

GOVERNMENT COLLEGE UNIVERSITY FAISALABAD



TENDER DOCUMENT No. 675/135/2019

SUPPLY OF LAB EQUIPMENT FOR DEPARTMENT OF ELECTRICAL ENGINEERING, GCUF

Sealed Tenders are invited from the well reputed firms / suppliers, who are registered with Sales Tax and Income Tax Department as Active Tax Payer for Purchase of Lab Equipment for Department of Electrical Engineering, GCUF.

GENERAL TERMS & CONDITIONS

1. Tender Opening Date & Procedure:

- 1.1 The procurement shall be completed in accordance with Punjab Procurement Rules 2014, on **Single Stage – Two Envelope** Bidding Procedure. (Technical & Financial proposal separately).
- 1.2 Bids in complete conformity with Tender Documents will be dropped in Tender Box placed at Procurement Department of the GCUF, not later than cut-off date & time at **10:00 Hrs on 18.08.2020.**
- 1.3 Technical bid shall be opened first on the same day at **10:30 Hours** at the office of Director Procurement & Inventory Control (in CPC Meeting) in the presence of the authorized representatives of the responding firms/companies, who cares to participate. The representatives of the responding firms/companies must have an authorization letter from the firm on their letterheads to participate.
- 1.4 Financial bids of the technically accepted firms will be opened. However, the financial bids of the technically disqualified bidders will be returned unopened.

Note:

- *Tender Number must be mentioned on envelope.*
- *Both Technical and financial proposal shall be written in the letter head of the company /firm along with other prescribed documents.*
- *All pages of the bid must be properly counter signed.*

2. Tender Fee & Bid Security

- 2.1 The Technical Bid must be accompanied by Tender Fee of Rs:1000/- (Non-Refundable) in shape of Call Deposit Receipt (CDR) in original.
- 2.2 The Financial Bid must be accompanied by 2% of Estimated Price of total tender

(Rs. 5.55 Million) or of that category against which bid has been submitted.

Category –A Lab Equipment for Industrial Electronics Rs. 2.45 Million

Category-B Lab Equipment for Power System Production Rs. 3.1 Million

(refundable) in shape of Call Deposit Receipt (CDR) in original.

2.2 CDRs must be in favor of Treasurer, Government College University, Faisalabad.

3. **Bid Validity**

3.1 All bids and prices shall be valid for 90 days from the opening date of tender.

3.2 Withdrawal / modification of the original offer within the validity period shall entitle the University to forfeit Bid Security.

3.3 All prices should be quoted on the letter head of the bidder in Pak Rupees inclusive of all applicable Government taxes, transportation, commissioning, installation, affixation & testing cost etc;

3.4 The earnest money to the successful bidder will be released after delivery/installation/affixation of required equipment.

3.5 For successful bidder, 10 % of each claim will be deducted as security deposit to be released after successful expiry of the warranty period.

4. **Supporting Documents: -**

Bid of a supplier/firm will not be considered if following supporting documents are annexed.

4.1 The bidder must provide company profile, name and address of the company with details of staff (or any other authorized persons).

4.2 The firm must provide record of experience in relevant line of business.

4.3 Copy of National Tax Registration certificate and proof of filer (Active Tax Payer).

4.4 Copy of Sales Tax Registration certificate and proof of filer (Active Tax Payer).

4.5 An affidavit on Rs. 100/- stamp paper that currently firm is not blacklisted or debarred by any Government/Semi-Government department to participate in bidding.

4.6 Tender Fee (Non-Refundable) and 2% of Estimated Price (refundable) in shape of Call Deposit Receipt (CDR) in original.

4.5 The bidder may quote local /imported equipment. However, in case of stock item the equipment must be imported or manufactured within 6 months.

(Imports documents must be attached as evidence)

5. **Failures and Terminations:**

No bid of a supplier / firm will be considered if:-

5.1 Bid received without Bid Security / Call Deposit.

5.2 Bids received with cheque or bank guarantee.

5.3 Bid received later than the date and time fixed for tender.

5.4 Bid is conditional, ambiguous or incomplete.

5.5 Bid from a firm which is black listed at any level.

5.6 Any supplementary or revised offer after opening of the tender.

5.7 The supplier fails to deliver the consignment within specified delivery period strictly

- in accordance with the terms and conditions as laid down in the Purchase Order.
- 5.8 If any punitive situation warranted, then University is authorized to forfeit the bid Security and the firm may also be black listed.

6. Mode of Delivery: -

- 6.1 The delivery shall only be accepted at GCUF premises with loading /unloading at firm's cost.
- 6.2 Upon the successful supply, fixation, placing, installation, demonstration and inspection carried out by the end user department, the said bidder shall submit all necessary documents for payment of bill directly to DP&IC along with delivery challan/Certificate duly signed & stamped by the authorized person of department within stipulated period.
- 6.3 If the bidder is authorized for any exemption of taxes (Sales Tax/Income Tax), shall claim it in the financial proposal and submit relevant documents along with bill for payment.

7 Other Special Conditions

- 7.1 Any overwriting/crossing etc in the bid should be properly counter signed by the person signing the bid. All pages of the bid must be properly countersigned.
- 7.2 The decision of the Central Purchase Committee will be binding on all concerned and will in no case be challenged on any forum court/law.
- 7.3 The warranty period for the supplied items should be declared one-year w.e.f final inspection of the Committee and end user. However, this warranty period should be extendable if deemed necessary due to unavoidable circumstances.
- 7.4 In case the successful bidder fails to supply the goods strictly in accordance with the terms and conditions laid down in the supply order/bidding documents or fail to provide the required maintenance in a satisfactory manner, the security deposited by him shall be forfeited and requisite store equipment, etc will be purchased and professional service hired at his risk and expenses.
- 7.5 LDC (Late delivery Charges) penalty shall be imposed @2% per month of delay upto maximum of 10% of total price.
- 7.6 In case any material is found not in conformity with specifications provided in the tender, either on account of inferior quality, defective workmanship, faulty design, faulty packing or short supplied, or wrongly supplied, the supplier will replace the same free of charges or pay the full cost of replacement besides LD charges.
- 7.7 No partial/advance payment shall be made against partial supply.
- 7.8 All bids & bidders will be governed by PPRA Rules 2014 as and when amended.
- 7.9 The successful bidder must provide on campus proper training for the operation of the module.
- 7.10 The University may reject all bids/proposals at any time prior to the acceptance of a bid or proposal as per PPRA Punjab rule 35, however upon bidder request the ground of rejection will be communicated to the concerned but no justification will be given as per PPRA rule 35 (2).

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Muhammad Ayub
Incharge Officer, Procurement & Inventory Control
Allama Iqbal Road Faisalabad, Phone: 041-9201468

Appendix “A”

TENDER NOTICE No. 675/135/ 2019

**SUPPLY OF LAB EQUIPMENT FOR DEPARTMENT OF ELECTRICAL
ENGINEERING, GCUF**

CATEGORY-A 2.45 Million

Sr No	Name of Equipment	Technical Specifications or equivalent	No of Units Required	Unit Price Rs.	Total Price Rs.
1	DC Servo Motor Control Trainer	Technical Features: • One 12V PMDC Motor with gear box Mounted on open frame • optical Encoder based speed sensor 1000 lines/revolution • Control circuit with opto-coupler Isolation • 2-Quadrant Operation • Maximum Current Limit Setting from 1.0 ~ 3.0 Amps Peak • TTL-CMOS Compatible Inputs • Position control, speed control and torque control of PMDC Motor • Speed Controller consists of P, PI, PID Controller • Check Terminal: Measures Input current and voltage, Output speed and Torque, Duty cycle of MOSFET • Touch LCD Display and Control Experiments • DC Servo Motor Modeling and Identification • Intelligent Servo Controller • Sensor Measurement and Position Control in MATLAB • DC Servo Velocity Adjustment	2		

		• Signal following and filter design; • Operational amplifier usage experiment; • Typical step response experiment; • P, PD, PID controller experiment			
2	AC Servo Motor Control Trainer	Technical Features: • AC two phase or three phase servo motor: 60V(50W-500W) • Rated Freq.: 200Hz • Rated Revolutions: 3000 r/min • AC servo drive • Feedback: 14-bit/16-bit encoder • Velocity Response: 1KHz • Control Inputs: Function Generator, Connector for PLC interface • Control Modes: Position, Velocity & Torque of AC Motor • Closed Loop Control: Position & Velocity • Touch LCD Display and Control Experiments: • Configuring the AC servo • Internal Speed Control • External Speed Control • Position Control	2		
3	Programmable Logic Control Trainer (Siemens Based)	Technical Features: • PLC: SIEMENS CPU S7-224XP • Digital Inputs: 14 • Digital Outputs: 10 • Analog Inputs: 2 X Voltage Type with 11-bit ADC • Analog Outputs: 1X Voltage Type & Current Type Simultaneous Output • Window-based programming software (STEP7-Micro/WIN)	2		

		- Accessories: 2mm Patch Cords, Power Cord, Experiment Manual, IDC Cable, PC Programming Cable, Software CD Experiments: - Implementation of Logic Gates - To implement UP/DOWN Counter. - To implement Timers. - To implement 4-bit Analog to Digital Converter. - To implement 4-bit Digital to Analog Converter.			
Application Modules for Programmable Logic Control Trainer: - Motor Control By PLC - Traffic Light Control By PLC - Temperature Control By PLC - Water Level Control By PLC - Conveyor Control By PLC - Elevator Control By PLC *Warranty of all modules and proper training for the operation is essential			2		
a	Motor Control By PLC	Technical Features: - DC Motor, Stepper Motor, R/C Servo Motor - Encoder: IR Opto-interrupter, 4XDigital Hall - Driver: Monolithic Dual H-Bridge - Signal Conditioning: PWM Generator, F/V Converter - Compatible PLC Trainer: Siemens 224XP - Accessories: User Manual, IDC Cable, Sample Program, 2mm Patch Cords Experiments: - Introduction - DC Motor Control using PLC - Stepper Motor Control using			

		PLC • R/C Motor Control using PLC			
b	Traffic Signal Control By PLC	Technical Features: • Red, Yellow & Green Lamps • Digital Output from PLC: 8 • Interface Connector: 40-pin IDC • Compatible PLC Trainer: Siemens 224XP • Accessories: User Manual, IDC Cable, Sample Program Experiments: • Introduction • Types of Traffic Lights • Traffic Light Control using PLC			
c	Temperature control by PLC	Technical Features: • Heater: 4X 47R 5W Resistor Type • Fan: 12 VDC • 3 ½-Digit Digital Voltmeter and Digital Ammeter: LCD Type • Analog Input to PLC: 1X Voltage, 1X Current Type • Output from PLC: 2X Fan ON/OFF, 2X Heater ON/OFF • Temperature Sensor: 2X IC Type • Interface Connector: 40-pin IDC • Compatible PLC Trainer: Siemens 224XP • Accessories: User Manual, IDC Cable, Sample Program, 2mm Patch Cords Experiments: • Introduction • Control Loops • Temperature Control using PLC			
d	Water Level Control By PLC	Technical Features: • Input Signals: 5X Level, 2X Output Valves • Output Signals: 2X Pump			

		Drives - Analog Output: To Drive Level Indicators - Interface Connector: 40-pin IDC - Compatible PLC Trainer: Siemens & Fatek - Accessories: User Manual, IDC Cable, Sample Program Experiments: - Introduction - Operation - Water Level Control using PLC			
e	Conveyor Control By PLC	Technical Features: - Conveyor Belt: 205mm - Sensors: IR, Proximity - Motor: DC Gear Motor - Indicator: LED, Buzzer - Control: Auto / Manual, Forward / Reverse - Digital Inputs: IR, Proximity, Auto/Manual & ON/OFF - Digital Outputs: Forward, Reverse, LED, Buzzer - Interface Connector: 40-pin IDC - Compatible PLC Trainer: Siemens & Fatek - Accessories: User Manual, IDC Cable, Sample Program Experiments: - Introduction - Types of Conveyor Belts - Conveyor Control using PLC			
f	Elevator Control By PLC	Technical Features: - Elevator: 3-Floor - Floor Indicator: 7-Segment LED Display - Call Switch: Momentary Tact Type - Call Indicator: LEDs - Elevator Direction Indicator: LEDs - Elevator Door Indicator: 8X8 Dual Color Dot Matrix			

		- Digital Inputs: 3XCall Switches, 3XInternal Panel Floor Switch - Digital Outputs: 2XFloor Indicator, 3XDoor Indicator, UP, DOWN, 3XCall Switch Indicator - Interface Connector: 40-pin IDC - Compatible PLC Trainer: Siemens & Fatek - Accessories: User Manual, IDC Cable, Sample Program Experiments: - Introduction - Types of Elevators - Elevator Control using PLC			
4	Air Conditioner	1. 1.5 Ton Inverter (Haier or Gree) 2. 1 Ton Inverter (Haier or Gree)	2		
TOTAL PRICE					

CATEGORY-B 3.1 Million

Sr#	A Trainer Composed of Following Modules & Accessories with Technical Specifications	No. of Trainers & Accessories Required	Unit Price Rs.	Total Price of Lab
01	i. Variable 3-Phase Power Supply - Three Phase 220-240V/380-440V, 50Hz - Variable Range 0-240/0-440 - With circuit breaker protection, - LCD Display of voltage and current ii. 3-Phase Power Supply - Three Phase 220-240V/380-440V, 50Hz - With circuit breaker protection, - LCD Display of voltage and current iii. Resistive, Inductive & Capacitive Load	2		

	Modules • Three phase loads with possibility of star, delta and parallel connection • Inductive load with different values • Capacitive load with different values • Resistive load with different values • (Rated Voltage: 440v three phase) • CT Load (Load for the single-phase current transformer) • VT Load (Load for the single-phase voltage transformer) iv. Transmission Line Module • Three-phase model of an overhead power transmission line ≥ 200 km long, voltage 380 kV, Related Measuring instruments • Operation of transmission lines • And all other accessories required • Resistive loads • Inductive loads • Capacitive loads v. Distance Protection Relay (Transmission Protection Relay) • Requisite relay testing for Transmission Line • Trip relay logic etc. vi. Differential Protection Relay • Requisite relay typically consisting of voltage injector • Current injector • Elapsed time counter etc. vii. Over-Current Relay (IDMT/DMT) • Input current selectable • Adjustable time scale setting viii. Over / Under Voltage Relay • Relay for monitoring the over-voltage and the under-voltage • Adjustable voltage setting (at least 10%)			
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	ix. Potential Transformer, Current Transformer & Summation Current Transformer • Single Phase, Three Phase, 220 – 240V/380-440V, 50 Hz Burden ratio of CT and PT • Single phase summation current transformer Rated power: 10 VA, Transformation ratio: 2.5/1 x. Motor Protection Relay • Three phase Motor • Thermal Overload • Overcurrent • Over/Under Voltage • Differential xi. Buchholz Relay Study Trainer • Complete study trainer of gas actuated Buchholz relay with all other accessories required xii. Frequency and Earth Fault Control Relay (3- Phase) xiii. Single & Three-Phase Transformer • Primary: 3 x 380-440 V windings • Secondary: 3 x 220-240 V windings with taps at +5%, -5%, -10%, -15% • Possibility of Star/ Delta Connections • Tertiary windings • Single-Phase Current Transformer • Three-Phase Current Transformer • Single-Phase Voltage Transformer • Three-Phase Voltage Transformer xiv. Three Phase Circuit Breaker • Three-phase power circuit breaker with normally closed auxiliary contact • Contact Load Capability $\geq 400V\ AC$ xv. Air Conditioner 1. 1.5 Ton Inverter (Haier or Gree) 2. 1 Ton Inverter (Haier or Gree) Accessories • Digital Multimeters (Digital Ammeter with			
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	different fuse ratings and Digital Voltmeter) • Electronic stop clock • Continuity tester • 3-Phase digital power analyzer • Digital torque meter • High Voltage measuring Probe • Connecting wires/leads etc. • Moving Coil Ammeter (1000mA) • Moving Coil Ammeter (3A) • Moving Iron Ammeter (5A) • Moving Iron Voltmeter (500V) (Any other for operation of Trainer)			
TOTAL PRICE				

Details of Call Deposit Receipt (CDR)

Signature_____

No_____ **Amount**_____

Name of Bidder_____

Bank_____ **Branch**_____ **City**_____

CNIC No _____

Name of the Firm & Address _____ **Ph No** _____

N.T.No. _____ **Sales Tax No.** _____

Issued By:

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