



सी.एस.आई.आर.–हिमालय जैवसंपदा प्रौद्योगिकी संस्थान
CSIR-INSTITUTE OF HIMALAYAN BIORESOURCE TECHNOLOGY
(Council of Scientific & Industrial Research)
Post Box No.6, Palampur-176 061 (HIMACHAL PRADESH)

Tender No.	4/5(252)18-Pur	Date:	13/12/2018
-------------------	-----------------------	--------------	-------------------

To

NOTICE INVITING TENDER THROUGH E-PROCUREMENT

Director, CSIR-IHBT, invites Online Bids for procurement of following item (s):-

Sl. No.	Description of item	Quantity	EMD Amount (Rs. in lakhs)	Type of Bid
1.	Supply and Installation of High Resolution Biological Atomic Force Microscope	One Unit	3.40 lakhs	Two Bid
	(Details as per Tender Document & Specifications attached)			

CRITICAL DATE SHEET

Tender No.	4/5(252)18-Pur
Publishing Date & Time	13/12/2018 at 01.00 PM
Document Download/Sale Start Date & Time	13/12/2018 at 01.00 PM
Pre-Bid Meeting Date and Time	26/12/2018 at 11.00AM
Bid Submission Start Date and Time	28/12/2018 at 03.00 PM
Bid Submission End Date and Time	08/01/2019 at 03.00 PM
Date and Time for Opening of Bids	09/01/2019 at 03.00 PM
Address for Communication	The Director CSIR-Institute of Himalayan Bioresource Technology, Post Box No.6, PALAMPUR (Himachal Pradesh) INDIA Email:- cosp@ihbt.res.in , spo@ihbt.res.in Phone: 01894-230425

TENTATIVE TIME SCHEDULE OF PROCUREMENT PLANNING

Sl. No.	Stage	Tentative Time Frame
1.	Date of Bid Opening	XX (09/01/2019)
2.	Date of Completion of Bid Evaluation	XX + 30
3.	Date of communication of Rejection of Bids	XX + 43
4.	Date of Receipt of context, if any, from Bidders	XX + 50
5.	Opening of Financial Bid	XX + 60
5.	Notification of Award	XX + 70

(TERMS & CONDITIONS INCLUDING INSTRUCTION TO BIDDERS AND CONDITIONS)

1. **GENERAL:** Online bids are invited on behalf of the Director, CSIR- Institute of Himalayan Bioresource Technology, Palampur from reputed Indian and foreign manufacturers. **The offer/ quotation must be strictly as per required specifications and the tender terms & conditions. One Indian Agent can participate in a tender on behalf of one manufacturer. The offer(s) will not be entertained if the same Indian Agent is representing more than one foreign principal manufacturer.**

2. **SUBMISSION OF OFFERS: (Two Bid)**
 - a. Online quotation should be submitted directly by the original manufacturer/supplier or its sole authorized distributor/dealer.
 - b. All the documents of the bids should be addressed to the Director, CSIR-Institute of Himalayan Bioresource Technology, Palampur and upload against the relevant tender through url <http://etenders.gov.in>
 - c. Each offer/quotation should be uploaded in relevant section against each item of the tender notice.
 - d. **The offer/quotation should be uploaded in one/two/three/four covers as requested in the Tender Notice. The four cover depict EMD fee details, Pre-Qualifications, Techno-commercial bid and Price Bid.**
 - e. **The Firms are also required to upload copies as detailed in Pre-qualification criteria. Moreover, if any document required is not applicable to you, please upload blank document marking it as “NOT APPLICABLE”.**
 - f. **In case firms upload wrong document in wrong envelope, it would be considered for further evaluation at the risk & responsibility of the bidder.**
 - g. **The Techno-commercial offers must contain the Technical Leaflets/literature and complete specifications of the quoted model(s) of the item along with general commercial terms & conditions, compliance statement of specifications & Compliance statement of tender terms & conditions and the required amount of EMD, if applicable.**
 - h. **Kindly mention the source from where NIT was made available to you i.e. IHBT website, IHBT letter or specify if any other source.**
 - i. **Bidders must upload duly signed and stamped tender acceptance letter on their letterhead as per Annexure I in the Pre-Qualification Section.**

3. **DUE & OPENING DATES:** The Offer/Quotations must be uploaded and bids must freeze on or before the dates and time mentioned in the Critical Date and Time section of the NIT. The first cover shall be decrypted as per the Date and Time mentioned in the same section. Bidders can see the decryption status online through their login. In case opening date happens to be a holiday, the tender will be opened on next working day at the same time.

The price bids of two bid tender system shall be opened after technical evaluation of technical bids. The date of opening of price bids shall be informed to the bidders found suitable in technical evaluation (For details, please refer cover of enquiry).

4. **EARNEST MONEY DEPOSIT (EMD):** EMD amount as stipulated, in the form of Bank guarantee or Term Deposit Receipt/FDR or **RTGS/NEFT (detail of account attached also please note that while doing RTGS/NEFT in remarks mention the EMD for tender No. Also attach documentary evidence which include UTR No.)** pledge in the name of Director, CSIR-Institute of Himalayan Bioresource Technology Palampur, H.P. valid for 225 days from the date of opening of the tender for the required amount as mentioned in the tender notice separate for each item must be submitted along with the quotation (with the techno-commercial quotation in case of two-bid system) and photocopy of the same enclosed with price bid, otherwise quotation may not be considered. The firms registered with DGS&D, NSIC, Govt. Public Undertakings, Start-ups registered with DIPP (GOI) with valid certificate or MSME's with valid Udyog Aadhar No., SSI registered with NSIC, Central Autonomous Bodies and with the CSIR Labs./Instt, if any, as manufacturer for the supply of the same category of item for which the party is submitting quotation will be exempted from submission of EMD. Exempted parties will have to give proof of registration along with their quotation. EMD of the unsuccessful bidders shall be refunded at the earliest but latest within 15 days after finalization of the purchase of concerned item. The party must

therefore, submit a pre-receipted Bill in triplicate along with the quotation (in case of EMD sent in for m of Bank Draft, to enable us to refund their EMD. In case a bidder intimates at the time of tender opening in writing that the bid security is kept inside the financial bid, in case of Two-bid system, then in such cases, the technical bid, of the party may be accepted provisionally till opening of the financial bids with which the party has attached the bid security. (For detail please refer cover of enquiry). Please note that EMD in any other format other than above will not be considered and bid will be rejected.

The Original of FDR/TDR/BG must reach this Institute before the closing date of the bidding. In case the EMD has been submitted through NEFT/RTGS, the same must be credited to our account before the closing date of the bidding.

5. **PRICES :**

- a) **For Imported supplies:** The prices shall be quoted in FOB value up to International Gate way Airport of the shipping country/CIF New Delhi. The prices should include all the charges up to the Board /Air Cargo. **If ex-works prices are quoted then packing, forwarding, documentation, and inland freight charges must be mentioned separately.** The airfreight & insurance shall be arranged and charges paid directly by us in Indian Rupee at our end. However, these charges should also **be mentioned separately** for our estimation purposes.
- b) **For indigenous supplies:** For indigenous/local supplies, the prices should be FOR at CSIR-Institute of Himalayan Bioresource Technology, Palampur inclusive of packing, forwarding, installation and commissioning charges etc. **If ex-works/go-down prices are quoted then packing, forwarding, documentation, freight and insurance charges must be specifically mentioned separately.** We are eligible for payment of concessional custom duty under **Notification Number 51/96 dated 23.07.1996. Hence, Customs Duty, if any, should be shown separately.** GST/other Govt. levies will be paid at actual and the prevailing rate of GST and other tax etc., if any, may be mentioned separately. We are eligible for IGST exemption as per **Notification No.47/2017-Ingerated Tax (Rate) dated 14.11.2017.** **No other charges than those mentioned clearly in the quotation will be paid.**
- c) In case of confusion in the figures and words of the quoted prices, the amount in words shall be treated final.
- d) **Validity of Price/Period of Validity of Bids**
 1. Bid shall remain valid at least for a period of **90 days for indigenous supplies** and **180 days for import** from the date of opening of Tender prescribed by the Purchaser. A bid valid for a shorter period may be rejected by the Purchase as non-responsive.
 2. In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of period of validity. The request and the responses thereto shall be made in writing(or by cable, telex, fax or email. The bid security provided under Clause 12 shall be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A bidder granting the request will not be required nor permitted to modify its bid.
 3. Bid evaluation will be based on the bid prices without taking into consideration of the above corrections.
- e) **Modification and Withdrawal of bids**
 1. The Bidder may modify or withdraw its bid after the bid's submission; provided that written notice of the modification or withdraw is received by the Purchaser prior to the deadline prescribed for submission bids.
 2. The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provision of Clause 15. A withdrawal notice may also be sent by telex or cable or fax or e-mail but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.
 3. No bid may be modified subsequent to the deadline for submission of bids.
 4. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the bid from. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to Clause 12.7.
 5. The Vague terms like "packing, forwarding, transportation.....etc. extra" without mentioning the specific amount/percentage of these charges will not be accepted. Such offers shall be treated as incomplete and rejected.

f) **Nil Charge: If a firm quoted NIL charges/consideration, the bid shall be treated as unresponsive and will not be considered.**

6. REASONABILITY OF PRICES :

- a) Please quote best minimum prices applicable for a premiere Research Institution, **leaving no scope for any further negotiations on prices.**
- b) **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 IHBT to any other customer nor they will do so till the validity of offer or execution of the purchase order, whichever is later.
- c) Copies of **at least last two-supply orders** received from other customers or details of last two supplies made to other customers preferably in India for the same item/model **may be submitted with the offer** giving reasons of price difference of their supply order & those quoted to us, if any.
- d) The party must give details of identical or similar equipment, if any, supplied to any CSIR lab during last three years along with the final price paid and Performance certificate from them.
- e) **Purchaser's Right to Accept Any Bid to Reject Any or All Bids:** The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder of bidders of the grounds of the Purchaser's action.
- f) **Notification of Award:** Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter of by cable or telex or fax or e-mail that the bid has been accepted by way of a Purchase Order.

7. ANNUAL MAINTENANCE CHARGES: The party should mention in the quotation, the rate/amount of annual maintenance charges, if we opt for maintenance contract after expiry of the warranty period.

8. A. Inspection and Tests:

1. The Purchaser or its representative shall inspect and/or test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. SCC and the Technical Specifications shall specify what inspections and test the Purchaser requires and where they are to be conducted; The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.
2. The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s) at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data – shall be furnished to the Inspectors at no charge to the Purchaser.
3. Should any inspected or tested Goods fail to conform to the specification, the Purchaser may reject the Goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirement free of cost to the Purchaser.
4. The Purchaser's right to inspect, test and where necessary, reject the Goods after the Goods arrival at the Project site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
5. Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

8 B. Incidental Services:

1. The Supplier may be required to provide any or all the following services, including additional services, specified in SCC, if any
 - (i) Performance or supervision of the on-site assembly and/or start-up of the supplied Goods.
 - (ii) Furnishing of tools required for assembly and/or maintenance of the supplied Goods;
 - (iii) Furnishing of detailed operations and maintenance manual for each appropriate unit of the supplied Goods.
 - (iv) Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract, and
 - (v) Training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation

8 C. Spare Parts:

1. As specified in the SCC, the Supplier may be required to provide any or all 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 requirement; and
 - (iv) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.
2. Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare for the Goods, such as gaskets, plugs, washers, belts etc. Other spare parts and components shall be supplied as promptly as soon as possible but in any case within six months of placement of order.

9. SPECIFICATIONS:

Specifications are basic essence of the product. It must be ensured that the offers must be strictly as per our specifications. At the same time it must be kept in mind that merely copying our specifications in the quotation shall not make the parties eligible for consideration of the quotation. A quotation has to be supported with the printed technical leaflet/literature of the quoted model of the item by the quoting party/manufacturer and the specifications mentioned in the quotation must be reflected/supported by the printed technical leaflet/literature. Therefore the model quoted invariably be highlighted in the leaflet/literature enclosed with the quotation. Non-compliance of the above shall be treated as incomplete/ambiguous and the offer can be ignored without giving an opportunity for clarification/negotiation etc. to the quoting party.

9A. Amendment to Bid Document

1. At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bid Document by amendment. Such amendments shall an integral part of bid documents and it shall amount to an amendment of relevant clauses of the Bid Document.
2. All prospective bidders who have received this bid will be notified if the amendment in writing or by cable or by fax, or by e-mail and will be binding on them.
3. The prospective bidders are required to keep a watch on the IHBT website w.r.t. any amendment to the tender document or to clarification to the queries raised by the bidder till 07 (seven) days prior to the opening of tender. The Purchaser reserves the right to reject the bids if the bids are submitted without taking into account these amendments/clarifications. In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Purchaser, as its discretion, may extend the deadline for the submission of bids.

10. COMPLIANCE STATEMENTS:

- a. **Bidders must furnish a Compliance Statement of each and every required Specification of our tender in the format given below.** The deviations, if any, from the tendered specifications should be clearly brought out in the statement. Technical literature/leaflet showing the compliance of the specification may also be attached with the quotation.
- b. Similarly, **the Compliance Statement/questionnaire for Terms & Conditions of the tender may be furnished, as per the enclosed format,** along with quotation (with techno- commercial bid in case of two bid tender system).
- c. **The firms are advised to submit both the compliance statements essentially along with their quotation failing which their offer may not be considered.**

FORMAT OF COMPLIANCE STATEMENT OF SPECIFICATIONS

S. N.	Name of specifications/ part / Accessories of	Specifications of quoted Model/Item	Compliance Whether "YES" Or	Deviation, if any, to be indicated in unambiguous terms	Whether the compliance / deviation is clearly
-------	---	-------------------------------------	-----------------------------	---	---

	tender enquiry		“NO”		mentioned in technical leaflet/ literature
1	2	3	4	5	6

11. PERIOD & MODE OF DELIVERY: The delivery period is the essence of supply, hence it must be indicated specifically in the quotation. Mode of delivery, tentative size and weight of consignment may also be indicated in the quotation.

12. PERFORMANCE BANK GAURANTEE: All the successful bidders will have to submit the Performance Bank Guarantee or establish a Standby Letter of Credit (SLOC) for the required amount as per payment terms mentioned at clause 13 below except where supplier opts for release of amount equivalent to PBG after expiry of warranty period. The PBG format shall be provided to the successful bidder later on along with the Purchase Order.

13. PAYMENT CONDITION:

A. FOR INDIGENEOUS SUPPLIES:

Payment on Bill Basis after supply: For local supplies the payment will be made only after satisfactory installation, commissioning and performance of the equipment at Institute of Himalayan Bioresource Technology, Palampur and after certification by our technical expert/scientist. However supplier will require either to submit Performance Bank Guarantee for 10% amount of the total value of equipment, after installation of the material, valid up to 60 days after the expiry of warranty period or the equivalent amount shall be released after expiry of the satisfactory warranty period.

B. FOR IMPORTS:

The payment against imports shall be made through irrevocable LC. L/C will be opened for 100% FOB value. **90%** of LC amount shall be released on presentation of complete and clear shipping documents and remaining payment i.e **10%** shall be released after installation, demonstration, commissioning, subject to submission of PBG of equivalent amount to cover the warranty period. The PBG should be remain valid upto 60 days after the expiry of warranty period. In case of non-submission of PBG after installation, demonstration, commissioning, remaining payment i.e.10% will be released only after the completion of warranty period.

14. COMMENCEMENT OF WARRANTY PERIOD : The warranty period of an item shall commence from the date of receipt of the item in good working condition and satisfactory installation/commissioning/demonstration at the project site in Institute of Himalayan Bioresource Technology, Palampur. The warranty period and validity of warrantee shall be extended for the period of delay in satisfactory installation and delay in warranty services.

15. NO ADVANCE PAYMENT : No advance payment will be made to any supplier.

16. INSTALLATION: The equipment should be installed/commissioned and demonstrated, by the supplier at the lab immediately but in any case within one months after receipt of the item in the lab and the same will be put under operation to the satisfaction of our technical expert/Scientist who will test the performance of the equipment. No separate charges for installation etc. will be paid to the party beyond the quoted prices.

17. **GUARANTEE:** The equipment/instrument must be guaranteed/warranted for a period of at least one year, if not specifically mentioned otherwise in the specifications sheet, from the date of its satisfactory installation/commissioning against all manufacturing defects. If the equipment is found defective during this period the whole equipment or part thereof will have to be replaced/repared by the supplier free of cost at the lab. or at site of the supplier for which 'to and fro' expenses will be borne by the supplier. However, if the items are guaranteed for a period of more than one year, it may be specifically mentioned in the quotation.
18. **SPARE PARTS:** Availability of spare parts of the equipment/instrument must be guaranteed for a period of at least five years from the date of supply.
19. **AFTER SALES SERVICES:** It should be clearly mentioned in the quotation whether the after sales services during and after the completion of warranty shall be provided directly by the supplier or their authorized agent/representative. Terms of the after sales services, if any, may be mentioned in the offer. However, in both the cases the original supplier shall be responsible for poor performance/services.
20. **INSPECTION :**
- a) The inspection of the system will be done by our technical expert /Scientist in the presence of firm's representative.
 - b) In case of receipt of the material in short supply or damaged condition the supplier will have to arrange the supplies/ replacement of goods free of cost pending the settlement of the insurance case wherever applicable on FOR at the lab. or CIF basis till satisfactory installation of the system.
 - c) The supplier **should arrange for physical inspection of the items directly or through their authorized representative within seven days of arrival of the consignment failing which they will be responsible for the losses.** After the shipment is effected, the supplier/its representative/Indian agents must remain in touch with the Lab/Instt. to ascertain the date of arrival of consignment.
21. **AUTHORIZATION OF INDIAN AGENTS & INDIAN REPRESENTATIVE:**
- a) In case there is involvement of an /Indian agent/representative in any form as mentioned at (b) below, an authority letter and copy of agreement from the principal manufacturer must be submitted with the quotation.
 - b) Where quoting party/Indian representative claims to be the subsidiary or branch office or an authorized representative of the principal foreign manufacturer/supplier in India, then a copy of approval from RBI/Ministry for operating business in India as Subsidiary/Branch/Liaison office or Joint-Venture may be submitted with offer.
 - c) The details of all supplies involving the foreign exchange shall be furnished to the Enforcement Directorate, New Delhi as per rule. It may be noted that only the quoting parties & their principals shall be responsible for violation of Foreign Exchange Management Act (FEMA) for not declaring the actual bilateral mutual interests, if any.
 - d) Indian agency commission shall be paid only to the Indian Agents in Indian Rupee out of the quoted FOB/Ex-works prices, after receipt of goods in good working condition & satisfactory installation/demonstration/commissioning of the items.
 - e) **Enclose a certified copy of the agency agreement between the principal and the agent.**
 - f) **Foreign bidders to disclose the name and address of agent and representative in India and Indian bidder to disclose their foreign principal or associates.**
22. **USERS LIST :**
- (a) The list of users specifically for the same model/make of the quoted item (not the list of general users) along with the complete name, address & contact numbers of the user organizations/persons may be submitted with the quotation along with the performance certificates from all/some of them.
 - (b) **If you have supplied identical or similar equipment to other CSIR Labs./Instts., the details of such supplies for the preceding three years shall be given together with the prices finally paid.**

23. PENALTY CLAUSE FOR LATE DELIVERY & LATE INSTALLATION:

- a) **Subject to operation of Force Majeure, time for delivery and acceptance is the essence of this contract. The supplier shall arrange to ship the ordered materials within the delivery period mentioned in the order unless extended with/without penalty.**
- b) In case of delay in supply on part of the supplier, a penalty @ 0.5% per week subject to maximum of 10% of Order/FOB value will be charged for delayed period.
- c) If the delay in the shipment of the ordered materials attributable to the supplier exceeds agreed time period from the date of original agreed upon date of shipment and extended with/without penalty, the Institute of Himalayan Bioresource Technology, Palampur shall have the right to cancel the contract/purchase order and recover the liquidated damages from other dues of the party or by legal means. It will also affect the other/future business dealings with such suppliers.
- d) **The same rate of penalty shall be applicable for late installation of the equipment/instrument also.**

24. TRAINING: Wherever needed, Our Scientist/Technical persons should be trained by the supplier at the project site free of cost. In case the person is to be trained at supplier's site abroad or in India it should be mentioned in the quotation clearly. The supplier should bear all the expenses for such training including 'to & fro' fares and lodging & boarding charges.

25. VALIDITY OF OFFER : The prices must be valid at least for a period of **90 days for indigenous supplies & 180 days for imports** from the date of opening of the Tender. No changes in prices will be acceptable in any condition after opening of tender till the validity of the offer or execution of the order whichever is later.

26. NON-SUBMISSION OF TENDER: In case you are unable to submit your quotation against our tender enquiry we would appreciate and expect a note of regret from your side giving in brief, reason for not quoting.

27. DELETION OF NAME: Names of bidders, backing-out/defaulting after opening of tenders will be recommended for deletion from the list of suppliers in addition to forfeiture of EMD submitted by them, if any.

28. LATE/ DELAYED /UNSOLICITED QUOTATION: Late or delayed/Unsolicited quotations/offers shall not be considered at all. These will be returned to the firms as it is. Post tender revisions/corrections shall also not be considered.

29. ACCEPTANCE OR REJECTION OF OFFER: The Director, CSIR-Institute of Himalayan Bioresource Technology, Palampur reserves the right to accept or reject any quotation /tender in part or full without assigning any reason thereof.

30. PAGE NUMBERING & SIGNATURES: Your offer should be a page numbered and signed by an authorized signatory giving his/her name and designation below the signatures.

31. INTERIM ENQUIRIES: No interim inquiries will be attended.

32. FORCE MAJEURE: The Supplier shall not be liable for forfeiture of its performance bank guarantee, liquidated damages or termination for default, if and to the extent that, its 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.

33. DISPUTE SETTLEMENT: All disputes arising out of this contract shall be referred to the sole arbitration of the Director General of Council of Scientific & Industrial Research (CSIR) and Secretary, Department of Scientific & Industrial Research (DSIR) Govt. of India or his nominee, who is overall controlling authority of this laboratory as per the provisions of Indian Arbitration and Reconciliation Act 1996 and his award shall be final and binding on the parties to the dispute. The venue of arbitration shall be **PALAMPUR, HP (INDIA)**.

34. EVALUATION OF BIDS:

- I. In case of two bid system, the technical bid will be evaluated first. In case a bidder is found to be techno commercially unresponsive, the same shall be intimated to the party giving a suitable time for any representation. If the representation is found unsustainable as per the other terms and conditions and the CSIR rules in this regards, the party will be finally rejected and the unopened financial bid will be returned.
- II. After price evaluation if two or more bidders quote comes out to be L1 then snap bid will be called from all such bidders and this will continue till single bidder is evaluated as L1.

35. Pre-Qualification Criteria: Documents/Papers to be submitted in relevant section (In the absence of these, tender cannot be considered):

<i>S.No.</i>	<i>Documents required</i>
1.	<i>Copy of PAN card in the name of firm/proprietor</i>
2.	<i>Copy of GST No. of the firm/proprietor</i>
3.	<i>Copy of balance sheet duly certified by the Chartered Accountant for minimum firm's turnover for the last two years</i>
4.	<i>Copy of Income Tax Return for two years</i>
5.	<i>Last two year satisfactory services being provided by the firm 2015-16 & 2016-17 in a government sector/private sector (Evidenced by copy of order)</i>
6.	<i>Copy of RTGS/Bank details as per attached format</i>
7.	<i>Manufacturer's Authorization Form, if applicable</i>
8.	<i>The bidder must be registered company as per the Companies Act 1956/2013, Necessary certificate shall be attached. The authorized business partner must submit letter of endorsement from the OEM, if applicable.</i>
9.	<i>Consortiums are not allowed to participate in the bidding.</i>
10.	<i>The bidder should not have been banned/suspended for any reasons by any Government Institute/PSU in last 3 years. A self-certified letter.</i>
11.	<i>Certified copy of Agency agreement between the principal and the agent or 100% whole Subsidiary, if applicable.</i>
12.	<i>Copy of Start-Ups registered with DIPP(GoI) with valid certificate or MSME's with valid Udyog Aadhar No. or SSI registered with NISC, if applicable.</i>
13.	<i>Foreign bidders to disclose the name and address of agent and representative in India and Indian bidder to disclose their foreign principal or associates.</i>

36. The purchase under this Tender shall be governed by Govt. of India Procurement Policies issued from time to time.

CONTROLLER OF STORES & PURCHASE

PRICE SCHEDULE FOR GOODS BEING OFFERED FROM ABROAD

Name of the Bidder _____
 No. _____

Tender

1	2	3	4	5	6		7		8		9
Sl No	Item Description	Country of origin	Unit	Qty	Unit Price		Total price (5x6)		Charges for Insurance & transportation to port/ place of destination		Total Price (7+8)
					FOB (named port of shipment)	FCA (named place of delivery)	FOB (named port of shipment)	FCA (named place of delivery)	Ocean	Air	CIF

Total Bid price in foreign Currency _____
 in words.

Signature of Bidder

Name:

Business Address:

Note:

- (a) Indian agents name & address _____
- (b) Installation, commissioning & training charges, if any _____
- (c) Cost of Spares _____
- (d) The Indian agent's commission shall be paid in Indian Rupees only based on the Exchange Rate prevailing on the date of negotiation of documents.
- (e) The cost of optional items shall be indicated separately.

PRICE SCHEDULE FOR GOODS BEING OFFERED FROM INDIA

Name of the Bidder _____

Tender

No. _____

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	Item Description	Country of Origin	Unit	Qty	Ex-Works. Ex-Warehouse, Ex-show room off the shelf price (inclusive of all taxes already paid)	Total price Ex-Works. Ex-Warehouse, Ex-show room off the shelf price (inclusive of all taxes already paid) 5x6	VAT & other taxes like excise duty payable, if contract is awarded	Packing & forwarding up to station of dispatch, if any	Charges of inland transportation, insurance up to Lab./Instt.	Installation, Commissioning & training charges, If any.

Total Bid price in foreign Currency _____
in words.

Signature of Bidder

Name:

Business Address:

Note:

- (a) The cost of optional items shall be indicated separately.
- (b) Cost of spares _____

LIST OF ANNEXURES

Annexure 1	Instruction to bidder
Annexure 2	Bid Security Form
Annexure 3	Technical Compliance statement
Annexure 4	IHBT bank detail for RTGS/NEFT
Annexure 5	Manufacturer Authorisation form
Annexure 6	Performance Statement
Annexure 7	Tender acceptance letter
Annexure 8	FORMAT/QUESTIONNAIR FOR COMPLIANCE OF TERMS & CONDITIONS

INSTRUCTIONS FOR ONLINE BID SUBMISSION

1. The tender form/bidder documents may be downloaded from the web site; <https://etenders.gov.in/e procure/app>
2. Bids must be mandatorily submitted Online through Central Public Procurement Portal - <https://etenders.gov.in/e procure/app>
3. **Manual/Offline bids shall not be accepted under any circumstances.**
4. Tenderers/bidders are requested to regularly visit the website: <https://etenders.gov.in/e procure/app>. Any changes/modifications in tender enquiry will be intimated by corrigendum through this website only.
5. In case, the day of bid opening is declared a holiday by the government, the tenders will be opened on the next working day at the same time. No separate intimation shall be sent to the bidders in this regard.
6. The Director reserves the right to accept or reject any or all the tenders.
7. The interested firms are required to deposit (in original) an Earnest Money of ₹_____ (₹_____ only) with Tender in the shape of TDR/FDR pledged in the name of Director, Institute of Himalayan Bioresource Technology, Palampur (HP) or NEFT/RTGS (detail of account attached at Annexure IV. Also please note that while doing RTGS/NEFT in remarks mention the EMD for tender no. and also attach documentary evidence which include UTR No.). In addition to the above, the EMD can also be submitted in the form of unconditional BG (Format for BG has been given at Annexure II).
8. The EMD must be valid for a period of 45 days beyond the bid validity period.
9. The original of FDR/TDR/BG must reach this Institute before the closing date of the bidding. In case the EMD has been submitted through NEFT/RTGS, the same must be credited to our account before the closing date of the bidding.
10. The firms registered with DGS&D, NSIC, Govt. Public Undertakings, Start-Ups registered with DIPP (GoI) with valid certificate or MSME'S with valid Udyog Aadhar No., SSI registered with NSIC, Central Autonomous Bodies and with the CSIR Labs. / Instts, if any, as manufacturer for the supply of the same category of item for which the party is submitting quotation will be exempted from submission of EMD. Exempted parties will have to give proof of registration along with their quotation. EMD of the unsuccessful bidders shall be refunded at the earliest but latest within 15 days after finalization of the purchase of concerned item. The party must therefore, submit signed pre-receipted TR-61 form as per annexure XI along with the quotation (in case of EMD submitted in form of RTGS/NEFT, to enable us to refund their EMD).
11. The Firms are also required to upload copies as detailed in Pre-qualification criteria. Moreover, if any document required is not applicable to you please upload a blank document marking it as "NOT APPLICABLE".
12. If a bidder wants to upload any other document or any document which have been asked into the tender document and no space has been provided anywhere could be upload under other Important document (OID)
13. The bidder is requested to prepare Bill of Material without price and other commercial conditions which is to be uploaded with the technical bid.
14. While preparing the price bid in downloaded xls format please note the following: -
 - A. Do not change the name of file otherwise it will not upload.
 - B. Fill only open filed.
15. In case the Price bid format (BOQ) not been specifically provided in tender document the format as per tender document shall prevail. Also if any mismatch between BOQ and price bid format as per tender document the BOQ shall prevail.

16. **Pre-Qualification Criteria:** Documents/Papers to be submitted in relevant section (In the absence of these, tender cannot be considered):

<i>S.No.</i>	<i>Documents required</i>
1.	<i>Copy of PAN card in the name of firm/proprietor</i>
2.	<i>Copy of GST No. of the firm/proprietor</i>
3.	<i>Copy of balance sheet duly certified by the Chartered Accountant for minimum firm's turnover for the last two years</i>
4.	<i>Copy of Income Tax Return for two years</i>
5.	<i>Last two year satisfactory services being provided by the firm 2015-16 & 2016-17 in a government sector/private sector (Evidenced by copy of order)</i>
6.	<i>Copy of RTGS/Bank details as per attached format</i>
7.	<i>Manufacturer's Authorization Form, if applicable</i>
8.	<i>The bidder must be registered company as per the Companies Act 1956/2013, Necessary certificate shall be attached. The authorized business partner must submit letter of endorsement from the OEM, if applicable.</i>
9.	<i>Consortiums are not allowed to participate in the bidding.</i>
10.	<i>The bidder should not have been banned/suspended for any reasons by any Government Institute/PSU in last 3 years. A self-certified letter.</i>
11.	<i>Certified copy of Agency agreement between the principal and the agent or 100% whole Subsidiary, if applicable.</i>
12.	<i>Copy of Start-Ups registered with DIPP(GoI) with valid certificate or MSME's with valid Udyog Adhar No. or SSI registered with NISC, if applicable.</i>
13.	<i>Foreign bidders to disclose the name and address of agent and representative in India and Indian bidder to disclose their foreign principal or associates.</i>

CONTROLLER OF STORES & PURCHASE

BID SECURITY FORM

Whereas (Hereinafter called “the tenderer”) has submitted their offer datedfor the supply of (Hereinafter called “the tender”) against the purchaser’s tender enquiry No. _____

KNOW ALL MEN by these presents that WE (Name of bank) of (Name of country), having our registered office at (Address of bank) (Hereinafter called the “Bank”), are bound unto ... (Name of purchaser) (Hereinafter called “the purchaser”) in the sum of for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this day of..... 20.....

THE CONDITIONS OF THESE OBLIGATIONS ARE:

- 1. If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- 2. If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity.
- 3. If the tenderer fails to furnish the Performance Security for the due Performance of the contract.
- 4. Fails or refuses to accept/execute the contract.

WE undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchase will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

The guarantee shall remain in force up to and including forty five (45) days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

.....
(Signature of the authorized officer of the Bank)

Name and Designation of the Officer
Seal, Name & Address of the Bank and address of the branch

FORMAT OF COMPLIANCE STATEMENT OF SPECIFICATIONS

S. N.	Name of specifications/ part / Accessories of tender enquiry	Specifications of quoted Model/Item	Compliance Whether “YES” Or “NO”	Deviation, if any, to be indicated in unambiguous terms	Whether the compliance / deviation is clearly mentioned in technical leaflet/ literature
1	2	3	4	5	6

Account Details for payment of EMD vide RTGS/NEFT

1. DETAILS OF ACCOUNT HOLDER:-

NAME OF ACCOUNT	DIRECTOR CSIR-IHBT, PALAMPUR
COMPLETE CONTACT ADDRESS	CSIR –IHBT, POST BOX NO.6 PALAMPUR, KANGRA (H.P.) 176061
TELEPHONE NUMBER/FAX/EMAIL	01894-230411, 91-1894-230433, 230428 director@ihbt.res.in.

2. BANK ACCOUNT DETAILS:-

BANK NAME	STATE BANK OF INDIA
BRANCH NAME WITH COMPLETE ADDRESS	STATE BANK OF INDIA,HPAU BRANCH PALAMPUR DISSTT KANGRA (H.P.)- 176061
TELEPHONE NUMBER AND EMAIL	01894 230319
WHETHER THE BRANCH IS COMPUTERRISED	YES
WHETHER THE BRANCH IS RTGS ENABLES? IF YES, THEN WHAT IS THE BRANCH'S IFSC CODE	SBIN0003632
IS THE BRANCH ALSO NEFT ENABLED?	YES
TYPE OF BANK ACCOUNT (SB/CURRENT/CASH CREDIT)	SAVING ACCOUNT
COMPLETE BANK ACCOUNT NUMBER (LATEST)	30268795419
MICR CODE OF BANK	176002063

MANUFACTURER'S AUTHORIZATION FORM

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that re binding on the Manufacturer]

Date: *[Insert date (as Day, month and year) of Bid submission]*

Tender No.: *[Insert number from Invitation for Bids]*

To: *[Insert complete name and address of Purchaser]*

WHEREAS

We *[insert completer name of Manufacturer]*, who are official manufacturers of *[Insert type of goods manufactured]* having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following goods, manufactured by us *[insert name and or brief description of the goods]*, and to subsequently negotiate and sign the contract.

We hereby extend our full guarantee and warranty in accordance with **Clause 19** of the Terms and Conditions of Contract with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____ *[insert date of signing]*

PERFORMANCE STATEMENT FORM

(For a period of last 3 years)

Name of the Firm _____

Order placed by { Full address of Purchaser }	Order No. and Date	Description and quantity of ordered equipment	Value of order	Date of completion of delivery as per contract	Date of actual completion of delivery	Remarks indicating reasons for late delivery, if any and justification for price difference of their supply order & those quoted to us.	Has the equipment been installed satisfactorily? <i>(Attach a certificate from the Purchaser/ Consigner)</i>	Contact Person along with Telephone no., Fax no. and e-mail address.

Signature and Seal of the Manufacturer/ bidder

Place:

Date:

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of
Tender/Work: _____

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:
_____ as per
your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organisation too has also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.
6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

FORMAT/QUESTIONNAIR FOR COMPLIANCE OF TERMS & CONDITIONS

Tender No. _____

Due Date: _____

NOTE:

1. Quotation will not be considered without submission of this format.
2. If a particular question is not at all applicable please write NA in compliance part in Col. No. 4 below.
3. Kindly see the relevant terms & conditions of the tender document as mentioned in Col. No. 3 in each question before replying to the questions mentioned in Col. 2 below).

SN	Terms & condition of Tender document	Relevant Clause No. of the tender terms & conditions of the tender	Whether acceptable (say 'Yes' or 'No' (preferably use different colour ink for 'No')	Deviation from tender terms, if any, with reasons for noncompliance or alternative condition quoted for
1	2	3	4	5
1	a.) Whether quotation is direct from Principal supplier/manufacturer or their own office in India (Please specify)	Clause 2(a)		
	b) Whether quotation is being submitted by Indian Agent? Please enclose the copy of agency agreement.	Clause 2(a)		
2	a) Whether the Techno-commercial and price bids (for two bid tender system only) have been uploaded in relevant section(s) duly marked with "Techno-commercial Bid" and "Price Bids" respectively.	Clause 2(e)		
3	Whether techno-commercial Bid contains EMD, technical literature/ leaflets, detailed specifications & commercial terms & conditions.	Clause 2(f)		
4	(a) Whether the required EMD is being submitted with the quotation.	Clause 4		
	(b) Please specify the form of EMD whether in the form of Ban Guarantee or TDR/FDR or RTGS/NEFT (Please mention No. Date and amount of EMD documents).			
	(c) Pre-receipted bill for refund of EMD is enclosed (for bank drafts only)			
5	a) If the prices are on FOR up to lab basis or FOB gateway airport basis, pl. specify	Clause 5(a), (b)		
	b) Whether specific amounts or percentage of expenses like packing, forwarding, handling, freight, insurance, documentation etc. have been mentioned in quotation separately in clear terms.	Clause 5 (a & b)		
6	a) Whether prevailing rates of GST, & other govt. levies (for indigenous supplies) have been given in quotation	Clause 5 (b) .		
7	a) Whether the Price reasonability Certificate is submitted with quotation	Clause 6(b)		
	b) Whether copies of last two supply orders of the same item from other customers have been attached with the quotation	Clause 6(c)		
	c) If there is any difference in prices of last two orders & those quoted to us. If yes, please give reasons for the same			
	d) Whether supplied in CSIR Labs.	Clause 6 (d)		
8	Whether rates/amount of AMC after the warranty period is over has been mentioned	Clause 7		
9	Have you gone through the specification Clause & complied with the same	Clause 9		
10	Whether the Make/Brand, Model number and name of manufacturer has been mentioned in the quotation and Printed technical literature/ leaflets of quoted items have been submitted	Clause 9		
11	Whether compliance statement of specifications has been attached with the quotation.	Clause 10		

12	a) Whether the delivery period for supply of the items has been mentioned	Clause 11		
	b) Whether mode of delivery & tentative size & weight of the consignment has also been indicated	Clause 11		
13	Do you agree to the submission of Performance Bank Guarantee/Standby LC and have you mentioned in your quotation about this	Clause 12		
14	a) Do you agree with the payment terms for indigenous supplies	Clause 13 A		
	b) Do you agree with the payment terms for import supplies?	Clause 13 B		
15	Do you agree about the date of commencement of warranty period & its extension is necessary.	Clause 14		
16	a) Who will install/commission and demonstrate the equipment at lab. FREE OF COST	Clause 16		
	b) Will you be able to do it within a month	Clause 16		
17	Have you mentioned the warranty period in your quotation and do you agree with guarantee clause?	Clause 17		
18	Spare parts	Clause 8(c) & 18		
19	After Sales service	Clause 19		
20	a) Do you agree that on receipt of material in damaged condition or short supply you will replace the same on CIF basis, free of cost pending the settlement of the insurance claim?	Clause 20(b)		
	b) Do you agree with the clause of physical inspection?	Clause 20 (c)		
21	For Import Cases only: a) Whether the Indian agent is registered with DGS&D	Clause 21		
	b) If the party is a subsidiary or corporate branch office of the foreign supplier, then whether copy of approval from Reserve Bank India is attached with the offer.	Clause 21 (b)		
22	Whether list of specific user's for the same item & model as quoted along-with performance certificates from the users is submitted with offer	Clause 22		
23	Whether you agree to the penalty clause for late delivery & installation?	Clause 23 (a to d)		
24	Whether training to our scientist/technical person will be given free of cost . If yes, have you specified in quotation whether it will be in our lab? Or at supplier's site in India or abroad.	Clause 24		
25	Have you mentioned the validity period of the quotation as per our requirements	Clause 25		
26	a) Whether all the pages have been page numbered?	Clause 30		
	b) Whether the tender No. have been written one each uploaded page.			
	c) Whether quotation has been signed and designation & name of signatory mentioned.			
27	Do you agree to settle the issue through the sole arbitration of the DG, CSIR or his nominee?	Clause 33		

Signatures of the authorized signatory _____

Name of the signatory _____

Designation _____

Name & Seal of the quoting party _____ Dated: _____

Detailed Technical Specification

Specifications for High Resolution Biological Atomic Force Microscope (Bio-AFM)

1. A complete biological Atomic Force Microscope (Bio-AFM) system with all accessories to be quoted as per the following specifications to handle biological and material science samples in high resolution mode. The Bio-AFM should offer high resolution imaging in both Air and Fluid.
2. The possible modes of operations should include but not limited to Contact, Non-Contact, Intermittent contact, MFM, Force Spectroscopy etc., Nanomanipulation and Nanolithography. Any other modes, which come as default modes with the quoted system, should also be clearly mentioned. Multiparametric imaging (e.g. topography and nanomechanical distribution) as imaging mode is required.
3. The system should be capable of doing Inverted Optical Microscopy (IOM) imaging and there should be seamless crosstalk between the optical and AFM modalities, resulting in easy data analysis and file sharing. Bio-AFM and fluorescence microscope with easy to use either as independent system or together as fully integrated system.
4. Cantilever holder has to be for use in air and liquid environment
5. The quoted AFM should have the following capabilities:
 - (a) AFM to have tip scanning or sample scanning design in xy. Must has tip scan for z.
 - (b) System should be able to achieve an atomic lattice resolution on inverted microscope in closed loop and offer Noise levels: ≤ 0.030 RMS Z noise level or better.
6. **Top view optics:**

Top view optics module for the standalone AFM operation for the non-transparent sample analysis/imaging without IOM must be available and should be quoted.
7. **Scanner:**
 - The AFM should use a single flexure guided decoupled scanner for high resolutions imaging and large scanning. Multiple scanners are not allowed.
 - The scan range must be 100 μm or more in the X and Y direction and 10 μm or more in the Z direction. The closed loop operation is required for all X, Y and Z directions.
 - AFM scanner must be made by Piezo Material in all X, Y and Z axis. No other substitutes are allowed.
 - Position noise level ≤ 0.15 nm RMS in X, Y (in closed loop) and ≤ 0.06 nm RMS sensor noise level in Z (3 kHz bandwidth).
 - The cantilever deflection detection system should have ultra-low noise level ≤ 2 pm, RMS (0.1 Hz – 1 kHz) and the bandwidth of deflection detection to be 8 MHz.
 - Automatic cantilever tuning
 - Tip approach must be automatic and software controlled for at least 5mm. No manual approach is allowed.
8. **Light source:**
 - Light source should be superluminescent diode of 850 nm or longer wavelength
 - Laser path from the laser source to tip should be coaxial with the optical microscope path and also orthogonal to the sample surface.
9. **Operating modes of nano-mechanical properties mapping to be done in both air and liquid:**
 - The AFM should include advanced option for nanoscale material properties for cell nano mechanical properties measurements, nanoscale material/mechanical properties including modulus and adhesion, at high resolution (≤ 10 nm), at conventional AFM imaging rates.
 - Force curve acquisition and raw data management must be able to operate better as 1000 curves /sec and over a wide modulus range (< 1 kPa to 50 GPa or better).

- Conventional nano-indentation, higher harmonics imaging, and Dual multi-frequency AC imaging modes are not acceptable as substitutes.
- Maintain maximum sample tip-sample interaction force with force control down to 40 pN or lower with ramp rates from 10 Hz to 1 kHz.
- Simultaneous (real time) acquisition, calculation and display of topography, adhesion and stiffness.
- 5000 x 5000 or more-pixel resolution required for at least 3 channels.
- Raw data acquisition & saving must be for at least these 3 channels for at least 1024 x 1024.
- Offline analysis to analyse data cubes for slices and property maps including modulus (at least 3 models), stiffness, and adhesion.

10. Head:

- The AFM head should be Liquid-safe design.
- The AFM should be designed for imaging biological specimens under aqueous buffer, on a glass cover-slip and also it should hold Petri dishes, glass slides etc.

11. Sample stage:

- AFM must have manual X, Y and Z positioning stage.
- AFM must accommodate samples sizes up to 80 mm (dia) and 10 mm thick or more.
- XY sample positioning with travel range up to 20 mm and an accuracy of minimum 2 micron or better.
- Suitable camera system for tip/sample viewing should be included.

12. Controller:

BioAFM controller should be suitable for recording High resolution and High speed imaging in future as an upgrade with fast scanning probes. Vendor to specify the AFM Controller specifications in detail. The software should be Linux or Windows based. The AFM must include automated scan parameter optimisation of scan parameters in both liquid and air for routine artifact free whole cell imaging.

13. Software:

- The software must include the functionality for the direct overlay of the optical microscope data with AFM data. This overlay procedure must include an integrated procedure to provide registration between both image data sets. The calibration of optical image should involve at least 9-25 data points on the optical image. The force spectroscopy mode should offer features for experimental flexibility. The user must be able to freely combine segments of force-distance curves to customize advanced force curve procedures. There must be possibility to set force ramps, temperature ramps, pulling speed or force feedback, Enhanced force mapping capabilities and powerful batch processing feature including WLC (Worm Like Chain), FJC, Step fitting and other analysis to be available.

14. Probes:

- AFM must include high resolution imaging probes that enable resolution of DNA Double helix and standard protein structure.
- Must also include probes for contact (20 No.), tapping (50 No.), magnetic (10 No.), mechanical (20 No.), nanoindentation (10 No.) and cell imaging probes (50 No.) with at least 17 μm in probe length for live cell imaging without tip artifacts.

15. Computer:

Latest computer with one 32 inch monitor with suitable configuration for installing the Imaging and analysis software and printer.

16. A Petri dish based liquid cell from room temperature to 60 deg. C or more should be included in the quote (for live cell imaging). PetriDishes with height of 10mm must be able to be used with AFM and heater.
17. For applications like single molecules like proteins, small fluid cell should be available ($\geq 120\mu\text{l}$) and to be included in the offer.
18. The entire system should be quoted along with active vibration isolation table, acoustic hood and any other items required for complete installation.
19. Mandatory Requirements: 10 years spare parts, accessories, free software upgrade availability including necessary training and support.
20. Good quality table suitable to accommodate the complete system, if necessary along with two office chairs with arms should be included in the quote.
21. The quote should include five-year comprehensive warranty on all parts of the equipment and labour including freight from the date of installation.
22. Complete onsite training should be provided for selected students and operators during installation of the instrument. Three days advanced training for such trained students and operators after three months/or as and when necessary to be provided onsite.
23. All standard start up accessories required for system operation should be included like calibration gratings, standard samples and other tools like tweezers, allen keys, tools etc. for sample handling and instrument operation.
24. Detailed instruction Manuals must be supplied with the instruments.
25. Should provide complete list of users where BioAFM is supplied/installed in India.
26. The vendor should provide at least three most recent purchase orders for BioAFM of Government organization.
27. A compliance statement should be attached with the quote. The vendor should highlight all the specification points with appropriate page number of the instrument catalogue.
28. **Specifications required for future up gradations:**
 - It must be possible to upgrade the same AFM to fast scanning with 70Hz line rate or better for scan ranges up to $2\mu\text{m}$ with the same AFM scanner.
 - The system should be upgradable to extend the Z-Scan range to 100um larger value than the offered range with main unit of Bio-AFM.
 - It must be possible to integrate AFM with Raman spectrometer from the leading Raman suppliers for performing Tip enhanced Raman spectroscopy (TERS).

29. Optional Inverted Fluorescence Microscope

Specifications for IOM for the BioAFM (only Zeiss, Nikon, Olympus and Leica):
The High Resolution BioAFM should be integrated fully with the IOM system to achieve the following capabilities:

- The AFM must be compatible with bright field, phase contrast (Ph1 and Ph2) and DIC imaging modes. It must be able to acquire these images as well as fluorescence images whilst the AFM is scanning in x/y/z.
- The IOM must be possible to run independently without the need to power on the AFM system.
- IOM must have following component as minimum requirement:
 - Frame: Designed for Inverted configuration with at least one sideport.
 - Light source: 100W with power supply or equivalent.
 - Objective: 10x, PH1, NA>0.25
 - 40x, PH2, NA>0.55
 - Binocular tube 45°/22

- Eyepieces 10x/22
 - Condenser: Universal, NA>0.3, Brightfield, Ph1 and Ph2
 - Fluorescence condenser
 - 3x filter (DAPI, GFP, mCherry or Cy3)
 - 8x reflector revolver, and aperture sliders
 - Epifluorescence light source
 - C mount adapter with CCD/or CMOS-Camera
 - The IOM need to be able to upgrade to other Imaging techniques including DIC, FRET, FLIM and FCS.
 - Suitable laptop system with 13.3" screen or better, Intel i5 or higher/equivalent processor, 8 GB RAM or higher, internal hard drive space of 1 TB or higher capacity, for running the IOM separately need to be quoted as optional item.
30. **Optional Cell Nano Manipulation attachment**
- Cantilever based microfluidic system for cell injection, extraction and manipulation. traditional glass micropipettes are not acceptable.
 - Must include the proper control system
 - Pressure Range -700 to + 800 mbar or wider
 - Pressure Resolution 0.5mbar or better
 - Transient Response time: <3s or better
 - Must include at least 20 different probes and Barcode reader (to read tip type and parameters)
31. Five year AMC charges need to be quoted as optional item.
32. Appropriate on line UPS system with 1-hour backup need to be quoted as optional item.