



19NED UNIVERSITY OF ENGINEERING & TECHNOLOGY  
PROCUREMENT CELL

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“Say No to Corruption”

Director Procurement

No. DP/BEME-121616/6717/761  
November 30, 2018

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 Function Generator, Digital Oscilloscope, Digital Multimeter, Power Supply and Soldering Station for Department of Bio Engineering and Medical Engineering Tender No. PC/NED/BEME/Function Generator/6717/18	04.12.2018	19.12.2018	20.12.2018 10:30 A.M	20.12.2018 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. 5 million, as per online annual returns submitted to FBR.
- Registration with FBR / SRB (whichever is applicable) and must have valid professional Tax Certificate.

Tender Fee and Bid Security @ 2.5% 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).

  
Director Procurement  
30/11/2018

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

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

**Department of Procurement Cell**  
**NED UNIVERSITY OF ENGINEERING & TECHNOLOGY,**



**“Procurement of Function Generator, Digital Oscilloscope, Digital Multimeter, Power Supply and Soldering Station for Department of Bio Engineering and Medical Engineering”**

**TENDER NO. PC/NED/BEME/FUNCTION GERATOR/6717/18**

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**PART-II**  
**INSTRUCTION TO BIDDERS**

- i Source of Funds** UDWP 63.16 Budget of NED University of Engineering & Technology. The eligible payment under the contract is to be made from this approved project.
- ii Eligible Bidders**
- 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.
- 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.
- 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.
- 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.
- iii Eligible Goods and Services**
- iii.a The origin of all the goods & related services to be supplied under the Contract should be mentioned.
- iii.b Origin means the place where the goods are mint, grown or produce or the place from which the related services are supplied.
- iii.c The Origin of goods and services is distinct from the nationality of bidders.
- 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

- 1. Scope**
  - 1.1 The NED University of Engg. & Tech., Karachi intends the **“Procurement of Function Generator, Digital Oscilloscope, Digital Multimeter, Power Supply and Soldering Station for Department of Bio Engineering and Medical Engineering”** through National Competitive Bidding Single Stage one Envelope Procedure as per SPPRA Rules-2010 (Amended 2017).
- 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:
    - 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 per mitted to modify its bid.
- 11. Format and Signing of Bid**
- 11.1 The Bidder shall prepare an original one copy of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" COPY OF BID" as appropriate. In the event of any discrepancy between them, the original shall govern.
- 11.2 The original and the copy of the bid shall be 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 and each copy of the bid in separate envelopes, duly marking the envelopes as "ORIGINAL BID" and "ONE COPY". The envelopes 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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|---|--|
| <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 2017), 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 2017), 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**
- 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.
- 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 2017).
- (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 compete 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 2017).
- 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 2017)** In case of conflict or primacy of interpretation the provisions of SPP Rules 2010 (amended 2017) 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 “**Procurement of Function Generator, Digital Oscilloscope, Digital Multimeter, Power Supply and Soldering Station for Department of Bio Engineering and Medical Engineering**” 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
	<b>Name of Contract.</b> “ <b>Procurement of Function Generator, Digital Oscilloscope, Digital Multimeter, Power Supply and Soldering Station for Department of Bio Engineering and Medical Engineering</b> ”.
<b>Bid Price and Currency</b>	
<b>ITB 4</b>	FOR Prices quoted by the Bidder shall be “ <i>fixed</i> ” and in” <i>Pak Rupees</i> ”
<b>Preparation and Submission of Bids</b>	
<b>TB 7</b>	<b><i>Selection / Eligibility / Responsiveness criteria:</i></b>  <ol style="list-style-type: none"> <li>1 Bidder should be a Pakistani entity.</li> <li>2 Having local presence in Karachi.</li> <li>3 Firm comply with specifications mentioned in bidding documents.</li> <li>4 Bid should be accompanied with client list.</li> <li>5 Bidder should strictly compliant with technical specification; no optional /alternative item will be accepted.</li> <li>6 The bidder must have at least 3 years of experience in the relevant field.</li> <li>7 Income Tax Certificate (NTN)</li> <li>8 GST Registration Certificate.</li> <li>9 Valid Professional Tax Certificate.</li> <li>10 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 5 Million</li> </ol>
<b>ITB 9</b>	<b>Amount of bid security.</b> 2.5% 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>	<b>Deadline for bid submission.</b> As notified in NIT
<b>ITB 19.1</b>	<b>Bid Evaluation:</b> Lowest evaluated responsive bid
	<b><i>Other:-</i></b>  <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> </ol>

## **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: 2.5%.

### **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)**

95% of the Contract Price shall be paid upon 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. Remaining 5% will be retained till completion of Warranty / maintenance period of six months from the date of Inspection certificate issued.

**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 2017

**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</b>	<b>Quantity</b>	<b>Time of Delivery from date of Award</b>	<b>Location of Supply</b>
01.	Function Generator	09	Delivery within One Month	for Bio Engineering and Medical Engineering Department NEDUET
02.	Digital Oscilloscope	09		
03.	Digital Multimeter	08		
04.	Power Supply	08		
05.	Soldering Station	04		

**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 \_\_\_\_\_ 2018\_\_\_\_\_.

\_\_\_\_\_  
*[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)
				Words	Figure		

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-IV****Contract Form**

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ 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:

1. 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;
  - (c) the Technical Specifications.
  - (d) the General Conditions of Contract;
  - (e) 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
4. 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 \_\_\_\_\_ 2018\_\_\_\_\_ 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 \_\_\_\_\_20\_\_\_\_\_.

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****BIO ENGINEERING AND MEDICAL ENGINEERING****SPECIFICATIONS AND QUANTITIES****Tender No. PC/NED/BEME/FUNCTION GENERATOR/6717/18**

Item Code No.	Description of items/specifications	Unit	Total Quantity Required	Price in Pak. Rupees	
				Unit Price	Total Amount
01.	<p><b>Function Generator</b>  Function Generator, Function Generator GW Instek model No AFG-2225 or equivalent  Wave forms  Sine, Square, Ramp, Pulse, Noise, ARB  Arbitrary Functions  Sample Rate 120 MSa/s  Repetition Rate 60 MHz  Waveform Length 4k points  Amplitude Resolution 10 bits  Non-Volatile Memory 4k points  Frequency Characteristics  Range Sine, Square 1uHz~25MHz  Ramp 1MHz  Resolution 1uHz  Accuracy Stability +/-20 ppm  Aging 1 ppm, per 1 year  Tolerance 1 mHz  Output Characteristics  Amplitude Range 1mVpp to 10 Vpp (into 50)  2mVpp to 20 Vpp (open-circuit)  1mVpp to 5 Vpp (into 50) for 20MHz-25MHz  2mVpp to 10 Vpp (open-circuit) for 20MHz-25MHz  Accuracy +/-2% of setting +/-1 mVpp (at 1 kHz)  Resolution 1mV or 3 digits  Flatness +/-1% (0.1dB) 100kHz  +/-3% (0.3 dB) 5MHz  +/-5% (0.4 dB) 12MHz  +/-10% (0.9dB) 25MHz  (sine wave relative to 1kHz)  Units Vpp, Vrms, dBm  Offset Range +/-5 Vpk ac +dc (into 50)  +/-10Vpk ac +dc (Open circuit)  +/-2.5 Vpk ac +dc (into 50) for 20MHz-25MHz  +/-5Vpk ac +dc (Open circuit) for 20MHz-25MHz  Accuracy 2% of setting + 10mV+ 0.5% of amplitude  Waveform Output Impedance 50 typical (fixed)  &gt; 10M (output disabled)  Protection Short-circuit protected  Overload relay automatically disables main output  Sine wave Characteristics  Harmonic distortion -55 dBc DC ~ 200kHz, Ampl &gt; 0.1Vpp  50 dBc 200kHz ~ 1MHz, Ampl &gt; 0.1Vpp  35 dBc 1MHz ~ 5MHz, Ampl &gt; 0.1Vpp  30 dBc 5MHz ~ 25MHz, Ampl &gt; 0.1Vpp  Square wave Characteristics  Rise/Fall Time 25ns at maximum output. (into 50 load)  Overshoot 5%</p>	Nos.	09.		

	<p>Asymmetry 1% of period +5 ns  Variable Duty Cycle 1.0% to 99.0% 100kHz  10% to 90% 1MHz  50% 25MHz  External Trigger Input  Type For FSK, Burst, Sweep  Input Level TTL Compatibility  Slope Rising or Falling(Selectable)  Pulse Width &gt;100ns  Input Impedance 10kDC coupled  External Modulation Input  Type For AM, FM, PM, SUM  Voltage Range +/-5V full scale  Input Impedance 10k  Frequency DC to 20kHz  Trigger Output  Type For Burst, Sweep, Arb  Level TT Compatible into 50  Pulse width &gt;450ns  Maximum rate MHz  Fan-out 4 TTL Load  Impedance 50 Typical  Dual Channel Function  Phase 180 ~ 180  Synchronize phase  Track CH2 = CH1 CH1 = CH2  Coupling Frequency (Ratio or Difference  Amplitude &amp; DC Offset  Frequency Counter  Range 5Hz to 150MHz  Accuracy Time Base accuracy +/- 1count  Time Base +/- 20ppm (23 +/-5C) after 30 minutes warm up  Resolution The maximum resolution is:  100nHz for 1 Hz, 0.1 Hz for 100MHz.  Input impedance 1k/1pf  Sensitivity 35mVrms ~ 30Vms (5Hz to 150MHz)  General Specification  Power Consumption 25 W (Max)  Operating Environment Temperature to satisfy the specification: 18~28C  Operating Temperature:  0 ~40C  Installation category CAT II  Operating Altitude 2000 Meters  Storage Temperature -10~70C, Humidity: 70%</p>				
02.	<p><b>Digital Oscilloscope</b>  Digital Oscilloscope, Oscilloscope. GW instek Model No.GDS 1104B or Equivalent  Channels 4  Bandwidth DC ~ 100MHz (-3DB)  Rise Time 3.5ns  Bandwidth Limit 20MHz  Vertical Sensitivity Resolution 8 bit :1mV*~10V/div  Input Coupling AC, DC, GND  Input Impedance 1 ohm// 16pF approx.  Polarity Normal &amp; Invert  Maximum Input Voltage 300Vrms, CAT I  (300Vrms CAT II with GTP-070B- 4/100B-4 10:1 probe) Offset  Position Range 1mV/div : +/-1.25V  2mV/div ~ 100mV/div : +/-2.5V  200mV/div ~ 10V/div : +/-125V  Or Equivalent</p>	Nos.	09		



	<p>Waveform Signal Process Plus, -,+, FFT, FFTrms, User Defined Expression          FFT: Spectral magnitude. Set FFT Vertical Scale to Linear RMS or dBV RMS, and FFT Window to Rectangular, Hamming, Hanning, or Blackman- Harris          Trigger Source CH1, CH2, CH3, CH4, Line, EXT          Trigger Mode Auto (supports Roll Mode for 100 ms/div and slower), Normal, Single Sequence          Trigger Type Edge, Pulse Width, Video, Pulse Runt, Rise &amp; Fall, Timeout, Alternate, Event-Delay(1~65535 events), Time-Delay(Duration, 4nS~10S)          Hold off range 4ns to 10s          Coupling AC, DC, LF rej., Hf rej., Noise rej.          Sensitivity 1div          External Triger Range +/-15V          Sensitivity DC ~ 100MHz Approx. 100mV          100MHz ~ 200MHz Approx. 150mV          Input Impedance 1 M ohm +/- 3%~16pF          Horizontal Time base Range 5ns/div ~ 100s/div (1-2-5 increments)          ROLL: 100ms/div ~ 100s/div          Pre-trigger 10 div maximum          Post-trigger 2,000,000 div maximum          Timebase Accuracy +/-50 ppm over any less than 1 ms time interval          Real Time Sample Rate 1GSa/s max.          Record Length Max. 10Mpts          Acquisition Mode Normal, Average, Peak Detect, Single          Peak Detection 2nS (typical)          Automatic Measurement 36 sets: Pk-Pk, Max, Min, Amplitude, High, Low,          Mean, Cycle Mean, RMS, Cycle RMS, Area, Cycle Area, ROVShoot, FOVShoot, RPRESshoot, FPRESshoot, Frequency, Period, RiseTime, FallTime, +Width, -Width, Duty Cycle, +Pulses, -Pulses, +Edges, -Edges, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF, Phase          Control Panel Function Autoset Single-button, automatic setup of all channels for          Vertical, horizontal and trigger systems, with undo autoset          Display TFT LCD Type 7" WVGA color display          Or Equivalent</p>				
03.	<p><b>Digital Multi meter</b>          Digital Multi meter, Hand held Digital Multi meter GW Instek Model No. GDM 396/398 (Auto /Manual Range) or Equivalent          DC VOLTAGE          Range 400mV, 4V, 40V, 400V, 1000V          Best Accuracy +/- (0.5%rdg + 1 digit)          Input Impedance 3000 M ohm          AC VOLTAGE          Range 400mV, 4V, 40V, 400V, 750V          Best Accuracy +/- (1.0%rdg + 3 digits)          Input Impedance 3000M ohm          DC CURRENT          Range 400 micro Amp, 4000 micro Amp , 40mA, 400mA, 4A, 10A          Best Accuracy +/- (1.0%rdg + 2 digits) for GDM-398 AC CURRENT          Range 400 micro Amp , 4000 micro Amp, 40mA, 400mA, 4A, 10A          Best Accuracy +/- (1.2%rdg + 5 digits)          RESISTANCE          Range 400 ohm ~ 40M ohm 6 ranges          Best Accuracy +/- (1.0%rdg + 2 digits)          CAPACITANCE          Range 40nF, 400nF, 4micro F, 40 micro F , 400 micro F, 4000 micro F          Best Accuracy +/- (3.0%rdg + 5 digits)          FREQUENCY</p>	Nos.	08.		

	<p>Range 10Hz ~ 10MHz          Best Accuracy +/- (0.1%rdg + 4 digits)          DIODE TEST          Open Circuit volt 2.8V (Approx.)          CONTINUITY BEEPER          Buzzer sounds if conductance less than 10 ohm          TEMPERATURE          Range -40 C ~ 1000 C          Best Accuracy +/- (1.2%rdg + 4 digits)          SPECIAL FUNCTION          Auto Ranging , True RMS, RS-232C ,hFE Test ,Display Backlight ,EF Function          Analog Bar, Auto Power Off          LCD DISPLAY          3 3/4 digits          POWER SOURCE          Single 9V Battery (6F22)          Or Equivalent</p>				
04.	<p><b>Power Supply,</b>          Power Supply, Power Supply GW Instek          Model No. GPC 3030DQ (0-15 VDC) or Equivalent          OPERATION MODE          Independent Two independent outputs and 5V fixed output Output from 0 to rating volts and 0 to rating amperes          Ch1/Ch2 Series Output from 0 to rating volts at rating amperes each          Output from 0 to double rating volts at rating amperes          Ch1/Ch2 Parallel Output from 0 to double rating amperes at rating volts          CONSTANT VOLTAGE OPERATION          Line Regulation less than 0.01%+3mV          Load Regulation less than 0.01% + 3mV (rating current less than 3A)          less than 0.01% + 5mV (rating current less than 10A)          less than 0.02% + 5mV (rating current greater than 10A)          Ripple &amp; Noise less than 1mVrms 5Hz ~ 1MHz          Recovery Time less than 100 micro S ( 50% load change, minimum load 0.5A )          CONSTANT CURRENT OPERATION          Regulation Line regulation less than 0.2% + 3mA          Load regulation 0.2% + 3mA          Ripple Current less than 3mArms          5V FIXED OUTPUT          Regulation Line regulation less than 5mV          Load regulation less than 10mV          Ripple &amp; Noise less than 2mVrms          Voltage Accuracy 5V +/-0.25V          Output Current 3A          TRACKING OPERATION          Tracking Error less than 0.5% + 10mV of the master          Series Regulation less than 300mV          METER          Type 3 1/2 digits 0.5" LED display          Accuracy +/- ( 0.5% of rdg + 2 digits )          INSULATION          Chassis and Terminal 20 M ohm or above (DC 500V)          100M or above ( DC 1000V )          Chassis and AC Cord 30M ohm or above (DC 500V)          100 M ohm or above ( DC 1000V )          Or Equivalent</p>	Nos.	08		
05.	<p>Soldering Station, Oriel 9000 TAHER ELMOHAMADY          or Equivalent Made in China</p>	Nos.	04.		
	<b>TOTAL</b>				
	<b>ADD: GST/SRB (Whichever is applicable)</b>				
	<b>TOTAL AMOUNT WITH GST</b>				

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