں کے دوران ان وسطیٰ اور اوپر جو کہ 124 روپوں سے کم نہیں ہونا چاہئے۔  
(iii) SSB/FBR کے ساتھ رجسٹرڈ بین (جس کا نام BSA ہو)

یونیورسٹی اور تعلیمی کی گئی قیمت کا 5% زرخیز رجحان بصورت ہے آرڈر Director Finance کے نام پر ہونا چاہئے۔ فیڈرل رجسٹر اس کے متعلقہ ڈیپارٹمنٹ کے مطابق دفتر ADP-II کے حاصل کی اور ترقی کرنا چاہتے ہیں۔ دیوٹی انجمن کے درخواست ہے کہ وہ اپنی بھینز اور حاضری یونیورسٹی میں کیونکہ اس مسئلے میں بہت حد تک اجازت نہیں ہے۔ دیگر رجسٹر اس کے ویب سائٹ [www.ppmis.pprasindh.gov.pk](http://www.ppmis.pprasindh.gov.pk) اور [www.neduet.edu.pk](http://www.neduet.edu.pk) پر بھی دستیاب ہیں ڈائریکٹر پروگریس رجسٹر

Daily AWAMI AWAZ روزاني

# عوامي آواز

جمعو 24 جون 2022 ع 24 ذوالقعد 1443 هـ

Daily AWAMI AWAZ

**NED UNIVERSITY**  
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Director  
Procurement

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No DP/RGT-153889/8118/434 Date: JUNE 22, 2022

**SAY NO TO CORRUPTION**

## ٽينڊر گھرائڻ جو نوٽيس (NIT)

NEDUET کي هيٺ ڄاڻايل جي فراهمي لاءِ انڪم ٽيڪس، سيلز ٽيڪس ۽ سنڌ روئينو بورڊ (جتي لاڳو ٿيندو هجي) سان رجسٽرڊ فرمن کان سنڌ اسٽيج هڪ لڦافي طريقيڪار تحت مهربند واک گهريل آهن.

### PROCUREMENT OF LABORATORY EQUIPMENT for Upcoming Semester of Department of Civil Engineering at TIENT Tarparkar

Tender No. PC / NED / RGT / LAB Equip / 8118 / 2022

ٽينڊر ڪولڻ جي تاريخ/وقت	ٽينڊر جمع ڪرائڻ جي آخري تاريخ/وقت	دستاويز جاري ڪرڻ جي آخري تاريخ	دستاويز جاري ڪرڻ جو آغاز
15 جولاءِ 2022 صبح 10.30 وڳي	15 جولاءِ 2022 صبح 10.00 وڳي	14 جولاءِ 2022	27 جون 2022

ٽينڊر فيس ... / 3,000 روپيا

**اهليت جو معيار:**

(i) آڇ ڏيندڙ لاڳاپيل شعبي ۾ 3 سالن جو تجربو لازمي رکندڙ هجي.

(ii) گهٽ ۾ گهٽ گذريل 3 سالن جي مالي ترن اوور جا تفصيل (بشمول ريپن ۾) ۽ گذريل 3 سالن جي دوران اوسط ترن اوور جيڪو 124 ملين ريپن کان گهٽ نه هجڻ گهرجي.

(iii) SRB/ FBR سان رجسٽريشن (جتي لاڳو ٿيندو هجي)

ٽينڊر فيس ۽ آڇ ڪيل لاڳت جو 5% سوڻي رقم ٻي آرڊر جي صورت ۾ Director Finance جي نالي هجڻ گهرجي. ٽينڊر جا دستاويز مٿي ڄاڻايل شيڊول تحت دفتر ADP-II مان حاصل ڪري ۽ جمع ڪرائي سگهجن ٿا. آڇ ڏيندڙن لکي درخواست ٿي ڪجي ته اهي پنهنجا بهترين ۽ حتمي اڳهه آڇ ڪن ڇو ته ان سلسلي ۾ ڪنهن ڳالهه بابت اجازت نه آهي. آڇ دستاويز ويب سائيٽ [www.ppms.pprasinidh.gov.pk](http://www.ppms.pprasinidh.gov.pk) ۽ [www.neduet.edu.pk](http://www.neduet.edu.pk) تي پڻ موجود آهن.

**ڊائريڪٽر پروسڪيورمينٽ**