

Annexure B

**DEPARTMENT OF PHYSICS UNIVERSITY OF LUCKNOW LUCKNOW-226007**

TENDER NO: CRG/LU-PHY/002/2019-2020, Dated: 22<sup>nd</sup> October, 2019

Tender /Bid invited  
For purchase of Universal Testing Machine  
For the SERB-DST project

**Project No. EEQ/2018/000647**

Department of Physics, University of Lucknow, Lucknow- 226007

**Non transferable**



**DEPARTMENT OF PHYSICS**  
UNIVERSITY OF LUCKNOW  
LUCKNOW-226007

**TENDER NO. – CRG/LU-PHY/002/2019-2020,**

**Dated: 22<sup>nd</sup> October, 2019**

**Notice: Inviting tenders for Universal Testing Machine under SERB-DST project, in the Department of Physics, University of Lucknow, Lucknow- 226007.**

Sealed tenders are invited from registered, experienced and reputed firms under Two Bid system i.e. Technical Bid & Financial Bid for purchase portable **Universal Testing Machine under SERB-DST** project in the Department of Physics, University of Lucknow, Lucknow.

**1. Detailed description of items required along with specifications and qualification criteria. (Please see Annexure 1).**

**2. Time Schedule:**

Date of uploading of Bid document:, 22<sup>nd</sup> October 2019

Last date and Time for receipt of Tenders: 14<sup>th</sup> November, 2019 by 12:00 noon.

Date and time for opening of Bid: 14<sup>th</sup> November, 2019 by 3.00 p.m.

Place of Submission of Tender: Dr. Chandkiram Gautam/Head of Department, Contact No. : 8840389015

Department of Physics, University of Lucknow, Lucknow – 226007 (U.P.)

**3. Cost of tender Form:** Rs 2000/- (Two Thousand only+18% GST) in the form of Bank draft of any Nationalized Bank in favor of Finance Officer, University of Lucknow payable at Lucknow, must be enclosed with tender form. Cost of tender form is Non-refundable.

**4. Validity of Tender:** 90 days from the date of opening of tender.

**5.** Interested firms may submit the documents completed in all respects along with Earnest Money Deposit (EMD) of Rs 15,000/- (Rupees fifteen thousand only) in the name of Finance Officer, University of Lucknow, Lucknow – 226007 in the form of Bank Draft only, of any Nationalized Bank.

**6.** The University of Lucknow, reserves all rights to amend or withdraw any of the terms and conditions contained in the tender document or to reject any or all tenders without giving any notice or assigning any reason. The decision of University of Lucknow in this regard shall be final and binding on all.

**Dr. Chandkiram Gautam,  
Assistant Professor in Department of Physics  
For REGISTRAR, University of Lucknow,  
Lucknow- 226007**

## TENDER FORM

The bidders should furnish the under mentioned information and also enclose copies of the respective documents as mentioned below failing which their bids will not be considered.

1. Name of the firm:

Full Address:

2. Name of the Proprietor:

3. Telephone / Mobile Number:

4. Bank Account Number:

(Please enclose proof)

5. Income Tax Permanent Account Number:

(Please enclose Photocopy)

6. G.S.T. Registration No.:

(Please enclose Photocopy)

7. Income Tax return for the past three years:

(Please enclose photocopies)

8. Firm deed & Registration of the Firm:

(Please enclose photocopy)

9. (a) Details of Demand Draft towards the cost of the Tender:

Draft No. Date: Amount: Rs 2000/- +18% GST=2360/-

Name of the issuing Bank:

(b) Details of Demand Draft towards the cost of Earnest Money Deposit (EMD):

Draft No. ....Date: ..... Amount: Rs 15000/-

Name of the issuing Bank:

**Demand Drafts should be drawn in favor of Finance Officer, University of Lucknow, Lucknow, payable at any Nationalized Bank at Lucknow.**

**Tenders/Bids not accompanied by the requisite Demand drafts shall not be considered and shall be rejected.**

**Annexure-1**  
**Portable Fiber Optic Spectrometer and Tungsten Halogen light Source for Department of**  
**Physics, University of Lucknow**

**1(a) Universal Testing Machine**

**Qty: 01**

**Scope:** Supply, installation, commissioning and training of complete and ready-to-use Universal Testing Machine with appropriate accessories.

**Application:** The Universal Tester should be capable of working in tension, compression, bend, and shear modes with appropriate accessories. It shall be able to test ceramics, plastics and other materials as per ASTM and other relevant standards.

1.0	Frame type	Tabletop, single test area
1.1	Design	Dual column, low-backlash ball screws
1.2	Frame capacity	50kN or better
1.3	Drive mechanism	Precise AC/DC servo motor
1.4	PC connectivity	RS-232 or USB
1.5	Digital controller	In-built type
1.6	Data acquisition rate at PC	100Hz or better
1.7	Frame stiffness	High frame stiffness preferred (specify exact value)
1.8	Horizontal clearance	400mm or better
1.9	Crosshead travel	1100mm or better
2.0	Test speed range	0.001 to 500mm/min or better
2.1	Speed resolution	0.001mm/min or better
2.2	Return speed range	0.001mm/min to 500mm/min or better
2.3	Power	Single phase, 220-240V, 50Hz
2.4	Additional features and safety	a) Return to zero function b) Motor drive alarm system to monitor over/under voltage, current and temperature c) Slow speed alarm d) Adjustable mechanical limit switches e) Emergency stop mounted on frame

		f) Compliance to international standards/directives on mechanical and electrical safety.
2.5	Load measurement	<p>a) Load measurement through strain-gauge type load cell of 50kN capacity</p> <p>b) Auto identification, scaling and calibration</p> <p>c) Shall meet or exceed requirements of ASTM E4, ISO 7500-1, calibrated in tension and compression mode</p> <p>d) Load range: 2% to 100% of the capacity or better</p> <p>e) Accuracy: <math>\pm 0.5\%</math> of measured load or better</p> <p>f) 150% or better mechanical overload protection</p>
2.6	Extension measurement	<p>a) Shall meet or exceed requirements of ASTM E83 and ISO 9513</p> <p>b) Accuracy: <math>\pm 10\mu\text{m}</math> or better</p> <p>c) Resolution: <math>1\mu\text{m}</math> or better</p>
2.7	Standard accessories	<p>a) Set of 3pt bend attachment, 50-300mm variable span, contact rollers dia. 10mm, 50mm wide, 25kN or higher capacity</p> <p>b) Set of steel compression platens, 100mm dia., 50kN or higher capacity</p>
2.8	Software	<p>Material testing software with data acquisition, control and analysis tools</p> <p>a) Compatibility with latest 64-bit Windows OS</p> <p>b) In-built library of at least 50 test methods as per national and international standards</p> <p>c) Facility to create new test methods as per our factory standards</p> <p>d) Tabbed navigation for easy user interface</p> <p>e) Load, position and strain rate control modes</p> <p>f) Fully customizable report format and test screen layout</p> <p>g) Real time display of data and curves</p> <p>h) Multiple graphs like force vs position, force vs strain, stress vs strain, stress vs time, strain vs time etc. on single test screen and test report</p> <p>i) Curve and results regeneration for missing or new results</p> <p>j) Pass/fail limit setup</p> <p>k) Advanced three level login and password facility</p> <p>l) Auto crosshead return</p> <p>m) Multi-segment programmable tests</p> <p>n) Multiple end-condition tests</p> <p>o) Hold and slow-speed cyclic tests</p> <p>p) Auto and manual data backup at secure location</p> <p>q) Units conversion to SI, metric or imperial</p> <p>r) Statistics functions like average, maximum, minimum, standard deviation, coefficient of variation, median etc.</p>

		<p>s) Auto and manual report generation in excel, xml, pdf format</p> <p>t) Auto cross-check functionality to setup test methods correctly</p> <p>u) Auto and manual data backup to secured location</p> <p>v) Load cell overload and crosshead over travel protection</p> <p>w) In-built tutorials and user manual</p> <p>x) In-built team viewer for remote access</p> <p>y) Software to be licensed perpetually</p>
2.9	PC interface	<p>Branded PC (Dell/Acer/HP) to be supplied locally free of cost. Minimum specifications: i7 processor, 8GB RAM, 1 TB HDD, 4- 6 USB ports, 4 GB or better DirectX 10.0 graphic card, mouse, keyboard and 19-23" LED monitor, Laser printer, 64-bit licensed Windows OS</p>
3.0	Documentation	<p>a) OEM with direct sales and distribution channel in India shall have operational factory/office for minimum five years as on bid submission date. Proof to be furnished in technical bid.</p> <p>b) In case of exclusive distributor, authorization certificate from OEM shall be furnished.</p> <p>c) OEM and exclusive distributor must have worked together for minimum five years as on bid submission date. Proof to be furnished in technical bid.</p> <p>d) Vendor shall enclose latest scope of accreditation of their ISO/IEC 17025 accredited calibration lab in technical bid.</p> <p>e) Vendor shall enclose CE certificate for offered model in technical bid.</p> <p>f) Vendor shall provide user and maintenance manuals, calibration certificates along with the machine.</p> <p>g) Vendor shall provide site requirements in technical bid.</p>
3.1	Local support	<p>a) Vendor shall have an operational service centre in North India. Number of trained service engineers employed in this region to be mentioned in technical bid.</p> <p>b) Vendor shall arrange demonstration of similar or higher capacity system in India upon request from the purchaser.</p>
3.3	Future upgradation	<p>Vendor to quote latest compatible accessories with offered machine. It shall include</p> <p>a) Clip-on type, axial extensometer, 50mm GL, 50% measuring range, shall conform to ASTM E83 class B1/B2, ISO 9513 class 0.5</p> <p>b) Non-contact laser extensometer, visible red low-powered HE-NE laser, scanning range 600mm or better</p> <p>c) Set of self-tightening mechanical wedge grips, 50kN or higher capacity, gripping length 50mm or better including crosshatch/serrated inserts for flat specimen, width 30mm or better, thickness up to 15mm or better</p> <p>d) Set of roller grips, 2kN or higher capacity</p>

Items 1(a) as mentioned above should be compatible with each other and these modules should be interfaced and made functional at University of Lucknow, Lucknow, India.

**Qualification Criteria:**

- 1) Software must be provided, installed and demonstrated.
- 2) Complete Hardware and Software environment for the working of the Universal Testing Machine must be provided.
- 3) Technical and financial bids, duly signed and stamped, to be kept separately in sealed envelopes. The envelope containing bids be marked on top as "Technical/Financial bids for items (Name of the scientific equipments) required for project in the Department of Physics, University of Lucknow".
- 4) An undertaking that guarantees of Universal Testing Machine, after the final installation of the software in our premises must be provided. In case of failing to do so (with maximum deviation of 5% from the results submitted in the bid), the University reserves the right to deduct 10% money from the payment.
- 5) The payment for the purchase would be done after the delivery of Universal Testing Machine.
- 6) The lowest bid which meets the specification and scientific use will be qualified for the Financial Bid.
- 7) The bidder must be registered under the companies' act 1956 or a registered firm. And have a registered office in India.
- 8) Bidder must not be blacklisted by any government organization in India; a notarized declaration must be submitted with the bid.
- 9) The firm should be capable of mobilizing adequate arrangement for the supply of scientific equipments/items required for various projects in the Department of Physics, University of Lucknow, Lucknow.
- 10) For legal dispute, if any, the jurisdiction will be limited to the District of Lucknow.
- 11) Tender should be addressed in the name Head, Department of Physics, University of Lucknow, Lucknow-226007.**
- 12) With tender form, specification of equipment or item supplied must be written, sealed and signed by the authorized signatory.
- 13) Quantity to be supplied and work to be completed may change at the time of order.
- 14) Non compliance of order, in time, will be treated as non compliance of the terms and conditions.

**All documents stated above should be marked as Annexures 1 and submitted in serial order**  
**General Terms and conditions:**

1. Technical Bid should contain **item-wise compliance chart** clearly tabulated, for the 1 item and sub-items mentioned under the specifications. The compliance chart should be duly authenticated by an authorized person of the company.
2. Financial bids for the product whose technical bid is not acceptable will not be opened.
3. The delivery period should be specifically stated – preferably 08-09 weeks from the date of purchase order.
4. Penalty @ 10% of the value of the order shall be imposed for every day of delay in the supply of the full order.
5. Maximum educational discounts should be provided.
6. Rates quoted by the firms are negotiable.
7. Installation within 10 days after receiving the system at the University. The price should be inclusive of full installation on site with full functionality demonstration.
8. Quotations & Payment in Indian Rupees only.