भारतीय प्रौद्योगिकी संस्थान



Ref: ChE/2019-20/VS/01

Date 22 April 2019

ANNEXURE-I

DEPARTMENT OF CHEMICAL ENGINEERING

INDIAN INSTITUTE OF TECHNOLOGY (BHU) VARANASI

<u>ENQUIRY</u>

Due Date: 13 May 2019

Date: 22 April 2019

Dear Sir/Madam,

Please submit your lowest quotation for supplying the under mentioned items. Quotation must reach us before the date marked above and should contain the following information:

- 1. Full specification and make of the item offered and its rate F.O.R. Varanasi/CIF New Delhi.
- 2. Sales tax at concessional rate as applicable to educational institution.
- 3. Your sales tax registration number and TAN number.
- 4. Conditions of supply and terms of payment.
- 5. If you are a manufacture of the item or if you have proprietary right over it, please mention it in the quotation and provide a certificate.
- 6. Please mention your agency commission in Indian currency. If applicable (in case of imported items).
- 7. Please give undertaking as per annexure-I-B

Quotation must be sent in a **sealed envelope** with word "QUOTATION", our reference number, and due date as given above, clearly marked over it to the address: **Dr. Vijay Shinde, Assistant Professor, Department of Chemical Engineering, Indian Institute of Technology (BHU) VARANASI 221005.**

Multi-Point Dynamic BET Surface Area Analyser.

Technical Specifications:

- 1. Specific Surface Area range: 0.1 m²/m to 1500 m²/g
- 2. Accuracy: Better than ± 5%
- 3. Reproducibility: Better than ±3 %
- 4. Sample Holder: Typical Sample holder capacity 7 ml.
- 5. Analysis Time: 10 to 15 min for single point analysis.
- 6. Power Supply: 230 V ± 10% AC, 50 Hz.
- 7. Dimensions: 45 cm x25 cm x 35cm approx.
- 8. Regeneration (degassing) System: Ambient to 300°c. Accuracy: Better than± 5°c.

भारतीय प्रौद्योगिकी संस्थान



INDIAN INSTITUTE OF TECHNOLOGY (काशी हिन्दू विश्वविद्यालय) (BANARAS HINDU UNIVERSITY) रासायनिक अभियांत्रिकी एवं प्रौद्योगिकी विभाग DEPARTMENT OF CHEMICAL ENGINEERING & TECHNOLOGY (उच्चानुशीलन केन्द्र एवं डी एस दी प्रायोजित 'फिस्ट' विभाग) (CENTRE OF ADVANCED STUDY & DST DEPARTMENT UNDER FIST) (वाराणसी - २२९००५) Varanasi - 221005

- 9. Operating Temp: 15°c to 40°c (non-condensing)
- 10. Multi-Point (max 5 points) Surface Area Analysis possible with using additional mixture gas cylinder.

11. Microporous Sample Surface Area measurement is possible by using lower partial pressure of adsorbate gas.

12. Pore Volume measurement possible with separate gas mixture.

- 13. Supplied with separate purging arrangement for sample degassing under inert atmosphere.
- 14. Supplied with gas manifold suitable for number of mixture gas cylinders provided with instrument.
- 15. Supplied with latest Window Based user friendly Software.

16. Personal computer (Dual Core 2.6 GHz, 2GB RAM, 500 GB HDD, 15" colour monitor, DVD Writer, Microsoft Keyboard, Optical Mouse, P4 ATX Cabinet)

<u>Utilities</u>

1) Calibration Gas Mixture (05%N2+95%He), (10%N2+90%He), (15%N2+85%He), (20%N2+80%He), (30%N2+70%He), (95%N2+05%He) Cylinder (Capacity10Ltr.): each 1No

2) Pure N2 Gas Cylinder (Capacity10Ltr.): 1No

3) Two Stage Gas Regulators for above gas cylinders: 7 No

- 4) Purification Panel with Moisture Trap & Oxy Trap: 1No
- 5) Gas Manifold with 6 input point and 1 output point: 1No
- 6) N2 Purging Arrangement for Regeneration System: 1No
- 7) Cryogenic Container for Liq N2, Capacity 10.5 Ltrs: 1No

HOD/COS/PI

