

TENDER NOTICE

Sealed Bids are invited from GST registered firms/authorized Dealers/manufacturers for supply of Lab Equipment for following Labs of Department of Electronics Engineering (DEE), FET (Male) International Islamic University, Islamabad:

| Sr. No | Name of Lab & Equipment | Document Fee |
|--------|--|--|
| 1 | <u>ANTENNA LAB:</u> i) Motorized Antenna trainer ii) Raspberry PI Model B iii) Arduino Mega 2560 Kit | Rs.1000/-(non-refundable) (Detail of items/ Specifications are mentioned in the tender documents) |
| 2 | <u>POWER SYSTEM LAB:</u> i) Power system lab trainer | |

2. Tender documents can be downloaded from **www.ppra.org.pk** and **www.iiu.edu.pk**.
3. Tender fee i. e. Rs.1000/- (Non-refundable) will be deposited along-with bid/tender in shape of Call Deposit/Bank Draft in favor of IIUI.
4. Tenders valid for a period of 04 months on **F.O.R** basis along-with earnest money @2% (refundable) of total bid in the shape of Call Deposit/Bank Draft in the name of International Islamic University, Islamabad, must reach in the Office of undersigned on or before **Tender Closing Date i. e. 17-02-2015 up-till 10:30 A. M. which will be opened on the same date at 11:00 A. M.** in presence of the bidders/their representatives who may like to attend the opening ceremony.
5. The University reserves the right to accept or reject any/all bid(s)/tender(s) in terms of Section-33 of Public Procurement Rules, 2004.

Javaid Rabbani, Assistant Director (P&S), Room # 213, (2nd Floor) Administration Block,
Sector H-10 International Islamic University, Islamabad, Phone # 9019255



INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD

No.17/11/2015/P&S-

Dated: _____.

M/S _____

**Subject: Procurement of Equipment for ANTENNA and POWER SYSTEM Labs of
Department of Electronics Engineering (DEE), FET (Male)**

Dear Sir,

We are pleased to invite your sealed tender(s) for the items mentioned at Annex I & II. The terms & conditions of the tender/supplies are given below:

A. SUBMISSION OF TENDER

1. You are required to send your tenders addressed to Assistant Director, (P&S), International Islamic University Islamabad latest by **17-02-2015 till 10:30A. M.** You may send your tenders through registered A/D mail addressed to Assistant Director-II, (P&S), Room No. 213, 2nd Floor, Admin Block, New Campus, Sector H-10, International Islamic University Islamabad, which must reach before the closing date and time mentioned above. Tenders **will be opened at 11:00 A. M.** on the same day in the presence of tenderers.
2. Tenders received after stipulated date & time shall not be considered. International Islamic University Islamabad will not be responsible for postal delays. The decision of Addl. Director (P&S) International Islamic University Islamabad in this respect shall be final and binding.
3. Bidders are required to submit a Pay Order of Rs.1000/- (Rupees one thousand only) as tender fees (non-refundable) along with Technical Proposal.

B. EARNEST MONEY

The Tender should be accompanied by a Pay Order payable (*valid for 04 months from the date of tender opening*) equivalent to 2% of total value in the name of INTERNATIONAL ISLAMIC UNIVERSITY, ISLAMABAD as interest free Earnest Money (Refundable) with Financial Proposal. Earnest Money in any other shape shall not be accepted. Earnest / Security Money deposited against a running contract (s) purchase orders(s) shall not be transferable as earnest money for any other tender. Tenders without Earnest Money shall not be considered.

C. RETENTION MONEY

For successful bidder(s) 05% of total value of every Purchase/Supply Order will be Retained/Held till the completion of Warranty Period of the items and Earnest Money will also be retained by the IIU up-till the completion of the Supplies.

D. PREPARATION OF TENDER

"Single Stage Two Envelope Basis"

- The BID (Tender) submitted shall comprise of a single package containing two envelopes, each envelope shall be marked and will contain "FINANCIAL" and "TECHNICAL" proposal.
- On the given tender opening date only "Technical Proposal" will be opened in the presence of tenderers available.
- The "Financial Proposal" shall be shown to the parties but will be retained with IIU without being opened.
- After Technical Evaluation of the received Technical Proposals, Financial Proposals will be opened publicly at the date, time & venue to be announced and will be communicated to the bidders in advance.
- IIU will open the "Financial Proposals" publicly of the parties whose Technical Proposals have been found acceptable.
- Financial Proposals of the technically non-responsive bids shall be returned **un-opened** to the respective bidders.

E. PREPARATION OF TENDER – TECHNICAL PROPOSAL:

IIUI's requirements with Technical Specifications are given.

Bidders **MUST:**

- Be OEM or Authorized Partner/ Reseller/Dealer.
- Be registered with Sales Tax Authorities. (Please attach copy of Registration Certificate).
- Quote Rates, GST, and other taxes separately.
- Bid on Prescribed Performa issued by IIUI. **No letter head, photocopy will be accepted.**
- Affix the company seal on all tender documents.
- Mention clearly Tender Reference on **TOP RIGHT CORNER OF PROPERLY SEALED ENVELOPE, BEARING COMPANY'S STAMP.**

Please give all the available technical details of the items offered by you, supported with the technical literature, brochure, drawings and pictures, client list details, warranty, authorization certificates, etc.

Bids / Tenders / Technical Proposal received shall be evaluated in accordance with the given technical specifications.

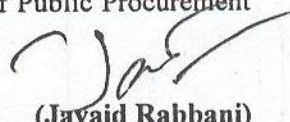
F. PREPARATION OF TENDER – FINANCIAL PROPOSAL

The tenders should be enclosed in double cover. The inner cover should be sealed having enclosed the following documents:

- Annex-I & II duly filled in, signed and sealed.
- Original Pay Order for Earnest Money.
- The outer cover should bear address of the Assistant Director-II, (P&S), Room No. 213, 2nd Floor, Admin Block, New Campus, Sector H-10, International Islamic University Islamabad and reference number of the tender with opening date of tender.
- All information about the material proposed to be supplied must be given as required in the Annex-I & II to tender.

G. PRICES

- a) The prices mentioned in the tender will be treated as firm till the completion of Purchase Order / Contract.
- b) The Prices must be stated both in words and figures. Additional information, if any must be linked with entries on the Annex-I & II to Tender.
- c) Offers must be valid for 04 months.
- d) Payment will be made on submission of bill, with delivery challan, GST Invoice and Warranty Card after satisfactory completion of the supply order, installation testing and commissioning.
- e) The University reserves the right to reject all bids in terms of Section-33 of Public Procurement Rules, 2004.


(Javaid Rabbani)
Assistant Director-II (P&S)
051-9019255

LIST OF EQUIPMENT WITH SPECIFICATIONS**EQUIPMENT FOR ANTENNA LAB:**

| Name of Equipment & Technical Specifications | | | Qty. | Unit Price Inclusive of GST | Total Amount (Rs.) |
|--|------------------------------|--|------|-----------------------------------|-----------------------|
| Item # 1: Motorized Antenna trainer With the following modules | | | 04 | | |
| | MODULE NAME | SPECIFICATIONS | | | |
| 1 | C-Band Transmitter | Center Frequency: 5150MHz Output Power: 10 dBm RF source: Dielectric Resonator Oscillator | | | |
| 2 | C-Band Receiver | Center Frequency: 5150MHz Band width: 50MHz Sensitivity: -30dBi Motor rotation: 0° to 180° with 5° step | | | |
| 3 | Pyramidal Horn Antenna | Gain: 7.42dBi HP Beam width: 62 Polarization: Linear° | | | |
| 4 | Yagi-Uda Antenna | Driven elements: Four element array Polarization: Linear | | | |
| 5 | Micro strip Patch Antenna | Gain: 6dBi Effective Angle: 125° | | | |
| 6 | Micro strip Array Antenna | Gain: 12dBi Patch Elements: 4 | | | |
| 7 | Parabolic Reflector Antenna | Aperture efficiency: 50 % Diameter: 31 cm Directivity: 21.5dBi Feed: Dipole disk feed | | | |
| 8 | Helical Antenna | AR: 1.1 Directivity: 14.6 HPBW: 37.5° FNBW: 83° | | | |
| 9 | Di-pole Antenna | Directivity: 1.64 Impedance: 50 Ohm Pattern: Omni directional Polarization: Linear | | | |
| 10 | Double Di-pole Array Antenna | Directivity: 7.5 dBi Impedance: 50 Ohm Polarization: Linear | | | |
| 11 | Double Stub Tuner | Length: 7cm | | | |
| 12 | Attenuator | Attenuation: 30dB Tolerance: ± 0.5 dB Peak Power: 2 watts | | | |

| Name of Equipment & Technical Specifications | | | Qty. | Unit Price Inclusive of GST | Total Amount (Rs.) |
|--|-----------------------------|---|------|-----------------------------------|-----------------------|
| Item # 2: Raspberry PI Model B | | | 10 | | |
| | Features | SPECIFICATIONS | | | |
| 1 | Chip | Broadcom BCM2835 SoC full HD multimedia applications processor or above | | | |
| 2 | RAM | 512 MB SDRAM @ 400 MHz or above | | | |
| 3 | Storage | MicroSD or above | | | |
| 4 | USB 2.0 | 4 x USB Ports or above | | | |
| 5 | Power Draw / voltage | 600mA up to 1.8A @ 5V or above | | | |
| 6 | GPIO | 40 or above | | | |
| Item # 3: Arduino Mega 2560 Kit | | | 10 | | |
| | Features | SPECIFICATIONS | | | |
| 1 | Microcontroller | ATmega2560 | | | |
| 2 | Operating Voltage | 5V | | | |
| 3 | Input Voltage (recommended) | 7-12V | | | |
| 4 | Input Voltage (limits) | 6-20V | | | |
| 5 | Digital I/O Pins | 54 (of which 15 provide PWM output) | | | |
| 6 | Analog Input Pins | 16 | | | |
| 7 | DC Current per I/O Pin | 40 mA | | | |
| 8 | DC Current for 3.3V Pin | 50 mA | | | |
| 9 | Flash Memory | 256 KB of which 8 KB used by bootloader | | | |
| 10 | SRAM | 8 KB | | | |
| 11 | EEPROM | 4 KB | | | |
| 12 | Clock Speed | 16 MHz | | | |

LIST OF EQUIPMENT WITH SPECIFICATIONSEQUIPMENT FOR POWER SYSTEM LAB:

| Sr. No. | Name of Equipment & Technical Specifications | Qty. | Unit Price Inclusive of GST | Total Amount (Rs.) |
|---------|--|------|-----------------------------|--------------------|
| 1 | <p><u>POWER SYSTEM LAB TRAINER:</u></p> <p>The power system lab trainer should at least include the following modules:</p> <p>Power Generation, Transmission and Distribution Module</p> <p>This trainer should essentially consist of following.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Power Generator set with prime mover. <input type="checkbox"/> 3 phase Alternator 1.5kw <input type="checkbox"/> Variable speed prime mover. <input type="checkbox"/> DOL Starter with safety. <input type="checkbox"/> Energy Analyzer 3 phase <input type="checkbox"/> AC Meter (V) <input type="checkbox"/> AC Meter (A) <input type="checkbox"/> Inductive load <input type="checkbox"/> Capacitive load <input type="checkbox"/> Resistive load <input type="checkbox"/> Three phase transmission line <input type="checkbox"/> Coupler Panel <input type="checkbox"/> Transmission line losses <input type="checkbox"/> Feeder panel <input type="checkbox"/> Three phase distribution system. <input type="checkbox"/> Selectable Phase selector <input type="checkbox"/> Single pole breaker <input type="checkbox"/> Safety fuses <input type="checkbox"/> Connecting leads <input type="checkbox"/> Extra fuses <input type="checkbox"/> Computer Interfacing software <p>This module should be capable of supporting/performing at least the experiments listed below.</p> <ol style="list-style-type: none"> 1. Regulation of three phase alternator 2. Construction and basic knowledge of three phase star winding alternator 3. No load test/ Open circuit test 4. Sync. Impedance Method 5. ZPF or Potier Method 6. Zero sequence reactance X0. | 02 | | |

7. Calculation of Energy by analyzer for three phase system.
8. Direct axis and quad rate axis sub transient reactance X_d and X_q
9. No load test for the transmission line.
10. Calculation of regulation efficiency of transmission line.
11. Symmetrical and unsymmetrical faults in transmission line.
12. Per phase representation.
13. Losses calculation in transmission line.
14. Three phase distribution system analysis.
15. Three phase load distribution.
16. Load calculation by Energy analyzer.
17. Phase selection for the respective load.
18. Connection and safety precaution of three phase distribution wiring.

Total Amount

Amount of Earnest Money

In Words: (Rupees _____)

Attention:-

Non compliance to the conditions mentioned below at Serial No. 1 to 5 will render the quotation for rejection at the time of opening of tenders.

Board Terms and Conditions of Tenders:-

1. Rates must be quoted in words and figures both as per accounting unit inclusive of all taxes, (FOR Basis) and free delivery at Central Store of IIUI, at New Campus, Sector H-10, Islamabad.
2. Offer must be firm and final and valid for **04 months**.
3. Incomplete, mutilated offer or offers without/ deficient earnest money are liable for rejection.
4. Copy of certificate of registration with Sales Tax collectorate must accompany the quotation.
5. IIUI will be the sole judge to determine the quality and the workmanship of the above item and also have the right to visit the facility / premises of the tenderer or call for any further documents to establish the capability of firms to undertake this order / contract. IIUI's decision in this regards shall be final will not be questioned in any court.

We / I hereby confirmed having read and understood the terms and conditions of the tender and we / I expressly confirm and agree that our tender for the supply of above mentioned items are in accordance with the terms & conditions of Tender Documents.

TENDERER'S SIGNATURE _____

DESIGNATION _____

ADDRESS _____

Tel No. _____ Fax No. _____ Email _____

GST No. _____

NTN No. _____

SEAL: _____