

**GHULAM ISHAQ KHAN INSTITUTE
OF ENGINEERING SCIENCES AND TECHNOLOGY**

Tender documents

For

**SUPPLY, INSTALLTION AND COMMSIONING OF
“LABORATORY EQUIPMENT”**

**No. GIKI/PO/EE-614/16
11 April 2016**

The Ghulam Ishaq Khan Institute (GIK) of Engineering Sciences and Technology, located at Topi, District Swabi is a seat of excellence in higher engineering education and research. Sealed bids are invited from reputed firms/suppliers for supply, installation, commission of laboratory equipment:

1. **Specification of items:**

Detail specification of the item, for which rate is required are given at Annexure-A, B and C. Please see the brief note at Annexure-A, before quoting the prices. Separate bids in separate envelope is required for each annexure.

2. **Date for submission of the quotation:**

Bids in sealed envelopes, on prescribed tender documents should reach to the Procurement Department, GIK Institute Topi before 3:00 pm on 26 April 2016. Write our inquiry No. GIKI/PO/EE-614/16 on the top of the envelope. Open bids will not be accepted.

3. **Tender opening date and venue:**

Tenders will be opened by the Procurement Committee in the presence of bidders at 3:30 pm on the same date (26 April 2016) in the Conference Room of H. U. Beg Administration Block, GIK Institute, Topi-23640, District Swabi, Khyber Pakhtunkhwa.

4. **Price / rate:**

Please quote unit price for each item on **C&F Islamabad Airport** basis, inclusive of installation, commissioning and training at GIK Institute etc.

5. **Validity of the price:**

Bids should remain valid for two months from the submission date of bids.

6. **Bid Security:**

You are required to enclose the call deposit of Rs.100,000 (refundable) through demand draft/pay order payable on account of GIK Institute, Topi with your bids document.

7. **Mode of Payment:**

Payment will be made through letter of credit (L/C).

8. **Delivery period:**

Please mention the delivery time after placing the Purchase Order for each item.

9. **Penalty clause:**

If you fail to supply the material in the above specified period, GIK Institute reserves the right to blacklist you for future business or forfeit the security money of 0.32% per day of the contract value or may impose any other financial penalty as deemed fit.

10. **Installation / Commission of the equipment/ Training:**
Equipment will be installed / commissioned by the trained engineer (s) of supplier / contractor at GIK Institute Topi, free of charge / are including in the cost. Free of cost tanning will be provide on side and two engineers at your official lab.
11. **Warranty:**
Minimum two years warranty is required for the equipment. Please indicate the warrantee period and terms & conditions of the warranty in the bids.
12. Please sign and stamp each page of the tender/bid document; otherwise, it will not be considered / accepted.
13. Bidders having minimum 3 years' experience of said work to the reputable organization/ institute/company etc are must.
14. Incomplete forms will not be acceptable and will not be considered in any case, and will be rejected.
15. Bids, will be accepted only, for the specifications given in the Tender (Annexure-A).
16. In case of any dispute the decision of the GIK Institute will be final and binding on you.

For further information:

Director (Procurement) GIK Institute, Topi,
District Swabi. Ph: 0938 281026 (Ext:2500/2213), Email: latif@giki.edu.pk

To be filled by the bidders

1. **Name of bidders:** -----

2. **Address:** -----

3. **Phone:** ----- **Mobile** -----

4. **Fax No.** ----- **E-mail:** -----

5. **NIC Tax No.** ----- **Sales Tax No.:** -----

6. **Branches (if any):** i. -----
ii. -----
iii. -----

7. **Type of Business:** i. -----
ii. -----
iii. -----

8. **Facilities:** i. List of technical staff with qualification and experience
ii. Authorization of distribution / dealership -----
iii. Any other: -----

9. **Monthly Turn Over:** -----

10. **Previous Experience** (name of organization where said or like equipment supplied/installed/ commissioned):

i. -----	ii. -----
iii. -----	iv. -----
v. -----	vi. -----
vii. -----	viii. -----

Please enclose any supporting document

Name and signature: - -----

Date: -----

Seal:

Annexure-A

S#	Particulars	Catalogue / Model No	Qty
1.	Transducer and Instrumentation Trainer with computer Interface	Model: IT-5927 of M/S Infnit Technologies OR Equivalent	5
2.	Strain Gauge Transducer Trainer	Model: IT-5931 of M/S Infnit Technologies OR Equivalent	5
3.	Temperature Transducer Trainer	Model: IT-5929 of M/S Infnit Technologies OR Equivalent	5
4.	GPIB Interface	Model: PSA3-GPIB of M/S ED KOREA OR Equivalent	5
5.	Digital Multi- Meter	Model: EDM-4760 of M/S ED KOREA OR Equivalent	5
6.	180W 3-output DC Power Supply	Model: ED-330 of M/S ED KOREA OR Equivalent	5
7.	Wheatstone Bridge	Model: BR-1600 of M/S ED KOREA OR Equivalent	5
8.	Precision LCR Meter	Model: 9216A of M/S PROTEK KOREA OR Equivalent	5
9.	Oscilloscope	Model: R&S HMO1002 Max. Education of M/s Rohde-Schwarz Germany OR Equivalent	20
10.	Trainers	Model: TS 7000A of M/S K&H	20

		Japan OR Equivalent	
11.	Digital Multi meter	Model: DMM M8217 of M/S Mastech OR Equivalent	20
12.	Function Generator	Model: AFG-2105 of M/S K&H OR Equivalent	20

Procurement of Equipment for Electrical Measurement and Instrumentation Laboratory

As a part of a course, "Electrical Measurement and Instrumentation" we intend to establish an allied laboratory for effective hands-on practical experience pertaining to the theoretical contents covered through class rooms lectures. By this laboratory, the students will learn various measurement techniques and shall implement them practically through laboratory experimentations. Major topics of the course content are given below:

- 1) ANALOGUE MEASURING INSTRUMENTS
- 2) BRIDGES AND CALIBRATORS
- 3) INSTRUMENT TRANSFORMERS
- 4) AMPLIFIERS IN MEASUREMENT TECHNOLOGY
- 5) OSCILLOSCOPES FOR MEASUREMENTS
- 6) DIGITAL INSTRUMENTS
- 7) MEASUREMENT OF ELECTRICAL QUANTITIES
- 8) INSTRUMENTATION AND COMPUTERS
- 9) MEASUREMENT SYSTEMS FOR DIFFERENT APPLICATIONS

To achieve better understanding of the above topics, the following items/sensors are required for the laboratory work of the above course. The quoted system should preferably be in a consolidated form of trainer with all required accessories etc.

- 1) Flow Sensors
- 2) Pressure Sensors
- 3) Proximity Sensors
- 4) Hall Effect Sensors
- 5) Humidity Sensors
- 6) Thermistors
- 7) Signal Conditioning circuits
- 8) LVDTs
- 9) Data acquisition systems
- 10) Wheatstone bridges
- 11) DMMs
- 12) CROs
- 13) Signal Generators
- 14) Amplifiers
- 15) Strain gauges
- 16) LED and photo diodes/photo transistors
- 17) Counter Modules

Annexure-B

S. #.	Description Store Items With Specification	Quantity Required
1.	3D Printer Type: DIY Kits Bed: HotBed Printing Size: 210mm*210mm*210mm Layer Thickness: 0.1-0.4mm Max Printing Speed: 100mm/s Standard Extruder Diameter: 0.4mm Printing Material Supply: PLA, ABS, Flexible rubber, Carbon Fiber Printing Filament Diameter: 1.75mm Date Import Format: STL, OBJ, G-Code Device Size: 475*425*370mm Carton Size: 340*39*22cm Operating System: Win XP/7/8, Mac, Linux, Unix	01
2.	Digital Controlled Infusion Syringe Pump - (0 - 25ml/min)	01
3.	Compact Spin Coater (Max. 8000 rpm, 4" wafer Max.) with 3 Sets of Vacuum Chucks & Complete Accessories	01
4.	Compact Stainless Steel Vacuum Glove Box (22"x17"x16") with Vacuum Flange & Gauge. With all accessories	01
5.	Anti Static BUTADYL® Glove (6"Dia x 32"L) for Larger Glove Box	05 pairs
6.	Laser scribe mini desktop 60 W 1000*600mm + laptop + software	01
7.	Titanium (IV) oxide, anatase Nano powder, <25 nm particle size, 99.7% trace metals basis Sigma Aldrich 637254-50G	2 pc.
8.	Indium Tin Oxide (ITO) Coated Substrates Sigma Aldrich 639303-5EA	6 pc.

Annexure-C

S. #.	Description Store Items With Specification	Quantity Required
1	Laurell Spin Processor Model WS-650Mz-23 NPPB of Laurell Or Equivalent	1
2	Oil Less Vacuum Pump, 220VAC, 60/60 Hz of Laurell Or Equivalent	1
3	Hoot Mounting Press Machine Number of Moulde -----1 Max Pressure, (bar) ----- 300 Heating Temperature (oC)----- 200 Water cooling ----- yes Operation ----- Automatic / electrohydraulic Display ----- 7 inches HMI touch screen (LCD) Mould assembly ----- 25 and 39 Mains (v) ----- 1 Phase, 230 V, 50 Hz Ac (As per specification of Ecopress 100, Programmable Automatic Mounting Press with one cylinder, Model:25 07 of M/S Metkon Instruments Inc. Turkey) Or equivalent	1