## **College of Engineering Trivandrum, Thiruvananthapuram**

## **NOTICE INVITING TENDER (Re Tender)**

I/163239/2024	01-11-2024
Tender No.	: 11/2024/P5/ANA/CSD
E-Tender ID	: 2024_DTE_672911_2
Superscription	:Purchase of <b>Surface Area and</b> <b>pore size Analyser</b> for Centre for Sustainable Development of this institution
Last date and time of receipt of tender on the website (www.etenders.kerala.gov.in)	:18/11//2024 3 PM
Date and time of opening of tender	:20/11/2024 11 AM
Date upto which the rates are to be firm	: 18/05/2025
Bidding fee	: <b>Rs.3658/-</b> (Rs.3100+18%GST) 3100/- should be paid to Department and GST of Rs. 558/- should be paid to GST department by the bidder.
EMD required	: Rs.20,600/-
Address of the Officer to whom hard copy is to be send.	: THE PRINCIPAL, COLLEGE OF ENGINEERING TRIVANDRUM, THIRUVANANTHAPURAM-695016, KERALA GSTIN:32AAAGC0358L1ZP
Quantity	1

Specifications-Surface area and pore size analyzer -

1.Fully automated, vacuum volumetric gas sorption analyzer for measurement of single and multipoint BET surface area, pore volume and pore size distribution of powder and porous materials.

2.Test principle : Static volumetric gas absorption

3.Data reduction methods (Single or Multi-point BET surface area, Langmuir surface area, Adsorption and Desorption isotherms, External Surface area (statistical thickness method), BJH Pore size analysis, t-plot, Average pore size, total pore volume).

4.Pressure sensor: 1000 torr pressure sensor accuracy shall be at least  $\pm 0.20\%$ .

5.Capable of analyzing minimum one sample or more.

6.System should have 1000 mmHg pressure transducer.

7.System should have dedicated 1000 mmHg Transducer for P0 station/port, this port should be in addition to the sample port.

8.System should have Three Stage evacuation and two stage filter on the analysis station.

9.System should be supplied with an Imported Vacuum Pump for the Main system and Degasser.

10.System should have provision to onsite upgrade for additional analysis station to increase the throughput of the system.

11.System should have facility for measuring P/P0 from  $10^{-5}$  to 0.998.

12.Degassing temperature should be maximum upto 400 deg.C

13. Specific surface area range :> 0.0005 meter  $^2/g$  (std. sample test repeatability (RSD)  $\leq 1.0\%$ 

14.Pore size range : > 0.0001 cm<sup>3</sup>/g

15.System should be supplied with External Degasser having 4 Degassing ports with Independent temperature control for all 4 degassing stations.

16.System should be supplied with Carbon Black Surface area reference standards Low Surface area and High Surface area samples.

17.System should have Equilibrium pressure intelligent control technology, sample adsorption /desorption equilibrium pressure should determine automatically and data acquisition, adsorption-desorption isotherms curve test points should be controlled automatically.

18.System should be supplied with all the spares and accessories required for the operation of the system Includes compatible computer, Gas Cylinders of 47 Liters with two stage gas regulator for Helium and Nitrogen of 99.999% purity, Pipes, ferrules and Liquid Nitrogen container of 10 Liters.

19. Power requirement : 100 -240 V AC , 50/60Hz, max power – 300W

20. Warranty for at least 2 Years from date of Installation.

## **General conditions**

1. The price quoted should be inclusive of all taxes, freight charges, unloading charges, installation and commissioning charges and should be furnished unambiguously.

2.Payment: 100 % after successful supply, installation, commissioning and demonstration.

3.Delivery Period: Maximum Delivery period will be 04-08 weeks from the date of receipt of P.O

4. Prliminary agreement and tender form should be uploaded.

5.5% security deposit along with agreement should be furnished within a month/fortnight from the date of receipt of supply order.

6.Date of opening of tender: In case the proposed date declared as holiday, the tender will be opened on the next working day.

7.After E-Tendering the hard copy of all documents such as agreement, brochure, should be submitted before the opening date.

8.Only GST registered firms can participate in the Tender

9. Bidder should have sales and service center in Kerala for after-sales support, registration details must be provided.

- 10. Installation and training must be provided by the bidder
- 11. Seller/reseller must be OEM verified
- 12. Supplier must be ISO 9001-2015 certified.
- 13. Product must be CE-certified.
- 14. Warranty :One year on site warranty should be provided.

15. For technical clarification and pre bid meeting if required please contact **9562097712** 

NB: The Tender procedure will be made as per Rules mentioned in the Revised Store Purchase Manual.

The bidders should participate this tender through E-Tendering System. Tender cost and EMD should be submitted only through online. For more details Contact Ph.0471 2577088, 0471 2577188, 0471 257388, 0471 2515772