



## Institute of Nano Science and Technology

Habitat Centre, Sector 64, Phase X, Mohali -160062, Punjab, India

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### **NOTICE INVITING TENDER**

INST invites tender from the reputed manufacturers or their authorized dealers so as to reach this office on or before scheduled date and time for the instrument, as per specifications given in the Annexure attached to the Tender form. All offers should be made in English and should be written in both figures and words. Tender forms can be downloaded from the website ([www.inst.ac.in](http://www.inst.ac.in)) of the Institute.

The bidders are requested to read the tender document carefully and ensure compliance with all specifications/instructions herein. Non-compliance with specifications/instructions in this document may disqualify the bidders from the tender exercise. The Director, INST reserves the right to select the item (in single or multiple units) or to reject any quotation wholly or partly without assigning any reason. Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored and rejected.

### **EQUIPMENTS LIST**

S. No.	Ref. No.	Item Description	Qty	Tender Submission Date and Time	Tender Opening Date and Time	Tender Fee (Non-refundable)	EMD
1	INST/12(79)/2017-Pur	Water Vapor Physisorption with Accessories	01 No	17/07/2017 upto 2.00PM	17/07/2017 at 3.00PM	Rs. 500/-	Rs. 1, 75, 000/-

**Note:** The Institute shall not be responsible for any postal delay about non-receipt / non delivery of the bids or due to any reason.

### **TERMS AND CONDITIONS**

Important Conditions of the tender to be abide by the tenderer

- Due date:** The tender has to be submitted before the due date. The offers received after the due date and time will not be considered.
- Preparation Bids:** The offer/bid should be submitted in two bid systems (i.e.) Technical bid and financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid. The Technical bid and the financial bid should be put in separate covers and sealed. Both the sealed covers should be put into a bigger cover along with letter of EMD and to be sealed. The tender number and details should be superscripted on the left side of the outer cover. The Quotations should be valid for 180 days from the date of opening of tender. The Quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to "**The Director, Institute of Nano Science and Technology, Habitat Centre, Sector 64, Phase –X, Mohali, 160062, Punjab, India**" so as to reach on or before the due date.
- Delivery of the tender:** The tender shall be sent to the below mentioned addressee either by post or by courier so as to reach our office before the due date specified in our Schedule. The offer/bid can also be dropped in the tender box on or before the due date specified in the schedule. The tender box is kept in Foyer area of INST.
- Tender Preparation Expenses:** The tenderer shall solely bear all the costs associated with the preparation and submission of the bid. The Institute shall in no case be responsible or liable for such costs, regardless of the conduct or outcome of the tender process. In no case, such costs shall be reimbursed by the Institute.



5. **Opening of the tender:** The offer/bid will be opened by a committee duly constituted for this purpose. The technical bid will be opened first and it will be examined by a technical committee which will decide the suitability as per our specification and requirement. The financial offer/bid will be opened only for the offer/bid which technically meets all our requirements as per the specification. The bidders if interested may participate on the tender opening Date and Time. The bidder should produce authorization letter from their company to participate in the tender opening. Only one representative will be allowed to participate in the tender opening.
6. **Acceptance/Rejection of bids:** The Committee reserves the right to reject any or all offers without assigning any reason.
7. **Pre-qualification criteria:**
- Bidders should be the manufacturer / authorized dealer. Letter of Authorization from original equipment manufacturer (OEM) on the same and specific to the tender should be enclosed.
  - An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.
  - OEM should be internationally reputed Branded Company.
  - Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between bidder specification and supporting documents etc. may lead to rejection of the bid.
8. **Tender Fee/EMD:** Tender fee/EMD is to be obtained from the bidders except those who are registered with the Central Purchase Organisation, National Small Industries Corporation (NSIC) or the concerned Ministry or Department. The tenderer should submit Tender Fee/EMD amount as per tender ref. no. through NEFT/RTGS in INST Account. Account Details are as follows:
- Name of Beneficiary: Institute of Nano Science and Technology (INST)
  - Account No. **2452201001102**
  - Name of Bank: **Canara Bank, Sector 34, Chandigarh**
  - IFS Code: **CNRB0002452**
  - MICR Code: **160015003**
  - Swift Code: **CNRBINBBFFC**
- The details of transaction for Tender Fee/EMD viz. Name of bidder firm, Tender Description, Transaction ID/No. of Transfer, Transaction date, Amount of Transaction, Name of Bank, Address of Bank shall be furnished by the tenderer on their letterhead separately along with their tender.
9. **Refund of EMD:** The EMD will be returned to unsuccessful Tenderer only after the Tenders are finalized. In case of successful Tenderer, it will be retained till the successful and complete installation of the equipment.
10. **REASONABILITY OF PRICES :**  
Please quote best minimum prices applicable for a premier Research Institution, **leaving no scope for any further negotiations on prices.** **The quoting party should give a certificate to the effect that** the quoted prices are the minimum and they have not quoted the same item on lesser rates than those being offered to INST to any other customer nor they will do so till the validity of offer or execution of the purchase order, whichever is later. We request you to fill the price reasonability certificate format in the enclosed file (Annexure "1")
- The party must give details of identical or similar equipment, if any, supplied to any CSIR labs/DBT/DST Institutes during last three years along with the final price paid and Performance certificate from them.
11. **Performance Security:** The supplier shall require to submit the performance security in the form of irrevocable bank guarantee issued by any Indian Nationalized Bank for an amount which is equal to the 10% of Purchase Order value within 15 days after the final installation cum acceptance of the equipment at INST and Performance Security should be valid for a period of 60

days beyond the date of completion of warranty period of the equipment.

12. **Force Majeure:** The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
  - If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
13. **Risk Purchase Clause:** In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.
14. **Packing Instructions:** Each package will be marked on three sides with proper paint/indelible ink, the following:
- i. Item Nomenclature
  - ii. Order/Contract No.
  - iii. Country of Origin of Goods
  - iv. Supplier's Name and Address
  - v. Consignee details
  - vi. Packing list reference number
15. **Delivery and Documents:**  
 Delivery of the goods should be made within a maximum of 12 weeks from the date of placement of purchase order and the opening of LC. Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AAP etc. and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:
- i. 4 Copies of the Supplier invoice showing contract number, goods' description, quantity unit price, total amount;
  - ii. Acknowledgment of receipt of goods from the consignee(s) by the transporter;
  - iii. Insurance Certificate if applicable;
  - iv. Manufacturer's/Supplier's warranty certificate;
  - v. Inspection Certificate issued by the nominated inspection agency, if any, and the Supplier's factory inspection report; and
  - vi. Certificate of Origin.
  - vii. Two copies of the packing list identifying the contents of each package.
  - viii. The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.
16. **Delayed delivery:** If the delivery is not made within the due date for any reason, the institute will have the right to impose penalty 0.5% per week and the maximum deduction is 10% of the contract value / price.



17. **Prices:** The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of taxes & duties shall be clearly indicated. The price should be quoted without custom duty and excise duty, since INST is exempted from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand.  
In case of import supply the price should be quoted on FOB Basis. Also please indicate CIF charges separately upto New Delhi indicating the mode of shipment. INST will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
18. **Notices:** For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.
- i. **Purchaser:** The Director,  
Institute of Nano Science and Technology,  
Habitat Centre, Sector – 64, Phase X, Mohali – 160064.
- ii. **Supplier:** (To be filled in by the supplier)  
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.....  
.....
19. **Progress of Supply:** Wherever applicable, supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:
- Quantity offered for inspection and date;
  - Quantity accepted/rejected by inspecting agency and date;
  - Quantity dispatched/delivered to consignees and date;
  - Quantity where incidental services have been satisfactorily completed with date;
  - Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;
  - Date of completion of entire Contract including incidental services, if any; and
  - Date of receipt of entire payments under the Contract (In case of stage-wise inspection, details required may also be specified).
20. **Inspection and Tests:** Inspection and tests prior to shipment of Goods and at final acceptance are as follows:
- After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications attached to the purchase order. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser shall be present at the supplier's premises during such inspection and testing if need is felt. The location where the inspection is required to be conducted should be clearly indicated. The supplier shall inform the purchaser about the site preparation, if any, needed for installation of the goods at the purchaser's site at the time of submission of order acceptance.
  - The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation and ascertaining conformity with the ordered specifications and quality. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.

- In the event of the ordered item failing to pass the acceptance test, a period not exceeding one weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.
  - Successful conduct and conclusion of the acceptance test for the installed goods and equipments shall also be the responsibility and at the cost of the Supplier.
21. **Resolution of Disputes:** The dispute resolution mechanism to be applied pursuant shall be as follows:
- i. In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Executive Director, Institute of Nano Science and Technology (INST) Mohali and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
  - ii. In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
  - iii. The venue of the arbitration shall be the place from where the order is issued.
22. **Applicable Law:** The place of jurisdiction would be Mohali (Punjab) INDIA.
23. **Right to Use Defective Goods**  
 If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.
24. **Supplier Integrity**  
 The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of the art methods and economic principles and exercising all means available to achieve the performance specified in the contract.
25. **Training**  
 The Supplier is required to train the designated Purchaser's technical and end user personnel to enable them to effectively operate the total equipment.
26. **Installation & Demonstration**  
 The supplier is required to done the installation and demonstration of the equipment within one month of the arrival of materials at the INST site of installation, otherwise the penalty clause will be the same as per the supply of materials.
27. **Insurance:** For delivery of goods at the purchaser's premises, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance shall be valid for a period of not less than 3 months after installation and commissioning. ***In case of orders placed on FOB/FCA basis, the purchaser shall arrange Insurance.***



28. **Incidental services:** The incidental services also include:
- Furnishing of 01 set of detailed operations & maintenance manual.
  - Arranging the shifting/moving of the item to their location of final installation within INST premises at the cost of Supplier through their Indian representatives.
29. **Warranty:** 1. Warranty period shall be 12 months from date of installation of Goods at the INST site of installation. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests. **The warranty should be comprehensive on site.**

**Note: If a different period of warranty has been specified in the 'Technical Specifications of the equipment' then the period mentioned above shall stand modified to that extent.**

2. The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall immediately within in 02 days arrange to repair or replace the defective goods or parts thereof free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter. The period for correction of defects in the warranty period is 02 days. If the supplier having been notified fails to remedy the defects within 02 days, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expenses and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.
3. The maintenance charges (AMC) under different schemes after the expiry of the warranty should also be mentioned. The tender must be quoted with one year on-site comprehensive warranty/guarantee which will commence from the date of the satisfactory installation /commissioning of the equipment against the defect of any manufacturing, workmanship and poor quality of the components. After the warranty period is over, Annual Maintenance Contract (AMC)/Comprehensive Maintenance Contract (CMC) up to next two years should be started. The AMC/CMC charges will be mentioned separately in the tender.
30. **Delivery Schedule:** The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.
31. **Governing Language**  
The contract shall be written in English language. English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the same language.
32. **Applicable Law**  
The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction.
33. **Notices**
- Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX or e mail and confirmed in writing to the other party's address.



- A notice shall be effective when delivered or on the notice's effective date, whichever is later.
34. **Taxes and Duties**  
Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser. However, VAT in respect of the transaction between the Purchaser and the Supplier shall be payable extra, if so stipulated in the order.
35. **Agency Commission:** Agency commission if any will be paid to the Indian agent in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in case of Nil commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent.
36. **Payment:**
- a. Payment will be made through irrevocable Letter of Credit (LC). Letter of Credit (LC) will be established in the favour of foreign Supplier after the submission of performance security. The letter of credit (LC) will be established on the exchange rates as applicable on the date of establishment.
    - i. For Imports, LC will be opened for 100% FOB/CIF value. 80% of the LC amount shall be released on presentation of complete and clear shipping documents and 20% of the LC amount shall be released after the installation and demonstration of the equipment at the INST site of installation in faultless working condition for period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in Clause 9 of tender terms and conditions.
    - ii. Indian Agency commission (IAC), if any shall be paid after satisfactory installation & commissioning of the goods at the destination at the exchange rate prevailing on the date of negotiation of LC documents, subject to DGS&D registration for restricted items.
    - iii. All the bank charges within India will be borne by the Institute and outside India will be borne by the Supplier.
  - b. For Indigenous supplies, 100% payment shall be made by the Purchaser after delivery, inspection, successful installation, commissioning and acceptance of the equipment at INST in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 11 of tender terms and conditions. In case of indigenous supply the 100% payment will be made through bank transfer after receipt & installation of the equipment. The following bank details to be submitted along with tender:
    - Name of Beneficiary:
    - Account No.
    - Name of Bank:
    - IFS Code:
    - MICR Code:
    - Swift Code:
37. **User list:** Brochure detailing technical specifications and performance, list of industrial and educational establishments where the items enquired have been supplied must be provided.

38. **Manuals and Drawings**

- Before the goods and equipments are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals. These shall be in such details as will enable the Purchaser to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
- The Manuals shall be in the ruling language (English) in such form and numbers as stated in the contract.
- Unless and otherwise agreed, the goods equipment shall not be considered to be completed for the purposes of taking over until such manuals and drawing have been supplied to the Purchaser.

39. **Application Specialist:** The Tenderer should mention in the *Techno-Commercial bid* the availability and *names* of *Application Specialist* and *Service Engineers* in the nearest regional office.

40. **Terms of Delivery:** The item should be supplied to our destination in case of local supply. In case of import supply, the item should be shipped upto New Delhi Airport. The Installation/Commissioning should be completed as specified.

41. **Site Preparation:** The supplier shall inform to the Institute about the site preparation, if any, needed for the installation of equipment, immediately after the receipt of the purchase order. The supplier must provide complete details regarding space and all the other infrastructural requirements needed for the equipment, which the Institute should arrange before the arrival of the equipment to ensure its timely installation and smooth operation thereafter.

The supplier shall visit the Institute and see the site where the equipment is to be installed and may offer his advice and render assistance to the Institute in the preparation of the site and other pre-installation requirements.

42. **Installation:** The equipment or machinery has to be installed or commissioned by the successful bidder within 30 days from the date of receipt of the item at INST. In case of any mishappening/damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance company as per his convenience. INST will not be liable to any type of losses in any form.

43. **Spare Parts:** The Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- i. Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- ii. In the event of termination of production of the spare parts:
- iii. Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
- iv. Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods, such as gaskets, plugs, washers, belts etc. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.

44. **Defective Equipment:** If any of the equipment supplied by the Tenderer is found to be substandard, refurbished, unmerchantable or not in accordance with the description/specification or otherwise faulty, the committee will have the right to reject the equipment or its part. The prices of such





equipment shall be refunded by the Tenderer with 18% interest if such payments for such equipment have already been made. All damaged or unapproved goods shall be returned at suppliers cost and risk and the incidental expenses incurred thereon shall be recovered from the supplier. Defective part in equipment, if found before installation and/or during warranty period, shall be replaced within 45 days on receipt of the intimation from this office at the cost and risk of supplier including all other charges.

**45. Termination for Default**

The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:

- i. If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the order, or within any extension thereof granted by the Purchaser; or
  - ii. If the Supplier fails to perform any other obligation(s) under the Contract.
  - iii. If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- For the purpose of this Clause:
    - i. “**Corrupt practice**” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
    - ii. “**Fraudulent practice**” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition;”
  - In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.
46. **Shifting:** After 3-4 years once our new building is ready, the supplier has to shift and reinstall the instrument free of cost.
47. **Downtime:** During the warranty period not more than 5% downtime will be permissible. For every day exceeding permissible downtime, penalty of 1/365 of the 5% FOB value will be imposed. Downtime will be counted from the date and time of the filing of complaint with in the business hours.
48. **Training of Personnel:** The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the Institute premises, immediately after completing the installation of the equipment for a minimum period of one week at the supplier’s cost.
49. **Disputes and Jurisdiction:** Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within Mohali.
50. **Compliance certificate:** This certificate must be provided indicating conformity to the technical specifications.
51. **Acknowledgement:** It is hereby acknowledged that we have gone through all the conditions mentioned above and we agree to abide by them.

SIGNATURE OF TENDERER  
ALONG WITH SEAL OF THE COMPANY WITH DATE



## BID PARTICULARS

1. Name of the Supplier :
2. Address of the Supplier :
3. Availability of demonstration of equipment : Yes / No
4. Tender cost enclosed: : Yes/No if yes
5. Online Tender Fee/EMD submission information enclosed : Yes / No if Yes  
Transaction ID/No. of Transfer\_\_\_\_\_
- Transaction date: \_\_\_\_\_
- Amount of Transaction\_\_\_\_\_
- Name of Bank\_\_\_\_\_
- Address of Bank\_\_\_\_\_
6. Name and address of the Officer/contact person to whom all references shall be made regarding this tender enquiry  
Name:  
Address:  
Ph:  
Fax:  
Mobile:  
Email:  
Web:

## **Compliance statement for the tender specifications**

Tender Ref No.: **INST/12(79)/2017-Pur**

<b>S.No.</b>	<b>Check list of documents/Undertakings</b>	<b>Yes/No</b>	<b>Remarks (give explanation if the answer is No)</b>
1.	Is EMD details attached? (if applicable)		
2.	Is the bidder original equipment manufacturer (OEM)/authorised dealer?		
3.	If authorised dealer, recent dated certificate to this effect from OEM, attached or not?		
4.	Undertaking from OEM regarding technical support & extended warranty period		
5.	Validity of 180 days or not?		
6.	Price Reasonability Certificate enclosed as per format??		
7.	Undertaking from bidder regarding acceptance of tender terms & conditions		
8.	Whether list of reputed users (along with telephone numbers of contact persons) for the past three years specific to the instrument attached?		
9.	Does the instrument comply with all the specifications detailed? Attach a separate sheet showing compliance with the specifications and explanations thereto if the equipment varies from the requested specifications.		
10.	Whether free Installation, Commissioning and Application Training offered?		
11.	Whether comprehensive onsite warranty offered?		
12.	Whether Annual maintenance after expiry of comprehensive onsite warranty quoted separately?		
13.	Whether free of cost shifting of instrument from transit campus to main campus offered?		



## **Annexure – 1**

### **PRICE REASONABILITY CERTIFICATE (to be submitted in financial bid envelope)**

This is to certify that we have offered the maximum possible discount to you in our Quotation No. \_\_\_\_\_ dated \_\_\_\_\_ for (Value Rs.) \_\_\_\_\_.

We would like to certify that the quoted price are the minimum and we have not quoted the same item on lesser rates than those being offered to INST to any other customer nor we will do so till the validity of offer or execution of purchase order, whichever is later.

Seal and Signature of the tenderer

**TECHNICAL SPECIFICATION FOR MULTI-PURPOSE ADSORPTION MEASUREMENT INSTRUMENT WITH PHYSISORPTION**

	Parameter	Specifications
<b>1.</b>	<b>PHYSISORPTION</b>	
a)	<b>Surface Area</b>	The unit should have the capability of carrying out physisorption of various gases and should have features to measure the adsorption/desorption isotherms, surface area (langmuir, BET), pore size, pore volume and micro pore distribution. It should have at least THREE sample measurement stations. The system should be capable of measuring surface area in the range of 0.01 m <sup>2</sup> /g to no known upper limit (nitrogen ) and 0.0005 m <sup>2</sup> /g to no known upper limit (krypton)
b)	<b>Pore Diameter</b>	The system should be capable of measuring pore diameter in the range of 3.5-5000 Å and micropore volume detectable within the range of 0.0001 cc/g or lesser.
c)	<b>Analysis Station</b>	The system should have minimum THREE or more analysis station with TWO station Micropore facility.
d)	<b>Dewar Flask</b>	The system should be supplied with a <b>80 + hour dewar</b> , for ultra-long measurements without any need to invoke error producing refills.
e)	<b>Coolant Level Control</b>	<b>The system should have an automatic, motor-driven cryogenic coolant level controller to minimize the cold free space, i.e. base of lowest portion of sample cell for enhanced sensitivity or equivalent.</b>
f)	<b>Po Station</b>	The system reference pressure Po station should be served by its own dedicated 1000 torr transducer to constantly monitor saturation pressure without interrupting pressure readings at the sample station. The pressure transducer should have an accuracy of 0.1%FS
g)	<b>Adsorbates</b>	The system should be designed to use gases like, CH <sub>4</sub> , N <sub>2</sub> , CO <sub>2</sub> , H <sub>2</sub> , CO, NH <sub>3</sub> and other gases are preferable. The quoted systems should have at least Five gas inlet ports or more.
h)	<b>Vapor adsorption</b>	The system manifold should be temperature monitored and designed with corrosive resistant material and should have option to do vapor adsorption <b>at least at TWO ports or more.</b>
i)	<b>Pressure Transducers</b>	The system should be equipped with pressure transducers in different ranges at least for TWO analysis station like 1000 mmHg, 10 mm Hg and 0.1 mmHg. The system should enable full range adsorption measurement, including micropore measurement. The pressure transducers should have high resolution and accuracy with high stability. The offer should provide the resolution and accuracy data of these transducers. It should have dedicated Po transducer.
j)	<b>Analysis Capability</b>	The system should have facility for, <b>Isotherms:</b> Up to 1000 data points (per station), adsorption and/or desorption. Hysteresis scanning. <b>Surface Area:</b> BET, Langmuir, STSA, DFT, BJH <b>Micropores:</b> NLDFT, QSDFT, Monte-Carlo, t-plot, alpha-s method, MP method, DR & DA methods.

		<b>Mesopores:</b> NLDTF, BJH, DH also it should have total pore volume and average pore size. Automatic BET point selector for microporous materials.
k)	<b>Degassing facility</b>	<b>Built in FOUR</b> or more vacuum degassing stations, each consisting of sample port, heating mantle with over-temperature protection, PC programmable ramp / hold / test protocols. Degassing ports should be served by the <b>dry turbo vacuum system (with 90,000 RPM), and a dedicated cold trap.</b> Temperature range ambient to 400° C. Temperature accuracy $\pm 1\%$ of set point at thermocouple. The ultimate degas vacuum should be $10^{-8}$ mm Hg or better.
l)	<b>Cryocooler</b>	System should be supplied with cryocooler for measurement of the physisorption isotherms in the range 20k to 320k without the need of cryogen.
m)	<b>Other facility</b>	The system should have features for automated real time free space measurement. Certified reference standards to be supplied for making adsorption studies. System should be supplied with Recirculating dewar kit for CO <sub>2</sub> adsorption studies at different temperatures.
n)	<b>Cryogenic temperature control accessory</b>	It should be designed to provide precise temperature control (as low as $\pm 0.005$ K) at temperatures in the range 82-100 K. It should do IUPAC-Recommended pore size analyses using argon gas at liquid argon temperature (87 K ), while employing the more readily available liquid nitrogen (at 77 K) as the cryogen.
2	<b>CHEMISORPTION</b>	
a)	<b>Analysis Station</b>	The system should have onsite upgrade facility for performing chemisorption measurements. Supplier should provide evidence of the onsite upgrade.
3.		
a)	<b>Facility</b>	System should have facility for onsite upgrade for the TCD-TPD/TPR-TPO. Supplier should provide evidence of the onsite upgrade.
b)	<b>PC interface, Data analysis and software features</b>	The system should be controlled through windows based software. Calibration routines to be controlled by the software. Features for creation of methods for measuring the adsorption/desorption isotherms. The software should have built in features for automatic start up and shut down procedures, real time display of the sample analysis progress. The software should have all the data handling features like user defined report generation, data/figures export to spreadsheets, offline data processing etc.
d)	<b>Standards</b>	Suitable performance evaluation standard for Surface Area should be included in the offer.
e)	<b>Gas Cylinders and Regulators</b>	Gas cylinders must be 99.999% Ultra High Purity with two stage gas regulators. Nitrogen, Helium, Hydrogen, CO <sub>2</sub> and Argon should be quoted.
f)	<b>LIQUID NITROGEN</b>	25 Liters or more of Liquid Nitrogen container should be quoted.

g)	<b>COMPUTER</b>	Latest Computer with minimum i3 processor, Windows 10, with 1TB HDD or more and minimum 4 GB RAM, monitor size above 29 inches and DVD writer should be supplied
h)	<b>Install Base</b>	<b>Supplier must have supplied and installed 10 similar systems or more in last 3 years to any of the leading institutions in India such as IISc/IIT/IISER/CSIR/DRDO/DAE etc provide the list of users with customer name.</b>
i)	<b>Warranty</b>	The quoted should be under warranty for minimum of 36 months from date of Installation
j)	<b>Annual Maintenance Contract (AMC)</b>	Apart from warranty, AMC amount should be quoted for 2 years after the warranty period
k)	<b>Service Support</b>	Vendor should provide service engineer's details. Company should provide the on-site service within 7 day's time after the intimation from the users.
l)	<b>Reinstallation requirements</b>	The instrument should be reinstalled at free-of-cost when the researchers will move to the permanent INST new campus.