



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

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"Say No to Corruption"



Director Procurement

No. DP/EE-154435/8131/ **513**
July 06, 2022

Notice Inviting Tender

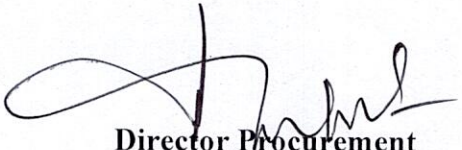
NEDUET invites sealed bids on single stage one envelope procedure from firms having registration with Income Tax, Sales Tax and Sindh Revenue Board (whichever is applicable) to carry out following:

S#	Tender / Number	Tender Schedule – Date and Time				Tender Fee Rs
		Issue / Sale		Submission	Opening	
		From	To			
1.	Procurement of Process Control Trainer, DC Servo control system, and Logic Analyzer and Protocol Analyzer for Department of Electrical Engineering. Tender No. PC/NED/EE/ Analyzer/8131/2022	19.07.2022	08.08.2022	09.08.2022 10:30 A.M.	09.08.2022 11:00 A.M.	1000/-

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 2 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 and www.ppms.pprasindh.gov.pk.


Director Procurement
06/07/2022

ISSUED ON: _____

ISSUED TO: _____

PROCUREMENT CELL



BID DOCUMENTS

“Procurement of Process Control Trainer, DC Servo Control System, and Logic Analyzer and Protocol Analyzer for Department of Electrical Engineering.”

TENDER NO. PC/NED/EE/Analyzer/8131/2022

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PART-II

INSTRUCTION TO BIDDERS

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| i Source of Funds | Funds would be arranged from UDWP funds of NED University of Engineering & Technology. The eligible payment under the contract is to be made from this approved project. |
| ii Eligible Bidders | <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> |
| iii Eligible Goods and Services | <p>iii.a The origin of all the goods & 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> |
| iv Cost of Bidding | 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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| 1. Scope | 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 up to date). |
| 2. Language of Bid | 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. |
| 3. Documents Comprising the Bid | 3.1 The bid prepared by the Bidder shall comprise the following components: <ul style="list-style-type: none"> a) Price Schedule completed in accordance with ITB Clauses 4, 5 and 6. b) bid security furnished in accordance with ITB Clause-9. |
| 4. Bid Prices | 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.

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.

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.

4.4 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet. |
| 5. Bid Form | 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. |
| 6. Bid Currencies | 6.1 Prices Shall be quoted in Pak Rupees. |
| 7. Bidder's Eligibility | 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

- 10. Period of Validity of Bids**
- 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.
- 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.
- 11. Format and Signing of Bid**
- 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.
- 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.
- 11.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

D. Submission of Bids

- 12. Sealing and Marking of Bids**
- 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 **"DO NOT OPEN BEFORE
at A.M"**
- 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.
- 13. Deadline for Submission of Bids**
- 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.
- 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.
- 14. Late Bids**
- 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.

- 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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| 21. Post – Qualification | <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> |
| 22. Award Criteria | <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> |
| 22 a Procuring Agency's right to vary quantities at the time of award | <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> |
| 23. Procuring agency's Right to Accept any Bid and to Reject any or All Bids | <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> |
| 24. Notification of Award | <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 up to date).

- 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 up to date) 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.

Introduction	
ITB 1	Name of Procuring Agency: Office of The Assistant Director Procurement – II, NED University, Karachi. Tel # 99261261-68, (Ext: 2471), Fax: 99261255
	Name of Contract. “Procurement of Process Control Trainer, DC Servo Control System, and Logic Analyzer and Protocol Analyzer for Department of Electrical Engineering”
Bid Price and Currency	
ITB 4	Prices quoted by the Bidder shall be <i>“fixed” and in” Pak Rupees”</i>
Preparation and Submission of Bids	
TB 7	Selection / Eligibility / Responsiveness criteria: <ol style="list-style-type: none"> 1. Bidder should quote price only in PKR. with all corrected applicable taxes and duties. 2. Having local presence in Karachi. 3. Bid should be accompanied with client list. 4. Bidder should strictly compliant with technical specification; no optional /alternative item will not be accepted without bid security. 5. The bidder must have at least 3 years of experience in the relevant field. 6. Income Tax Certificate (NTN) 7. GST Registration Certificate. 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 2 million per year 9. Affidavit confirming that the firm has not been black listed by any Government, Semi Government or Autonomous Bodies on non-judicial stamp paper. 10. Bidder must not have forfeited performance security deposit with Procuring Agency (NEDUET).
ITB 9	Amount of bid security. 5% of Bid Value
ITB 10	Bid validity period. 90 days
ITB 11	Number of copies. One original - - -
ITB 13	Deadline for bid submission. As notified in NIT
ITB 19.1	Bid Evaluation: The Most Advantageous evaluated responsive bid

Other Terms & Conditions:

- 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
- 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.
- 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.
- iv. Incomplete, conditional and tender without required earnest money in the specified form/format shall be rejected.
- 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.
- vi. Bidders are required to provide their valid e-mail Ids and contact numbers (s) for effective and timely communication
- vii. Affidavit that firm has never been blacklisted.
- viii. All Bidding documents must be signed, named & stamped by authorized person of the firm/ Companies along with authorized letter.
- 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.
- x. Contract Agreement and Integrity Pact both are mandatory for successful bidder.
- 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.

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 45 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 after issuance of Inspection Certificate from Indenting Department. Bidder is responsible to get Inspection Certificate from Indenting Department.

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.

S. No	Items/Quantity	Delivery time after issuance of Award of Work.	Location of Supply
1.	[As specified in Part – VIII of this bidding documents at P-32 to 37].	Preferably within 30 Days	at Electrical Engineering NEDUET

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

PART-VII
SAMPLE FORMS

Form-I

Letter of Acceptance

Date: _____

To:

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 _____

1	2	3	4	5		6	7
Item	Description	Country of origin	Quantity	Unit price		Total	Remarks (if any)
				<u>Words</u>	<u>Figure</u>		

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 NED University of Engg. & Tech., Karachi should include the price of incidental services. No separate payment shall be made for the incidental services.

Form-III

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

[name of bank or financial institution]

[address]

[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
ELECTRICAL ENGINEERING
SPECIFICATIONS AND QUANTITIES

Tender No. PC/NED/EE/Analyzer/8131/2022

Item Code No.	Description of Items/Specifications	Unit	Price in Pak. Rupees Only				
			Unit Price			Total Quantity Required	Total Amount with GST / SRB
			Without GST/SRB	Add GST/SRB	Total With GST/SRB		
			1	2	3 = (1+2)		
1.	<p>Process Control Trainer (4 in 1) IT-5200 or equivalent in all aspects Brief description: Process Control Trainer which contains an educational board with a pressurized vessel and a set of sensors and actuators for level, pressure, temperature and flow. A control module, containing the interface circuits for the sensors and the actuators and the ON/OFF, proportional, integral and derivative control circuits (PID) along with integrated S7-1200 Siemens PLC.</p> <p>Features: Sensors installed on-board Control Circuits Installed Drivers Installed: Protection Circuits Installed Technical Features: Fixed Supply DC: +15V, -15V Vessel: 5 Liter approx. Water Tank: 20 liter approximately Heater Element: 200 W Water Circulation Pump: 10 Ltr/min Piping: Plastic Thermal Sensors: PT100, Bi-metallic Direct Reading Pressure Sensor: Manometer Direct Reading, Strain Gauge Level Sensor: LVDT, Float Switch Flow Sensor: Direct Reading, IR-Opflow 8000 pulses/Ltr Valves: Manual, Motor Driven & Safety set at 2.0 Bar</p> <p>Level Sensor Interface: Precision Rectifier and DC Amplifier with Offset and Gain Control Flow Sensor Interface: F/V Converter and DC Amplifier with Offset and Gain Control Temperature Sensor Interface: T/V Converter and DC Amplifier with Offset and Gain Control Pressure Sensor Interface: P/V converter and</p>	Nos.				3	

<p>Differential Amplifier with Offset and Gain Control</p> <p>ON/OFF Control: Comparator with Hysteresis Control Analog Source: 0 ~ +10V, 0 ~ $\pm 10V$</p> <p>PID Controller: Proportional, Integral & Differential Control with Feedback</p> <p>Pump Driver: DC to PWM Driver with DC Level Offset Control</p> <p>Motor Valve Driver: $\pm 10V$ ON/OFF Control</p> <p>Heater Driver: DC to PWM Driver with DC Level Offset Control</p> <p>Solenoid Valve Driver: ON/OFF Control with Driver</p> <p>Accessories: Power Cords, 2mm Patch Cords, Experimental Manual</p> <p>IT-5200SW Digital PID Controller with Data Acquisition Unit / Inter with Siemens 57-1200 PLC (Plug and paly)</p> <p>Both PID and PLC units are required with mandatory 57-1200 integration</p> <p>Standard PID characteristics and responses are realizable and validated for each uit (level, pressure, temperature and flow)</p> <p>Demonstrable responses of $\zeta < 1$, $\zeta = 1$ and $\zeta > 1$ where seta is the damping ratio</p> <p>Demonstrable improvement in response using PID controllers and PLC inverse relationship between P and Tau</p> <p>Motor/pump first order behavior Heater first order behavior variation in P should result in variation in overshoot.</p> <p>All experiments must be realizable for 150 mins lab excluding PLC programming lab which is to be done separately in another time slot</p> <p>Features of Interface Software: Flow Control</p> <p>User can control flow of liquid manually, through ON/OFF control or through software PID control algorithm.</p> <p>Level Control</p> <p>User can maintain level of liquid manually, through ON/OFF control or through software PID control algorithm.</p> <p>Pressure Control</p> <p>User can control pressure of liquid manually or through software PID control system algorithm.</p> <p>Other PID parameters are controllable and graph plotting</p>									
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2.	<p>Experiments to be included</p> <p>Study of the Level Sensor</p> <p>Study of the Flow Sensor</p> <p>Study of the Pressure Sensor</p> <p>Study of the Temperature Sensor</p> <p>Study of the Characteristics of the Pump and of the Motorized Valve</p> <p>Study of the characteristics of the static process and of the time constants</p> <p>ON-OFF, P, PI, PD and PID Closed Loop Control of the Level</p> <p>ON-OFF, P, PI, PD and PID Closed Loop Control of the Flow</p> <p>ON-OFF, P, PI, PD and PID Closed Loop Control of the Temperature</p> <p>ON-OFF, P, PI, PD and PID Closed Loop Control of the Pressure with the Pressure Sensor</p> <p>Closed loop control of level, flow, temperature and pressure through Siemens PLC S7-1200</p> <p>Note: Only one unit to be delivered for inspection before final delivery of all units.</p>	Nos.				3	
3.	<p>DC Servo Control System IT-4425 or equivalent in all aspects</p> <p>P-Controller Continuous 0~10 proportional constant K (precision 10-turn potentiometer) P With push button R-CAL. 0 for displaying K on the 7-segment display P KP Range selector: x1, x10, x50</p> <p>With over-range test output</p> <p>I-Controller Continuous 0~10 integral constant Ki</p> <p>Summing Junction 2 sets of analog signal summation with over-range test outputs</p> <p>(Precision 10-turn potentiometer) With push button R-CAL. 1 for displaying K on the 7-segment display i Ki Range selector: x1, x10, x50 with over-range test outputs</p> <p>D-Controller</p> <p>Continuous 0~1 derivative constant K D (precision 10-turn potentiometer) With push button R-CAL. 2 for displaying K on the 7-segment display D With over-range test output</p> <p>SUM/DIF Amplifier</p> <p>3 positive inputs and 3 negative inputs for the sum of analog signals Continuous 0~10 amplifier gain K (precision 10- turn potentiometer)</p> <p>With push button R-CAL. 3 for displaying K on the 7-segment display with over-range test output</p> <p>Integrator</p> <p>Initial value: -10~+10 With synchronous control function T constant setting: 1, 10, 100 With over-range test output</p> <p>Inverting Amplifier One inverting buffer and on inverting amplifier with gain K of 0~10 (precision 10-turn potentiometer)</p> <p>With push button R-CAL. 5 for displaying K on the 7-segment display</p>	Nos.				3	

<p>Second Order Plant Used for first/second order plant simulation a and b parameters: 0~10 T parameter: 1, 10, 100 With push buttons R-CAL. 6 and R-CAL. 7 for displaying b and a on the 7-segment display with over-range test outputs</p> <p>Lead/Lag Compensator Inverting Amplifier One inverting buffer and one inverting amplifier with gain K of 0~10 (precision 10-turn potentiometer) With push button R-CAL. 4 for displaying K on the 7-segment display z and p parameters: 0~10 T parameters: 1, 10, 100 With push buttons R-CAL. 8 and R-CAL. 9 for displaying z and p on the 7-segment display with over-range test outputs</p> <p>Test Signal Generator Analog Power Driver Provide input signals to control systems STEP generator with positive and negative outputs RAMP generator with positive output PARABOLIC generator with positive out Amplitude associated with offset: -10V~ + 10v Frequency: (Precision 10 turn potentiometer) range x 1: 0.05Hz ~ 100Hz analog input voltage: 0 ~ +/-4v; input impedance: 1K Ohm; Gain: 3 Analog output voltage: 0 ~ +/- 12v; Max output current: 1A Input amplitude limitation: +/- 12v output with short circuit and current-limiting protection: 1.5A 2mm to BNC adapter</p> <p>DC Step pulse with synchronous control function Amplitude associated with offset +10v ~ 10V Frequency: 0.1Hz ~ 10KHz continuously adjustable Range 1: 0.1Hz ~DHZ Range 10: 1Hz ~10Hz Range 100: 10Hz ~100Hz</p> <p>Range 1K: 100Hz ~1KHz range 10K: 1K Ohm over range check 8 sets of over range detectors over-range indicator illuminates with input exceeding +/-12.7.</p> <p>DC Servo PWM Driver Analog input voltage: 0 ~ +/- 12v input Impedance: 100k ohm PWM output: 0 ~ +12v, bridge PWM drive, Max output current: 1A With dead band elimination for protection output with short circuit and current-limiting protection: 1.5A.</p> <p>Linear VR Angle/position sensor & buffer resistance: 1k ohm Linearity: 0.1% detecting angle: 0 ~350o angle to analog output voltage: 5v ~ + 5v output impedance: 1k ohm</p> <p>Calibration & Testing Module V-TEST analog input voltage: -15v ~+15V R.CAL: R-CAL. 0 ~CAL. Parameters display: 3 1/2 digit, - 19.99 ~19.99v or 0.00 ~100.0k ohm.</p> <p>DC Servo Motor & control unit can be provided for speed & position control. DC servo Motor</p> <ul style="list-style-type: none"> (a) Voltage: 12VDC (b) No-load current: 125Ma +30% (c) No-load speed: 3750 rpm +/- 20% (d) Terminal resistance: 3.10 ohm +/- 15% (e) terminal inductance: 2.10 Mh +/-10% (f) Torque constant: kt=0.30 kg-cm/A +/- 20% Co-shaft Techometer (a) Back EMF: Ke=2.60V/Kr.m. +/- 15% Gear-coupled Linear VR for angle detecting (a) Gear 									
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	ratio:64:1 (b) Impedance: 1k ohm (c) Linearity: 0.1% (d) Detecting angle: 0 ~3500 Experiments included Laplace transform experiment System simulation experiment Stead-state error experiment First order system experiment Second-order system experiment Transient response specifications experiment effect of zeros on first-order system experiment Dominant pole of second-order system experiment DC Servo motor characteristics experiment proportional controller experiment P controller in DC servo motor speed/position control experiment Integral controller experiment I controller in DC Servo motor speed/position control experiment Proportional integral (PI) controller experiment PI controller in DC Servo motor speed/position control experiment Proportional derivative (PD) controller experiment PID controller experiment (1)Ziegler-Nichols method (1) PID controller experiment (2) Ziegler-Nichols method (2) PID controller experiment (3) position control PID Controller Experiment (4) speed control closed loop DC servo motor Speed/position control with PID controller experiment Inner-loop feedback control experiment phase lead compensator Experiment (1) Root locus technique Phase lead compensators experiment (2) Frequency domain design Phase lead compensators experiment (1) root locus technique Phase lead compensators experiment (2) Frequency domain design Phase lead-lag compensators experiment (1) root locus technique Phase lead-lag compensators experiment (2) root locus technique Phase lead-lag compensators experiment (3) Frequency domain design Pole-zero cancellation experiment State feedback pole assignment experiment Software Easy motion studio Note: Only one unit to be delivered for inspection before final delivery of all units.					
4.	Logic Analyzer and Protocol Analyzer (Digilent Discovery or equivalent) Digital Logic Analyzer Software for waveforms Waveforms Resource Center Channels 24 Sample Rate 800 MS/s (with the High Speed Adapter) Bandwidth 100 MHz+ Voltage Range 1.2V to 3.3V (5V compatible when	Nos.				6

used as inputs) Buffer 2Gbit DDR3 acquisition Bus Analyzers SPI, I ² C, UART, CAN, I2S, Parallel and Custom Digital Pattern Generator Channels 16 Sample Rate 100 MS/s Bandwidth 50MHz Voltage Range 1.2V to 3.3V Bus Output Counters and Custom Multi-purpose Digital I/O Channels 16 Sample Rate 100 MS/s (50 MHz max output frequency) Voltage Range 1.2V to 3.3V (5V compatible when used as inputs) Buffer Algorithmic pattern generator (no buffers used) Protocol Analyzer Channels 16-32 Voltage Range 1.2V to 3.3V (inputs 5V compatible) Bus Analyzers UART: send and receive SPI: read and write I2C: read and write CAN: rx and tx Programmable Power Supplies Voltage Range 1.2V to 3.3V Current Limit 100 mA max available in each of the two 2-6 MTE connectors Script Editor Supported Instruments All Language JavaScript Cross Triggering Supported Instruments Logic Analyzer, Pattern Generator Provided Hardware USB A to Micro B Cable 2x6 MTE Cable 2x16 MTE cable High-speed Adapter Note: Only one unit to be delivered for inspection before final delivery of all units.						
					Total	
					Total Bid Amount including all Provincial and Federal taxes & duties etc.,	

NOTE: Bidder is strictly advised to quote bid clearly and explicitly with GST/SRB (Whichever is applicable). Above column No. 1,2,3,4 and 5 are mandatory to fill with accuracy; any column left as blank, bid shall be considered incomplete and shall be rejected.

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]

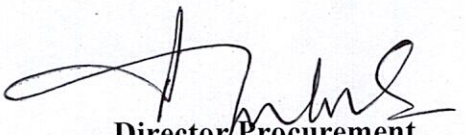


NOTIFICATION

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 Process Control Trainer, DC Servo Control System and Logic Analyzer and Protocol Analyzer for Electrical Engineering Department (vide Case File No. PC/NED/EE/Analyzer/8131/2022), as follows:

- | | |
|--|------------------|
| 1. Muhammad Umar Sajid
Assistant Professor
Electrical Engineering Department
NEDUET, Karachi | Convener |
| 2. Mr. Muhammad Mabroor Khan
Administrative Officer
Center for Excellence in Marine Biology
University of Karachi | Member |
| 3. Mr. Fawad Ul Hasan Kamran
Assistant Director Procurement-II
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 09-08-2022 at 11:00 AM in the office of Assistant Director Procurement-II.


Director Procurement
06/7/2022

Email:

- i. musajid@neduet.edu.pk
- ii. mabroork@hotmail.com
- iii. 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. | Prof. Dr. Saad Ahmed Qazi
Dean (ECE) | Convener |
| 2. | Independent Professional from the relevant field | Member |
| 3. | Nominee of Accountant General Sindh | 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



DAWN

Friday

July 6, 2022

Zilqaj 8, 1443

KARACHI

Rs 30.00

20 Pages

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Regd. No. 55-022

www.dawn.com



NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

PROCUREMENT CELL

University Road, Karachi-75272

Tel: 3265-1261-68 (Ext: 2471 & 2501) Fax: 3265-1255
Email: dp@neduet.edu.pk Website: <http://www.neduet.edu.pk>
NG-PRP-15445/5151/555 Date: JULY 06, 2022

WAY NO 30 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 PROCESS CONTROL TRAINER, DC SERVO CONTROL SYSTEM, AND LOGIC ANALYZER AND PROTOCOL ANALYZER for Department of Electrical Engineering

Tender No. PC / MED / LE / Analyzer / 8131 / 2022

Issuance of Documents from	Last Date of Release of Tender Documents	Tender Submission Deadline	Tender Opening Date / Time
18 JULY 2022	06 AUGUST 2022	06 AUG 2022 10:30 am	06 AUG 2022 11:00 am

Tender Fee (Rs.): 5,000/-

ELIGIBILITY CRITERIA:

- The Bidder must have at least 3 years of Experience in the relevant field
- Details of Turn-Over (including in terms of Revenue of at least Last 3 years while the Average Turnover of Last Three years should not be Less than Rs. 100 Million Per year
- Registration with FBR / SSB 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 & www.pps.pprasinth.gov.pk

Director Procurement

Dawn: 08.07.2022

(د) د پسرلي د پيداوار

عوامي آواز

جمعو 8 جولاءِ 2022 ع 8 ذوالحج 1443 هـ



Director
Procurement

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 Website: <http://www.neduet.edu.pk>

DP/EE-154435/8131/513

Date: JULY 06, 2022

SAY NO TO CORRUPTION

ٽينڊر گھرائڻ جو نوٽيس (NIT)

NEDUET کي هيٺ ڄاڻايل جي فراهمي لاءِ انڪم ٽيڪس، سيلز ٽيڪس ۽ سنڌ روينيو بورڊ (جتي لاڳو ٿيندو هجي) سان رجسٽريڊ فرمن کان هڪ مرحلي هڪ لفافي طريقيڪار تحت مهربند واک گهريل آهن.

PROCUREMENT OF PROCESS CONTROL TRAINER, DC SERVO CONTROL SYSTEM, AND LOGIC ANALYZER AND PROTOCOL ANALYZER for Department of Electrical Engineering

Tender No. PC / NED / EE / Analyzer / 8131 / 2022

ٽينڊر ڪولڻ جي تاريخ/وقت	ٽينڊر جمع ڪرائڻ جي آخري تاريخ/وقت	دستاويز جاري ڪرڻ جي آخري تاريخ	دستاويز جاري ڪرڻ جو آغاز
09 آگسٽ 2022 صبح 11.00 وڳي	09 آگسٽ 2022 صبح 10.30 وڳي	08 آگسٽ 2022	19 جولاءِ 2022
ٽينڊر فيس _ / 1,000 روپيا			

اهليت جو معيار:

- آڇ ڏيندڙ لاڳاپيل شعبي ۾ 3 سالن جو تجربو لازمي رکندڙ هجي.
- گهٽ ۾ گهٽ گذريل 3 سالن جي مالي ترن اوور جا تفصيل (بشمول رپين ۾) ۽ گذريل 3 سالن جي دوران اوسط ترن اوور جيڪو 02 ملين رپين کان گهٽ نه هجڻ گهرجي.

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

ٽينڊر فيس ۽ آڇ ڪيل لاڳت جو 5% سوڻي رقم پي 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 کي درخواست ٿي ڪجي ته اهي پنهنجا بهترين ۽ حتمي اڳهه آڇ ڪن ڇو ته ان سلسلي ۾ ڪنهن ڳالهه بولڻ جي اجازت نه آهي. آڇ دستاويز ويب سائيٽ www.ppms.pprasinidh.gov.pk ۽ www.neduet.edu.pk تي پڻ موجود آهن.

ڊائريڪٽر پرايوڪيورمينٽ