



**SUPPLY OF LAB EQUIPMENT FOR DEPARTMENT OF  
MECHANICAL ENGINEERING TECHNOLOGY 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 Mechanical Engineering Technology, 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 20.10.2020.**
- 1.3 Technical bid shall be opened first on the same day at **10:30 Hours** at the office of Incharge Officer 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:1,000/- (Non-Refundable) in shape of Call Deposit Receipt (CDR) in original.

- 2.2 The Financial Bid must be accompanied by 2% of Estimated Price i.e; Rs.1,090,000/- (refundable) in shape of Call Deposit Receipt (CDR) in original.
- 2.3 CDRs must be in favor of Treasurer, Government College University, Faisalabad.

**3. Bid Validity**

- 3.1 All bids and prices shall be valid for 120 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 (non-consumable items) will be deducted as security deposit to be released after successful expiry of the warranty period.

**4. Supporting Documents: -**

- 4.1 The bidder must provide company profile, name and address of the company with financial status and chief executives (or any other authorized persons).
- 4.2 The firm must provide record of at least three years' experience in relevant line of business.
- 4.3 Copy of National Tax Registration certificate.
- 4.4 Copy of Sales Tax Registration certificate.
- 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.

**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 shall be declared one year on final inspection of the Committee and end user. However, this warranty period may be extended 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, faculty design, faulty packing or is 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 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).

Appendix “A”

**TENDER NOTICE No. 685/006 / 2020**

**SUPPLY OF LAB EQUIPMENT FOR DEPARTMENT OF MECHANICAL  
ENGINEERING GCUF**

SR#	Item with Specifications	QTY	Total Price
01	<p><b>UTM 20KN (Compression, Bending and Tensile)</b></p> <p>Specification:</p> <p>Classic experiments from destructive materials testing.</p> <p>Tensile tests, Brinell hardness test.</p> <p>Extensive accessories available for further experiments.</p> <p>Generation of tensile and compressive forces.</p> <p>Forces generated by hand-operated hydraulic system; no power supply required.</p> <p>Force gauge, pointer instrument with drag indicator.</p> <p>Dial gauge for determining the elongation.</p> <p>16 hardness specimens.</p> <p>Technical Data:</p> <p>Test force: max. 20kN.</p> <p>Stroke: max. 45mm.</p> <p>Free installation space for specimens: 165x65mm.</p> <p>16 tensile specimens.</p> <p><input type="checkbox"/> Material: 4x Al, 4x Cu, 4x St, 4x CuZn.</p> <p>16 hardness specimens.</p>		

	<p>LxWxH: 30x30x10mm.</p> <p>Material: 4x Al, 4x Cu, 4x St, 4x CuZn.</p> <p>Sphere for hardness testing: Ø 10mm.</p> <p>Measuring ranges:</p> <p>Force: 0...20kN, graduation: 0.5kN.</p> <p>Travel: 0...20mm, graduation: 0.01mm.</p> <p>Dimensions and weight:</p> <p>LxWxH: 610x500x860mm.</p> <p>Weight: approx. 48kg.</p> <p>Experiments:</p> <p>Tensile tests.</p> <p>Plot stress–strain diagrams.</p> <p>Brinell hardness test.</p> <p>Together with the accessories:</p> <p>Compression tests.</p> <p>Bending tests.</p> <p>Cupping tests.</p> <p>Shear tests.</p> <p>Testing of plate and coil springs.</p>		
02	<p><b>Pendulum Impact Tester 25Nm</b></p> <p><b>Specifications:</b></p> <p>Classic Charpy notched-bar impact test.</p> <p>Pendulum impact tester.</p> <p>Hammer mass can be varied by adding or</p>		

<p>removing weights.</p> <p>Brake to reduce the residual energy.</p> <p>Safe operation thanks to two-hand release of the hammer and protective ring for the operating area.</p> <p>Protective cover SMT-SM-13 available as an accessory.</p> <p>Scale for displaying the notched-bar impact work.</p> <p>Notched-bar impact specimens according to ISO (U/V notch) and automotive steel, tempering steel, structural steel, brass.</p> <p><b>Technical Data:</b></p> <p>Pendulum impact tester.</p> <p>work capacity: □ □ 15Nm.</p> <p>25Nm (with extra weights).</p> <p>Hammer:</p> <p>Weight: 2.05kg and 3.42kg (with extra weights).</p> <p>Extra weights: 4x 0.342kg.</p> <p>Impact velocity: 3.8m/s.</p> <p>Head: 745mm.</p> <p>Supports for specimens:</p> <p>Gap: 40mm.</p> <p>Notched bar impact specimens:</p>		
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	<p>LxW: 10x5mm, 10x10mm.</p> <p>Cross-section at the notch root: 10x8 and 10x5mm.</p> <p>Specimen materials:</p> <p>Automotive steel 9SMn28K.</p> <p>Tempering steel C45k.</p> <p>Structural steel S235JRC+C.</p> <p>Brass CuZn40Pb2.</p> <p>Dimensions and weight:</p> <p>LxWxH: 1000x300x1000mm.</p> <p>Weight: approx. 55kg. <b>Experiments:</b></p> <p>Determine the notched-bar impact work.</p> <p>Determine the notched-bar impact strength.</p> <p>Analyze the fracture surface characteristics.</p> <p>Plot a notched-bar impact work–temperature diagram.</p> <p>Influence of notch shape, material and specimen temperature on the notched-bar impact work.</p>		
<p><b>03</b></p>	<p><b>COMBINE BENDING AND TORSION OF BARS APPARATUS</b></p> <p><b>Specifications:</b></p> <p>Elastic deformation of bars under bending or torsion</p> <p>Bending tests with statically determinate and indeterminate systems</p> <p>Torsion tests with a statically determinate</p>		

	<p>system</p> <p>Supports in the bending test may be clamped or free</p> <p>2 adjustable blocks with clamping chuck for torsion tests and supports for bending tests</p> <p>Weights to generate the bending or twisting moment</p> <p>Dial gauge with bracket</p> <p>storage system to house the components</p> <p><b>Technical Data:</b></p> <p>17 bars for bending tests</p> <p>material: aluminium, steel, brass, copper</p> <p>height with LxW 520x20mm: h=3 to 10mm</p> <p>width with LxH 520x5mm: w=10 to 30mm</p> <p>length with WxH 20x4mm: l=210 to 520mm</p> <p>LxWxH: 20x4x520mm (Al, St, brass, Cu)</p> <p>LxWxH: 10x10x520mm (aluminium)</p> <p>22 torsion bars</p> <p>material: aluminium, steel, brass, copper</p> <p>lengthwithØ10mm:50to650mm(aluminum)</p> <p>o ØxL: 10x50mm/10x340mm (aluminium, steel, copper, brass) o diameter with L=50/340mm: Ø5to12mm(steel)</p> <p>Dial gauge</p> <p>o 0to10mm, graduation:0.01mm</p> <p>Tape measure</p> <p>o graduation:0,01m</p>		
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	<p>Weights</p> <ul style="list-style-type: none"> <li>o 1x 100g (hanger)</li> <li>o 1x 100g, 1x 400g, 1x 500g, 1x 900g</li> </ul> <p>The unit has Optional Software for computer connectivity, monitoring &amp; display and data analysis on computer.</p> <p>LxWxH: 1000x250x200mm  Weight: approx. 20kg  LxWxH: 1170x480x210mm (storage system)  Weight: approx. 12kg (storage system)</p>		
<p><b>04</b></p>	<p><b>HOOKE`S LAW APPARATUS</b></p> <p><b>Specifications:</b></p> <hr/> <p>Experiment relating to friction on the inclined plane.  Inclined plane with plastic coating, drag link with angle scale and ball bearing-mounted deflection roller.  Angle of plane adjustable.  2 samples.  Graduated weight set.</p> <p><b>Technical Data:</b></p> <hr/> <p>Friction body:  LxWxH: each 80x60x44mm.  Dead-weight force: each 10N.  1x steel / polypropylene.  1x aluminium / brass.</p> <p>Inclined plane:  Length: 1000mm.  Adjustable angle range: <math>\pm 45^\circ</math>.</p> <p>Weights:  1x 1N (hanger), 4x 0.1N, 1x 0.5N, 4x 1N, 1x 5N.</p> <p><b>Experiments:</b></p> <hr/> <p>Determination of the friction coefficients of various material pairings.  Transition from static to dynamic.  Static equilibrium of forces on the inclined</p>		

	<p>plane. Determination of the angle of inclination as from which sliding occurs (calculation and verification by experiment).</p>		
	<p><b>THERMAL EXPANSION APPARATUS</b></p> <p>Thermal Expansion Apparatus, students can accurately and easily investigate the expansion of metals with increasing temperature.</p> <p>Brass, copper and aluminum tubes are included so that students can compare the coefficients of expansion of the different metals. The fluid used to heat the tubes can be water or steam at any temperature. We recommend using our Steam Generator (not included).</p> <p>Each tube has a built-in thermistor housed under a short length of insulation which does not affect results but makes the tubes easier to handle when heated.</p> <p>The Thermal Expansion Apparatus can be used in two different ways:</p> <p>The 3.5 mm jack from the Thermistors can be connected directly to a PASPORT Quad Temperature Sensor using a ESOLS interface and data collection and analysis captured by ESOLS software.</p> <p>Or the 3.5 mm jack can be connected to the input on the base with a digital multimeter connected to the apparatus via banana jacks and the resistance of the thermistor measured.</p> <p>When not in use, the tubes store neatly on the base of the apparatus.</p> <p><b>Features</b></p> <p>Built-in Digital Gauge: Measure the rod expansion with 0.01 mm resolution</p> <p>Built-in Thermistor: A 10 k thermistor is connected directly to each tube and the temperature can be determined using a digital ohmmeter or Temperature Sensor.</p> <p>Heat with Steam or Water: The fluid used may be steam or water at any temperature.</p> <p>Three Drop-in Metal Tubes: Each tube connects securely onto the rigid base. The other two can be simultaneously mounted on the base for convenient storage.</p>		

	<p>Touch LCD to Measure Temperature and the expansion. DAQ Software included.</p> <p><b>What's Included</b></p> <p>1x Base with built-in dial gauge and thermistor</p> <p>1x Expansion tubes brass, copper and aluminum; 16 mm dia. (80 cm length)</p>		
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**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:**

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