



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) 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.

INSTRUMENTS LIST

S. No.	Ref. No.	Instrument	Qty	Tender Submission Date and Time	Tender Opening Date and Time	Tender Fee (Non-refundable)	EMD
1	INST/equip/2016-17/M-01	High performance computing cluster with Accessories	01 No	01/12/2016 upto 2.00PM	01/12/2016 at 3.00PM	Rs. 500/-	Rs 90,000/-
2	INST/equip/2016-17/M-02	Gel Permeation Chromatography System with Accessories	01 No	01/12/2016 upto 2.00PM	01/12/2016 at 3.00PM	Rs. 500/-	Rs 70,000/-
3	INST/equip/2016-17/M-03	Molecular Interaction Measurement System with Accessories	01 No	01/12/2016 upto 2.00PM	01/12/2016 at 3.00PM	Rs. 500/-	Rs 1,50,000/-
4	INST/equip/2016-17/M-04	Time Resolved Fluorescence Spectrometer with Accessories	01 No	01/12/2016 upto 2.00PM	01/12/2016 at 3.00PM	Rs. 500/-	Rs 80,000/-

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

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.

4. **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:**
 - (i) 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.
 - (ii) 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.
 - (iii) OEM should be internationally reputed Branded Company.
 - (iv) 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. **EMD:** The tenderer should submit an EMD amount along with the tender by way of Demand Draft/BG/Banker's Pay Order drawn in favour of "The Director, Institute of Nano Science and Technology, Mohali" and payable at Chandigarh/Mohali from any nationalized bank valid for six months. The Technical Bid without EMD would be considered as UNRESPONSIVE and will not be accepted. The EMD will be returned without any interest to the unsuccessful bidders immediately after the award of contract.
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 Committee will have the right to impose penalty 1% 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:
- i. Quantity offered for inspection and date;
 - ii. Quantity accepted/rejected by inspecting agency and date;
 - iii. Quantity dispatched/delivered to consignees and date;
 - iv. Quantity where incidental services have been satisfactorily completed with date;
 - v. Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;
 - vi. Date of completion of entire Contract including incidental services, if any; and
 - vii. 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:** 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.
- For Indigenous supplies, 100% payment shall be made by the Purchaser against 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 9 of tender terms and conditions.
 - 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.
 - 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.
 - All the bank charges within India will be borne by the Institute and outside India will be borne by the Supplier.
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 within 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. D.D. No. _____ Bank _____ Amount _____
6. EMD enclosed : Yes / No if Yes
7. D.D. No. _____ Bank _____
8. 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.: _____

S.No.	Check list of documents/Undertakings	Yes/No	Remarks (give explanation if the answer is No)
1.	Is EMD 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.	Undertaking from bidder regarding acceptance of tender terms & conditions		
7.	Whether list of reputed users (along with telephone numbers of contact persons) for the past three years specific to the instrument attached?		
8.	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.		
9.	Whether free Installation, Commissioning and Application Training offered?		
10.	Whether comprehensive onsite warranty offered?		
11.	Whether Annual maintenance after expiry of comprehensive onsite warranty quoted separately?		
12.	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 OF HIGH PERFORMANCE COMPUTING CLUSTER

Turnkey Solution for High Performance Compute (HPC) Cluster Rack server based (non-blade) high performance compute cluster is required by INST to run applications (such as VASP, CPMD, SIESTA, QUANTUM ESPRESSO, GAUSSIAN, ORCA, MOLCAS, NWCHEM, BLAST, AMBER, NAMD etc.) in the areas of computational chemistry, condensed matter physics, biophysics, nano science and molecular simulations. A detailed specification for HPC cluster is given below.

1	Technical Specifications		Qty -1 Unit
Master Node	Processor(s)	2 x Intel® Xeon processors (E5-2630 V4) with at least 10-Core, 2.2GHz, 25M Cache (Broadwell)	
	RAM	128GB DDR4-2133 ECC RDIMM (Max 1.5TB, at least 24 DIMMs)	
	RAID	SAS 12Gbps RAID controller with 1GB cache, supports RAID 0, 1, 10, 5 & 6	
	HDD(s)	2 x 4000GB, 7.2K RPM Enterprise SATA hot-plug HDDs At least 12 Hot Swap Hard Drive bays	
	NIC	2 x Gigabit(10/100/1000Mbps) Ethernet ports on-board	
	Interconnect	Hi Speed (100Gbps) Single Port Interconnect, with cable of suitable length	
	Graphics	On-board graphics using Server Grade Graphics Controller	
	Management	On-board IPMI 2.0 with dedicated LAN and KVM over LAN support with required license	
	Free Slot(s)	At least 4 PCI-E 3.0 x8 expansion slots or higher	
	Ports	1 Serial, 2 USB, 2 x Network, 1 x Management, 1 x Interconnect(40Gbps), 1 x Video	
	Chassis	1U/2U rack-mountable or better with sliding rails	
	OS	Open Source Enterprise Linux Operating System, Linux(RHEL/SUSE) Certified System	
	P. Supply	1+1 Redundant, hot-plug power supplies (80PLUS Certified)	
	Peripherals	18.5" TFT Color Monitor, Keyboard & Optical Mouse	

2	Technical Specifications		Qty - 10 Units
Compute Node Type A	Processor(s)	2 x Intel® Xeon processors (E5-2650 V4) with at least 12-Core, 2.2GHz, 30M Cache (Broadwell)	
	RAM	128GB DDR4-2133 ECC RDIMM (Max 512GB, 8 DIMMs)	
	HDD(s)	1 x 1000GB, 7200 RPM, Enterprise SATA HDD (at least 2 HDDs)	
	NIC	2 x Gigabit(10/100/1000Mbps) Ethernet ports on-board	
	Interconnect	Hi Speed (100Gbps) Single Port Interconnect, with cable of suitable length	
	Graphics	On-board graphics using Server Grade Graphics Controller	
	Management	On-board IPMI 2.0 with dedicated LAN and KVM over LAN support with required license	
	Exp Slot(s)	at least 1 x PCI-Express x8 (low-profile or higher) slot	
	Ports	2 USB, 2 x Network, 1 x Management, 1 x Interconnect(100Gbps), 1 x Video	
	Chassis	1U/2U or better rack-mountable with sliding rails	
	P. Supply	redundant, hot-plug power supplies (80PLUS Certified)	

3	Technical Specifications		Qty - 1 Unit
Storage	Capacity	HPC Cluster should be supplied with capacity of minimum 40TB configured	
		under RAID 6 (8+2) with double disk failure protection	
	Disk Type	Disk Drives can be either SAS 7200 RPM or SAS 10k RPM based. Storage can be	
		Mounted/reside either on master node or thru a dedicated storage system with minimum	
		12Gbps based connectivity thru SAS Host Bus Adapter	
	Accessories	All required accessories including cables for connectivity must be quoted	
	Redundancy	Fully redundant Hot Plug Power supply and fans for the storage	

4	Technical Specifications		Qty: 1
Interconnection		Hi Speed Interconnect Switch based on 100Gbps Connectivity (Non Blocking)	
	Ports	At least 24 x (100Gbps) Hi Speed Interconnect ports	
	Cables	Interconnect switch must be supplied with required cables of sufficient length	
	Accessories	Required accessories must also be supplied with the switch	

5	Technical Specifications		Qty: 1
Secondary Communication & Management	24 Port Gigabit Ethernet Switch for Secondary Communication and Management		

6	Technical Specifications		Qty: 1
42U Rack	42U server rack, with required number of PDUs, cable managers, keyboard tray		
	and all other required accessories		

7			
Training	Installation & Training (1-day 8-hr for up to a batch of 5 persons) by Certified Professionals		

8	Components include
Software & Installation	<p>OS : Enterprise Linux</p> <p>Job Schedulers :</p> <p>Multiple queue system</p> <ul style="list-style-type: none"> o GUI based Job monitoring and management o GUI based reporting, o Workload cum resource manager with policy-aware, resource-aware and topology-aware scheduling o Advance reservation support o Support of job submission through CLI, Web-services and APIs o Heterogeneous cluster support o Multi-cluster support o Preemptive and backfill scheduling support o Application integration support o Live reconfiguration capability o SLA/Equivalent o GPU Aware scheduling o Intuitive web interface to submit and monitor jobs <p>MPI : OpenMPI, MVAPICH</p> <p>Libraries : Open Source Libraries for C, C++ & FORTRAN, MPI, MKL, Blas 1,2,3, Lapack, Scalapack etc.</p> <p>Intel compiler & libraries</p> <p>Cluster Management :The cluster management stack with a GUI based cluster monitoring for all the cluster nodes. Cluster monitoring and management software with the following features</p> <ul style="list-style-type: none"> o Cluster manager with provisioning, monitoring and reporting capabilities o Support Package and Image based provisioning o Support Disk and diskless cluster deployment o Intuitive web interface to manage and customize the cluster o Customizing networks and compute node profiles through GUI o Customizing compute nodes to max, upto changing kernel parameter <p>Able to Push configuration changes and updates to the compute nodes without reinstalling and rebooting</p> <ul style="list-style-type: none"> o Provided authorised copy of the following softwares have to be installed in parallel environment and tested appropriately. VASP, CPMD, SIESTA, QUANTUM ESPRESSO, GAUSSIAN, ORCA, MOLCAS, NWCHEM, BLAST, AMBER, NAMD

Tender Qualification Criteria:

1. Bidder must have experience in the HPC domain. Must have installed at least three similar core or larger clusters in last 3 years. Reference Purchase order to be shared.
2. Bidder must submit MAF/Authorization Certificate from the Server, Storage and Hi Speed Interconnect Switch OEMs
3. Head & compute nodes and storage must be from same OEM.
4. Any commercial software used in HPC solution must have perpetual license with support for minimum three years.
5. Server , storage OEMs must have at least 1 previous HPC installations in India during



- last five years. PO copies to be shared.
6. Bidder must have a office with HPC expert engineers located in India and be capable to provide next business day after-sale on-site (INST, Mohali) support and 24x7 telephonic/remort support by their expert team. This claim should be supportant by producing necessary documents.
 7. Theoretical peak performance, power consumption and cooling requirements of the HPC solution must be mentioned. Bidders must also quote for optional item. The peak performances of the cluster have to be tested and reported to INST and it should not deviate more than 20% of the theoretical peak performance of the HPC.
 8. Bidder should be an OEM/authorized partner/service provider of the OEM. The bidder needs to submit (i). an authorization from a signing authority of OEM for participating in this tendering process, supply and maintenance of equipment/goods, (ii). a certificate that equipment/goods being offered as per bill of material are not end of line or service, with full support of warranty of goods for at least five years. This authorization must also mention the tender number/reference.
 9. OEM or bidder or system integrator must clearly state their responsibility for system integration, support and maintenance of HPC solution on their letterhead. Firm responsible for support and maintenance of HPC solution should have a team of technical experts in place with an experience of at least five years in the area of high performance computing. Documentary proof is required in this regard.
 10. The proposal HPC solution has to be complete in all respects, self-contained and address all the requirements comprehensively, as stated in this document. If any information sought in this document is missing or not clearly specified by the bidders, it will be assumed that the bidder is not in a position to supply the information. It is at the discretion of INST to ask for clarifications or further information, if required.
 11. The warranty period for HPC shall be minimum for 36 months and it should cover replacement of the damaged product including hardware and software. The aforementioned on- and off-site supports should be provided for the entire warranty period. There should be further provision for two years AMC after the warranty period.



TECHNICAL SPECIFICATION OF GEL PERMEATION CHROMATOGRAPHY SYSTEM

POLYMER CHARACTERIZATION EQUIPMENT

A Gel Permeation Chromatography System for rapid & reliable characterization of relative molecular weight & molecular weight distributions for macromolecules ranging from natural to synthetic polymers using advanced chromatographic detectors. The Gel Permeation Chromatography system should consist of a **Solvent & Sample Delivery system** along with **multiple Set of Detectors, columns & calibration standards and Softwares** to deliver unparalleled robustness & performance for various polymer applications ranging from Molecular Weight measurements using Conventional Calibrations, Molecular Weight Distributions & Co-polymer Analysis. The Detailed specifications of the desired Gel Permeation Chromatography System are listed below:

Power Requirement:

230 V \pm 5%, 50 Hz

Solvent & Sample Delivery system:

It should consist of **Pump, Degasser, Auto-Sampler and Column Oven** of the following specifications.

Pump Specifications:

1. Gradient Flow System: Isocratic
2. Flow Rate Range: 0.1 to 9.9 mL/min
3. Pulsation: Less Than 1%
4. Pump to be compatible with any solvent

Degasser Specifications:

1. Two Channel or more along with the system

Auto-Sampler Specifications:

1. Capacity: Provision for 80 vials (standard 1.5 ml) or more.
2. Injection Volume Range: 20 to 100 μ l
3. Reproducibility: Better Than 0.5%
4. Carryover: Less than 0.1%

Column Oven:

1. A column oven should be quoted to provide a temperature control range of ambient to 50 degree Celsius or more.
2. The column oven should accommodate the columns as well as all the multiple-detectors which have been asked below.
3. The column oven should be able to accommodate atleast 4 numbers of 300 mm columns or more.

Detection System Specifications:

The Gel Permeation Chromatography System should preferably have a multiple detection system which offers precise & accurate temperature control by housing all the detectors & the chromatographic columns together in the same thermal chamber, to maintain minimum inter-detector volumes & to reduce band broadening effects to provide unmatched baseline stability & data reproducibility. The



detailed specifications of the various detectors required to meet the applications are mentioned below:

RI Detector Specifications:

1. Light Source Wavelength: 670 ± 10 nm LED
2. Cell: Volume 12 ul or less & quartz glass
3. Measuring Principle: Deflection
4. Temperature Range: Ambient to 50 Degree Celsius or more
5. Baseline Noise: 0.5μ RIU or less

UV-vis Detector Specifications:

1. Wavelength Range: 190 to 500 nm
2. Light Source: Deuterium Lamp
3. Cell Volume: 12 ul or less
4. Temperature Range: Ambient to 50 Degree Celsius or more
5. Noise: less than 2.5×10^{-5} AU at 254 nm
6. Drift: less than 4.0×10^{-4} AU/h at 254 nm
7. Linearity: 2 ± 0.5 AU

Light Scattering Detector Specifications:

1. The light scattering detector to measure the absolute molecular weight should be equipped with Right Angle Light Scattering Detector (RALS) or better (In terms of number of angles of measurement)
2. The laser wavelength of the Light Scattering detector should be 670 ± 10 nm.
3. Temperature Range: Ambient to 50 Degree Celsius or more

Columns & Standards:

1. Atleast 6 sets of 12 different Molecular Weight standards ranging from low to mid & high molecular weights for the conventional calibration must be quoted along with the instrument.
2. Atleast 6 sets of 12 different Molecular Weights Standards to calibrate the RALS detector must be quoted along with the system.
3. Atleast 2 Nos. of General Mixed Org 300 mm x 7.8 ± 0.3 mm alongwith a guard column GPC columns must be quoted along with the instrument.

Software Features:

1. An original licensed version of the software should be quoted.
2. The quoted software should be able to perform Conventional Calibration & Triple Detection/Light scattering calibrations.
3. The software should be able to perform the following calculations: M_n , M_w , M_z , M_p , M_w/M_n using conventional & Triple Detection/Light Scattering Calibration methods.
4. The software for compositional analysis of Co-Polymers using the RI & UV Detector must be quoted as an option along with the instrument for the copolymer analysis as and when required. The software should be able to collect the RI and UV signals at 100 Hz and processes them together to establish the RI/UV ratio across the chromatographic peaks. This should allow calculation of the % composition of two components in the sample with respect to the molecular weight – example, styrene/butadiene.



OPTIONAL ITEMS

1. Various Organic & Aqueous columns with different molecular weight ranges, along with the guard columns must be quoted as an option along with the bid.

The instrument should be upgradeable with a Viscosity Detector anytime in the future to get the Intrinsic Viscosity values & branching information about the samples. The Viscometer detector should have the following minimum specifications:

1. Measuring Principle: Inert, 4 capillary differential Wheatstone bridge arrangement
2. Bridge Volume: 100 ul or less
3. Temperature Range: Ambient to 50 Degree Celsius
4. Flow Rate: 1-3 mL/min solvent specific

Warranty & Annual Maintenance Charges

1. The equipment must be quoted with a complete comprehensive warranty of 1 year. Additional 2 year comprehensive warranty should be clearly quoted separately. The warranty must include all the electronics & spare parts & consumables that may be required for the trouble free operation of the instrument.
2. Annual Maintenance Charges/Comprehensive Maintenance Charges for another 2 years after the expiry of warranty of the equipment must be quoted in the bid.
3. Dedicated Training for two scientists at INST, Mohali for 1 week on the Advanced Gel Permeation Chromatography system, at our campus must be clearly quoted separately along with the instrument.
4. Relocation to the new campus of the Institute should be free of cost.
5. All the features claimed by the manufacturers should be available in the technical product brochure. The same needs to be highlighted in the submitted technical brochure.

TECHNICAL SPECIFICATION OF MOLECULAR INTERACTION MEASUREMENT SYSTEM

The specifications of Real time analysis of Macromolecular Affinity Determination and Binding Kinetics

1. The system should be based on label free bio-sensing without the requirement of any fluorescent tags or labelling of compounds or proteins.
2. The system should be a plug and play system without the need of any additional setup time for running the experiment.
3. The system should provide high quality, real time kinetic data for bio-molecular reactions
4. The system should be capable of accommodating samples ranging from small organic molecules to peptides, proteins, antibodies and DNA to crude extracts, lipid vesicles, viruses and intact cells.
5. The system should especially be capable of handling of samples for best handling of crude and unfiltered sample and solvents like crude cell extracts, organic reaction mixtures, and human body fluids such as serum, urine etc.
6. The system should have an injection free simple mode of ligand macromolecule interaction (e.g. Dip and read based methodology) so that the washing and equilibration require minimum amount of time and consumables. In the specifications
 - a) Volumes of washing required and
 - b) Time for equilibration should be clearly mentioned.
7. The system should be able to do sample measurement in 96 well plate format with provision for shaking and the option of doing at least two or more independent samples in parallel with simultaneous online monitoring.
8. The system should be able to study the complete kinetic profile of any macromolecular interaction without the need for regeneration of the sensors.
9. The system should be able to study interaction in the affinity range of 10 pM to 1 mM or better.
10. The data analysis should come with the following features:
 - a) Kinetic analysis (k_{obs} , k_a , k_d)
 - b) Affinity analysis (K_D),
 - c) Fast concentration monitoring and automated concentration determinations.
11. The data presentation should be in the form of **a)** plots displaying kinetic binding, equation fits and residuals of fits **b)** tabulated kinetic data.
12. The system should combine high sensitive to interaction studies with small molecule interactions down to a molecular weight as low as 200 Da or better and also with large macromolecules.
13. The system should be able to perform in a wide range of pH range 2-9 or better.
14. The system should be able to perform in the temperature range of 4°C to 37°C or better
15. The biosensors should be modifiable to cater specific requirements. Modification chemistry including but not restricted to amine coupling, His tag, biotin binding, anti-GST, anti-FLAG, gold DNA etc. must be available.
16. There should be options of regenerating the biosensors both online and offline.

Software

17. Appropriate software should be provided for comprehensive evaluation of data analysis.
18. The system should include the processing unit, a PC driven system controller with a dedicated software package, and supporting consumables and reagents.



19. Any upgrades or bug fixing to the software will be provided for no cost up to five years from date of installation.

Additional Processing Computer

20. The vendor should provide an additional state-of-art desktop computer (latest configuration) with software for post-acquisition analysis.

21. Essential tool kits for routine operations should be provided.

Consumables

22. The bidder should quote for the cost of 200 biosensors of the following type:

- a. Protein interactions
- b. Nucleic acid interactions
- c. Carbohydrate interactions
- d. Liposome interactions
- e. Whole cell interaction
- f. Virus interaction
- g. Small molecules such as drugs, pesticides, short peptides etc.

23. Quotation should also include consumables for functionalizing and/or cleaning biosensors

24. Quotation should also include calibration standards

Warranty

25. Comprehensive on-site warranty for three years including:

26. All parts and labor.

27. Free maintenance and service

Optional

Extended comprehensive on-site warranty for additional two years

TECHNICAL SPECIFICATION OF TIME RESOLVED FLUORESCENCE SPECTROMETER WITH ACCESSORIES

S. No.	Description	Technical Specification
1.	Optical configuration	Right angle geometry (standard)
2.	Operation mode	Time Correlated Single Photon Counting (TCSPC) based, Modular, Computer controlled spectrometer
3.	Lifetime range	50 ps - 50 μ s or better resolution with suitable source and detector
4.	Spectral Band Pass	0nm – 40nm (computer controlled) or better
5.	Light Source	Light source should be Pulsed LED and Picosecond pulsed Diode laser <ul style="list-style-type: none"> • Picosecond pulsed Diode laser sources with the wavelengths of 375 nm ,405 nm • Pulsed LED with the wavelengths of 260nm, 280 nm
6.	Temporal dispersion	Double Subtractive Monochromator or equivalent that can provide Zero or negligible temporal dispersion in the optical path for precise measurements in the lower picosecond time scale stray light rejection $<1 \times 10^{-4}$ or better
7.	Laser Beam Attenuation	10^4 or higher with continuously adjustable (computer controlled)
8.	Detectors	High speed PMT (spectral coverage 250 – 640 nm or better)
9.	Instrument Response Function (IRF)	< 300 ps with picoseconds pulsed diode lasers or < 1 ns with pulsed LEDs
10.	Measurement modes	<ul style="list-style-type: none"> • Fluorescence Decay Acquisition for both liquid and solid samples • Time Resolved Fluorescence Spectra (TRES) • Time-Resolved Anisotropy Measurements (with optional polarisers) • Automated Temperature Maps (with optional cryostat or Peltier cooled sample holder).
9.	Data Analysis Modes	<ul style="list-style-type: none"> • 4-exponential fit with background, shift, reconvolution (or deconvolution) based on propriety algorithm • Multi-exponential fluorescence anisotropy fits (tail fits only).
11.	Software	Software should be user friendly, original licensed Software package for data acquisition and lifetime data analysis compatible with Windows 7.0 or higher version. Software can be used for spectrometer control, performance monitoring, fluorescence lifetime data acquisition, anisotropy with G-Factor correction, temperature control and data analysis particularly 1 to 4 exponential decay, global, non-exponential, micelle kinetics, life time distribution, FRET calculator. Data analysis software must have full re-convolution analysis, fitting route for determination of multiple decay times, Chi-square test for goodness of fit, export data in ASCII format.
12.	Accessories	<ul style="list-style-type: none"> • Sample chamber should be compatible for single cuvette holders (liquid samples) and solid samples (powder/ film) holders (front surface); Standard 10 mm Cuvettes (normal and micro volumes). • thermostated sample holders.
13.	PC, Printer	Branded desktop PC (HP/Compaq/IBM or equivalent) with following configurations: Processor Core – i5-3470 or higher (3.4GB), RAM - 4GB DDR3, HDD - 1 TB, Disks - R/W DVD, OS - Windows 7 or higher (whichever is compatible), Input Devices - Keyboard & Mouse, 6 USB ports <ul style="list-style-type: none"> • (Minimum), Display - 21" or larger Screen, Graphics - NVIDIA 1GB/512MB Dedicated Graphics (Optional),

		Warranty - 3 Years Onsite which may be extendable to 2 more years
14.	Optional accessories	<ul style="list-style-type: none"> • MCP PMT can be added at the field for sub picoseconds measurement (<25 ps). • Liquid N2 cryostat should be addable in the future. • NIR PMT can be added to reach NIR region (up 1400 nm). • Both excitation and emission polarizer (computer controlled) for anisotropy measurement.