



**University of Kashmir, Hazratbal, Srinagar 190006**  
(NAAC ACCREDITED GRADE 'A<sup>+</sup>')

**NOTICE INVITING E-TENDER**

For and on behalf of Competent Authority of the University of Kashmir, e-tenders in two bid systems are invited from reputed manufacturers/authorized dealers for supply, installation and testing of equipment detailed hereunder under the Component 10 of RUSA 2.0. The bid/tender document consisting of qualifying information, eligibility criteria, specifications, terms & conditions and other details can be seen/downloaded from website [www.jktenders.gov.in](http://www.jktenders.gov.in) as per the schedule given below:

S. No	Activity	Date
1.	Date of issuance of tender notice	03-10-2020
2.	Date of downloading the bid documents	05-10-2020 (10:00 AM)
3.	Start Date for Bid Submission	05-10-2020 (11:30 AM)
4.	Last Date for seeking any Clarification	09-10-2020 (03:00 PM)
5.	Last Date for Bid Submission	23-10-2020 (03:00 PM)
6.	Last date for submission of hard copies of tender documents and all related papers.	28-10-2020 (03:00 PM)
7.	Date and Time of Opening of Technical bids	31-10-2020
8.	Date and Time of Opening of Commercial bid	To be intimated

Detailed tender notice can be also be viewed from the official website of University of Kashmir [www.kashmiruniversity.ac.in](http://www.kashmiruniversity.ac.in)

**Registrar**  
**University of Kashmir**

**No: F-TENDER (UOK/RUSA/2020-I)**

Dated: 03-10-2020

**e-TENDER FOR THE SUPPLY OF RESEARCH EQUIPMENTS FOR THE  
PROJECTS SUPPORTED UNDER COMPONENT 10 OF RUSA 2.0  
UNIVERSITY OF KASHMIR,**

**E-TENDER ENQUIRY NO: F-TENDER (UOK/RUSA/2020-I) DATED .....**

1. For and on behalf of University of Kashmir, Srinagar, Registrar, the University of Kashmir invites e-tenders through [www.jktenders.gov.in](http://www.jktenders.gov.in) from eligible providers for **the supply of various equipments including accessories**". Bidders are requested to quote their best possible prices with special discount, as the set-up is a non-commercial public service educational/research initiative supported by the University Grants Commission (UGC).

2. The address and contact numbers for sending bids or seeking clarifications regarding this e-TENDER are given below:

- Bids/queries to be addressed to: **Registrar, University of Kashmir, Hazratbal, Srinagar-190006**
- Name/designation of the contact personnel: **Dr. Nisar A Mir, Registrar**
- Telephone numbers of the contact personnel: .....
- E-mail ID's of contact personnel: [registrar@kashmiruniversity.ac.in](mailto:registrar@kashmiruniversity.ac.in)

3. **SCHEDULE OF VARIOUS ACTIVITIES:**

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1.	Date of issuance of tender notice	03-10-2020
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8.	Date and Time of Opening of Commercial bid	To be intimated

4. This TENDER is divided into five parts as follows:

**Part I.** Contains general information and instructions for the Bidders about the e- TENDER.

**Part II.** Contains essential details of the items/services required, such as the schedule of requirements (SOR), Technical specifications, delivery period, mode of delivery and consignee details.

**Part III.** Contains terms and conditions of the contract with the supplier.

**Part IV.** Contains special conditions applicable to this TENDER and which will also form part of the contract with the successful Bidder.

**Part V.** Contains evaluation criteria and format for Price

5. This TENDER is being issued with no financial commitment and the buyer reserves the right to change or vary any part thereof at any stage. Buyer also reserves the right to withdraw the TENDER, should it become necessary at any stage.
6. Prospective bidder may download the tender paper from the website ([www.jktenders.gov.in](http://www.jktenders.gov.in)) and submit the bid in the institute in due time & date as mentioned in the tender document.

### **Part I: General Information**

1. **Last Date and Time for Depositing the Bids: As Given in the Front Page of the Tender.** The bids (both technical and commercial) should be deposited/submitted by the due date and time. The responsibility to ensure this lies with the bidder.
2. **Manner of Depositing the Bids:** The Technical Bid of the Tender should be submitted in a sealed cover super-scribed as — **“Technical Bid for the Supply of Equipments and other Laboratory items against e-NIT No.:F-TENDER(UOK/RUSA/2020-I).....”**. Commercial bid should be filled as per the BOQ on [www.jktenders.gov.in](http://www.jktenders.gov.in). **HYPERLINK "http://www.jktenders.gov.in/"** The prices should be quoted exclusive of taxes and all applicable taxes must be mentioned separately. In case, taxes are not mentioned in commercial bid, prices shall be considered inclusive of all taxes. Prices are to remain valid for 90 days from the date of opening of Commercial Bid. **No hard copy of commercial bids needs to be submitted.**
3. **Time and Date for Opening of Bids: As Given on the Front Page of the Tender.** If due to any exigency, the due date for opening of the Bids is declared a closed holiday, the Bids will be opened on the next working day at the same time or on any other day/time, as intimated by the Buyer through e-mail).
4. **Place of Opening of the Bids: Office of the Registrar, UNIVERSITY OF KASHMIR, Srinagar.** The bidders may depute their representatives, duly authorized in writing, to attend the opening of Bids on the due date and time. Rates and important commercial/technical clauses quoted by all Bidders will be read out in the presence of the representatives of all the Bidders after the commercial bid is opened. This event will not be postponed due to non- presence of a representative of any bidder
5. **Two-Bid System:** Technical Bid would be opened and the **Commercial Bids** of tenders found eligible will be opened on the same day or the day as decided by the competent authority and commercial bids of ineligible tenderers will not be opened.

- 6. Clarification Regarding Contents of the TENDER:** A prospective bidder who requires clarification regarding the contents of the bidding documents shall notify to the Buyer in writing about the clarifications sought as per the date given on the front page of the tender. Clarification if any shall be notified on the website in the form of Corrigendum and no separate paper publication shall be made.
- 7. Rejection of Bids:** Canvassing by the Bidder in any form, unsolicited letter and post- tender correction may invoke summary rejection with for feature of EMD. Conditional tenders will be rejected.
- 8. Validity of Bids:** The Bids should remain valid till **90** days from the date of opening of the commercial bid.
- 9. Earnest Money Deposit (EMD):** Bidders are required to submit Earnest Money Deposit.

(EMD) **amounting to Rs. 25,000/= or 5%** of the total bid value (whichever is higher) along with their bids. The EMD may be submitted in the form of an Account Payee Demand Draft, EMD is to remain valid for a period of 90 days. EMD of the unsuccessful bidders will be returned to them at the earliest. The Bid Security of the successful bidder would be returned, without any interest whatsoever, after the receipt of Performance Security from them as called for in the contract. The EMD will be forfeited if the bidder withdraws or amends, impairs or derogates from the tender in any respect within the validity period of their tender.

- 10. Eligibility Criteria:** Firm/bidders blacklisted at any stage or by any State/Central Universities, NITs/IITs/IITs, Central/State Government body/PSUs etc. need not to apply.
- (a) The bidder should be an Indian registered company engaged in respective area of works. The bidder should have sufficient Infrastructure, technical expertise and financial strength to undertake the contract.
- (b) **Minimum AVERAGE ANNUAL TURNOVER of Rs.10 lakhs** in the last 3 financial years. (Balance sheet/CA certificate to be enclosed, duly supported by the income tax return for financial years 2017-18, 2018-19, 2019-20).
- c) The bidder should have experience in supply of Laboratory equipments with reputed organization. The nature of completed work i.e. for the supply and instillation of equipments should be supply & satisfactory completion of assignments in various Government Institutes/Reputed Firms/PSUs.
- (d) Tenderer should submit documents in support of minimum eligibility criteria along with the tender/bid. NO document in support of minimum eligibility criteria will be accepted / entertained after opening of tender.
- (e) The Bidder/Tenderer should provide the following mandatory information:
- Bidder/Tenderer must provide the information for the successfully supply of equipments/items.

- List of Organizations/Customers dealt by them.
- Last three year 's copies of Income Tax Return Form and PAN number.
- Copy of Registration of Firm.

(f) Tenders/bids not meeting any of the above Eligibility Criteria shall be rejected.

**12. Performance Guarantee:** Successful Bidders must have to submit the performance security @ 5% of the purchase order value or Contract value in the form of Fixed Deposit, Bank guarantee from a schedule commercial bank and will be retained up to the warranty Period.

## **Part II: Essential Details of Items/Services required**

- 1. Schedule of Requirements:** List of items required is mentioned in Annexure- B.
- 2. Technical Details:** Technical Specification of required items is mentioned in Annexure-B
- 3. Delivery Period:** Delivery period for supply and instillation works would be **30 DAYS** from the effective date of placing Purchase Order. Please note that Purchase order can be cancelled unilaterally by the Buyer in case items are not received within the contracted delivery period. Extension of contracted delivery period will be at the sole discretion of the Buyer.
- 4. Terms for Delivery and Transportation:** The definition of delivery period for the TENDER will be **on receipt of Purchase Order.**
- 5. Consignee Details.** Dr. Nisar A Mir, Registrar, University of Kashmir, Hazratbal, Srinagar – 190006.

## **PART III – Standard Conditions of Tender Enquiry**

- 1.** The Firm is required to give confirmation of their acceptance of the Standard Conditions of the contracts which will automatically be considered as part of the Contract concluded with the successful Firm (i.e. Seller in the Contract) as selected by the Client. Failure to do so may result in rejection of the submitted Bid. The standard conditions of the contract may be perused in the office of tenderer prior to submission of quotation.
- 2. Law.** The Contract shall be considered and made in accordance with the laws of the Republic of India. The Contract shall be governed by and interpreted in accordance with the laws of the Republic of India.
- 3. Arbitration.** All disputes or differences arising out of or in connection with the tender shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Supply/Installation/performance, which cannot be settled amicably, may be resolved through arbitration. In case of arbitration with the firm and this unit on any issue the final decision would be of Registrar, University of Kashmir. The arbitration will be governed by following:-

- All disputes or differences arising out of or in connection with the present contract including the one connected with the validity of the present contract or any part thereof should be settled by bilateral discussions.
  - Any dispute, disagreement or question arising out of or relating to this contract or relating to construction or performance (except as to any matter the decision or determination whereof is provided for by these conditions), which cannot be settled amicably, shall within sixty (60) days or such longer period as may be mutually agreed upon, from the date on which either party informs the other in writing by a notice that such dispute, disagreement or question exists, will be referred to a sole Arbitrator.
  - Within sixty (60) days of the receipt of the said notice, an arbitrator shall be nominated in writing by the authority agreed upon by the parties.
  - The sole Arbitrator shall have its seat in Srinagar or such other place in India as may be mutually agreed to between the parties.
  - The arbitration proceedings shall be conducted under the Indian Arbitration and Conciliation Act, 1996 and the award of such Arbitration Tribunal shall be enforceable in Indian Courts only.
  - Each party shall have to bear its own cost of preparing and presenting its case. The cost of arbitration including the fees and expenses shall be shared equally by the parties, unless otherwise awarded by the sole arbitrator.
  - The parties shall continue to perform their respective obligations under this contract during the pendency of the arbitration proceedings except in so far as such obligations are the subject matter of the said arbitration proceedings.
  - **(Note:** In the event of the parties deciding to refer the dispute/s for adjudication to an Arbitral Tribunal then one arbitrator each will be appointed by each party and the case will be referred to the Indian Council of Arbitration (ICADR) for nomination of the third arbitrator. The fees of the arbitrator appointed by the parties shall be borne by each party and the fees of the third arbitrator, if appointed, shall be equally shared by the buyer and seller).
  - The delivery of equipments/other items is delayed due to causes of Force Majeure by more than (02 months) provided Force Majeure clause is included in the contract.
  - The customer has noticed that the FIRM has utilized the services of any Indian/Foreign agent in getting this contract and paid any commission to such individual/company etc.
  - As per decision of the Arbitration Tribunal.
- 4. Penalty for use of Undue Influence.** The Firm undertakes by bidding for the Tender Enquiry, that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the BUYER or otherwise in procuring the Contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present contract or any other contract with the Government of India for showing or forbearing to show favour or disfavor to any person in relation to the present contract or any other contract with the Government of India. Any breach of the aforesaid undertaking by the Firm or any one employed by him or acting on his behalf (whether with or without the

knowledge of the Firm) or the commission of any offers by the Firm or anyone employed by him or acting on his behalf, as defined in **Chapter IX of the Indian Penal Code, 1860** or the Prevention of Corruption Act, **1986** or any other Act enacted for the prevention of corruption shall entitle the Client to cancel the contract and all or any other contracts with the Firm and recover from the Firm the amount of any loss arising from such cancellation. A decision of the Client or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Firm. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Firm towards any officer/employee of the Client or to any other person in a position to influence any officer/employee of the Client for showing any favour in relation to this or any other contract, shall render the Firm to such liability/ penalty as the Client may deem proper, including but not OPEN to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Client.

- 5. Access to Books of Accounts.** In case it is found to the satisfaction of the Registrar, UNIVERSITY OF KASHMIR that the seller has engaged an agent or paid commission or influenced any person to obtain the contract as described in clauses relating to agents/agency commission and penalty for use of undue influence, the Seller, on a specific request of the Registrar, UNIVERSITY OF KASHMIR, shall provide necessary information/ inspection of the relevant financial documents/information.
- 6. Liquidated Damages.** In the event of the Firm's failure to provide services and maintain the agreed uptime etc. as specified in this contract, the Client may, at his discretion, withhold any payment until the completion of the contract. The Client may also deduct from the Firm as agreed, liquidated damages to the sum of 0.5% of the contract price of the delayed/undelivered stores/services mentioned above for every week of delay or part of a week, subject to the maximum value of the Liquidated Damages being not higher than 10% of the value of payable amount as per the scheduled terms of payment.
- 7. Non-disclosure of Contract Documents.** Except with the written consent of one party, the other party shall not disclose the contract or any provision, specification, plan, design, pattern, sample or information thereof to any third party.
- 8. Notices.** Any notice required or permitted by the contract shall be written in the English language and may be delivered personally or may be sent by FAX or email or registered pre-paid mail/airmail, addressed to the last known address of the party to whom it is sent.
- 9. Premature Termination of Contract.** A contract may be terminated in the following circumstances:-
  - When the FIRM fails to honor any part of the contract including failure to deliver the contracted stores/render services in time.
  - When the FIRM is found to have made any false or fraudulent declaration or statement to get the contract or he is found to be indulging in unethical or unfair trade practices.

- When both parties mutually agree to terminate the contract.
- When the item offered by the FIRM repeatedly fails in the inspection and/or the supplier is not in a position to either rectify the defects or offer items conforming to the contracted quality standards.
- Any special circumstances, which must be recorded to justify the cancellation or termination of a contract.
- The delivery of the material is delayed for causes not attributable to Force Majeure for more than (01 month) after the scheduled date of delivery.
- The Firm is declared bankrupt or becomes insolvent.

**10. Transfer and Sub-letting.** The seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present contract or any part thereof without prior consent in written from Registrar, UNIVERSITY OF KASHMIR.

- The FIRM may subcontract any part of Scope of the supply of items on mutual agreement with the **CUSTOMER**. The FIRM can under no circumstance subcontract the complete Scope of supply to a Third Party.
- The FIRM would be entirely responsible for quality / standard and timely execution of the supply and installation of items. The FIRM is to draw up a suitable Quality Assurance (QA) Plan with the Sub- FIRM and a copy of the same along with Record of Inspection in accordance with such QA Plan shall be submitted to the **CUSTOMER. Buyer**.
- The supervision of instillation work for the sub-contracted jobs is to be done by the FIRM. The FIRM is not permitted to seek any extension of Completion Date citing delay on the part of Sub- FIRMS or rework arising out of Sub-Contracted work.

**11. Patents and other Industrial Property Rights.** The prices stated in the present Contract shall be deemed to include all amounts payable for the use of patents, copyrights, registered charges, trademarks and payments for any other industrial property rights. The Seller shall indemnify the Registrar, UNIVERSITY OF KASHMIR against all claims from a third party at any time on account of the infringement of any or all the rights mentioned in the previous paragraphs, whether such claims arise in respect of manufacture or use. The Seller shall be responsible for the complete instillation of the equipments, supplies including technical literature and training aggregates irrespective of the fact of infringement of the supplies, irrespective of the fact of infringement of any or all the rights mentioned above.

**12. Amendments.** No provision of present Contract shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after the date of this Contract and signed on behalf of both the parties and which expressly states to amend the present Contract.

**13. Taxes and Duties.** All the rates quoted should be inclusive of all taxes including the GST.



**14. Transportation and Material Handling.** The FIRM (supplier) will arrange necessary transport and labour at own cost for loading and unloading the items.

#### **PART IV – Special Conditions**

- 1. Option Clause.** This contract has an Option Clause, wherein the Client can exercise an option to procure an additional quantity of items in accordance with the same terms & conditions of the present contract. This will be applicable within the currency of contract. It will be entirely the discretion of the Client to exercise this option or not.
- 2. Repeat Order Clause.** This contract has a Repeat Order Clause, where in the Client can order as desired quantity of the items / services under the present contract within six months from the date of successful completion of this contract, cost, terms & conditions remaining the same. It will be entirely the discretion of Client to place the Repeat order or not.
- 3. Tolerance Clause.** To take care of any change in the requirement during the period starting from issue of Tender Enquiry till placement of the supply/work order, Client reserves the right to increase or decrease the quantity of the required goods/ services without any change in the terms & conditions and prices quoted by the Firm. While awarding the contract, the quantity/services ordered has been increased or decreased by the Client within this tolerance limit.
- 4. Payment Terms.** It will be mandatory for the Bidders to indicate their bank account numbers and other relevant e-payment details so that payments could be made through ECS/NEFT/RTGS mechanism instead of Payment through cheques. No Advance payment will be Made. 100% payment will be done on satisfactory instillation of the equipments/items.
- 5. Paying Authority.** The payment of bills will be made by REGISTRAR, UNIVERSITY OF KASHMIR within 60 days of submission of the following documents by the SELLER to the Paying Authority:
  - 02 ink-signed copies of Commercial invoice / SELLER's bill.
  - A completion certificate of Installation /User Satisfaction certificate from Registrar, University of Kashmir.
  - Photocopy of Performance Bank guarantee.
  - Details for electronic payment viz Account holder's name, Bank name, Branch name and address, Account type, Account number, IFSC code, MICR code (if these details are not incorporated in contract).
- 6. Risk & Expense Clause.** Should the services or any installment there of not be delivered with the time or time specified in the contract documents, or if unsatisfactory delivery are made in respect of the services or any installment thereof, the BUYER shall after granting the SELLER 60 days to cure the breach, be at liberty, without prejudice to the right to recover liquidated damages as a remedy for breach of contract, to declare the contract as cancelled either wholly or to the extent of such default.

- 7. Force Majeure Clause.** Neither party shall bear responsibility for the complete or partial nonperformance of any of its obligations (except failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as flood, fire, earth quake and other acts of God as well as other circumstances beyond the parties control that have arisen after the conclusion of the present Contract.
- (a) In such circumstances, the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time action of these circumstances and their consequences.
  - (b) The party for which it becomes impossible to meet obligations under this contract due to Force Majeure conditions, is to notify in written form to the other party of the beginning and cessation of the above circumstances immediately, but in any case, not later than 10 (ten) days from the moment of their beginning.
  - c) Certificate of a Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be a sufficient proof of commencement and cessation of the above circumstances.
  - d) If the impossibility of complete or partial performance of an obligation lasts for more than 06 (six) months, either party hereto reserves the right to terminate the contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.
- 8. Quality Assurance.** Assurance of quality is the responsibility of the firm and firms are to indicate exclusively and submit proofs of quality assurance norms being followed.
- 9. Inspection.** The inspection of delivered items would be carried out by the representative/s of the Registrar, UNIVERSITY OF KASHMIR.
- 10. Period of Contract.** The contract shall be valid for a period of **12 months**, from the date of issue of Purchase Order.
- 11. Extension Clause.** The contract agreement may be extended further for a period mutually agreed between the buyer & seller, without any changes in rates quoted, and, on same terms and conditions mentioned in the extant tender document. However, charges in taxes/Government levies incorporated from time to time would be catered in concluding extension in contract. Any such extension would be processed only after submission of a certificate by the seller mentioning —No downward trend in price and with the approval of the competent financial authority.

## **Part V – Other/Miscellaneous Information**

### **1. The Broad Guidelines for Evaluation of Bids.**

- Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the tender Enquiry.
- If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.
- Prices quoted by the FIRM should be precise and unambiguous. Rate per unit is to be quoted individually as per format for submission of “Q” bid at **Annexure “D”**. Clarifications, if any, may be obtained from this office prior to submission of tender.
- FIRM can quote for some or all categories mentioned in the “Q” bid submission format.
- Evaluation of the bid shall be carried out basing on the cost of the financial bid.

**2. Price/Commercial Bid Format:** The rates for Items /services & spares are to be quoted as per **Enclosure to “Q” bid Format**. CUSTOMERS are required to forwarded 'Q' bid (**Annexure D**) electronically.

**3. Technical Bid Format:** The Technical Bid is to submitted as per format attached with this tender document appended at Appendix-E

### **4. CHECKLIST (*ONTHELETTERHEADOFTHEBIDDER*)**

The Bid must include a check list in the following format. No document in support of minimum eligibility criteria will be accepted / entertained after opening of tender.

<b>S. No</b>	<b>Documents</b>	<b>YES/No</b>	<b>Proof of Document Attached</b>
•	Cover letter by bidder (On the Letter Head of the Bidder).		As per the format given in Annexure A
•	Check List		As given in the tender document
•	Earnest Money Deposit (EMD), if required.		As given in tender document
•	Registration Certificate of the Bidder		Copy of Registration Certificate
•	Documents in proof of Similar work Experience		(Copy of Purchase Order, etc.)
•	Affidavit to the effect that the bidder is not Black Listed by any State/Central Universities NIT/IIT/IIIT		Furnish details as per Annexure-C
•	Documents in proof of Availability of Technical and Financial strength to undertake the work		Dealership/Distributor/OEM Certificate, Any valid document in proof of financial strength
•	Latest Income Tax Return (Last Three Years)		Copies of Income Tax Returns filed for last three years
•	List of Organization/Customer Dealt.		Furnish details as per Annexure-F
•	Compliance Sheet		Furnish details as per Annexure-G
•	Other Documents		As given in the tender

**5. Cover letter by bidder(On the Letter Head of the Bidder).**

**BID PROPOSAL SHEET**  
**(ON THE LETTER HEAD OF THE BIDDER)**

**Subject: Supply of Laboratory Equipment/items at for the RUSA 2.0 projects, University of Kashmir, Srinagar**

Dear Sir,

We, the undersigned Tenderers, having read and examined in detail the specifications as specified in this document in respect of **Supply of Laboratory Equipment/items at Registrar, University of Kashmir, Srinagar** do hereby propose to supply the required products and services.

<b>Tender No.</b>				
<b>Tender Fees Submitted</b>		YES/NO (Please strike off whatever is not applicable)		
Amount	Mode	Date of Issue	Name of Bank	Valid up to
	Demand Draft			
<b>EMD submitted</b>		YES/NO (Please strike off whatever is not applicable)		
Amount	Mode	Date of Issue	Name of Bank	Valid up to
	Demand Draft	Test	Testing	

**ADDITIONAL PURCHASE ORDER:** We understand that the Registrar, University of Kashmir, Srinagar, in case of the requirements may also place repeat purchase order. In such cases, we shall accept and execute all the purchase work order placed on us by the Registrar, University of Kashmir, Srinagar.

**BID PRICING:** We further declare that the prices stated in our proposal are in accordance with your Terms & Conditions in the bidding document. We further understand that the quantities as specified in this Tender may increase/decrease at the time of Award of Purchase Order as per the requirements of RUSA 2.0 Registrar, University of Kashmir, Srinagar.

**QUALIFYING DATA:** We confirm that we satisfy the qualifying criteria and have attached the requisite documents as documentary proofs. In case you require any further information/documentary proof in this regard during evaluation of our bid, we agree to furnish the same in time to your satisfaction.

**CONTRACT PERFORMANCE SECURITY:** We hereby declare that in case the contract is awarded to us, we shall submit the performance Guarantee Bond in the form of Bank Guarantee for the amount of 5% of the total order value.

**PAYMENT TERMS:** We hereby declare that in case the contract is awarded to us, we agree with payment terms specified in the tender documents.

**CERTIFICATE AND DECLARATION:**

- I/We certify that no addition/modification/alteration has been made in the Original Tender Document. If at any stage addition /modification /alteration is noticed in the Original Document. I/We will abide by the terms and conditions contained in the original tender document, failing which **Registrar, University of Kashmir, Srinagar** reserves the right to reject the tender and/or cancel the contract.
- It has been certified that all information provided in tender form is true and correct to the best of my knowledge and belief. We hereby declare that our proposal is made in good faith, without collusion or fraud. No forged /tampered document(s) are produced with tender form for gaining unlawful advantage. We understand that the **RUSA 2.0 Registrar, University of Kashmir, Srinagar** is authorized to make enquiry to establish the facts claimed and obtained confidential reports from clients.
- In case it is established that any information provided by us is false / misleading or in the circumstances where it is found that we have made any wrong claims, the Registrar, University of Kashmir, Srinagar is authorized to blacklist our firm/company/agency and debar us in participating in any tender/bid in future.
- I / We assure the Institute that neither I /We, nor any of my/our workers, will do any act which is improper / illegal during the execution, in case the tender is awarded to us.
- I / We assure the Institute that I / We will NOT be outsourcing any work specified in the tender document, to any other firm.
- Our Firm / Company / Agency has not been blacklisted or banned by any Govt. Department, PSU, University, Autonomous Institute or any other Govt. Organization.
- I/We certify that, I have understood all the terms & conditions, as indicated in the tender document, and hereby accept all the same completely.
  - I/We, further certify that I/We, possess all the statutory/non-statutory registrations, permissions, approvals, etc., from the Competent Authority for providing the requisite services,
  - I/We hereby declare that this tender on acceptance communicated by you shall constitute a valid and binding contract.

- I/We certify that the submitted quotation duly paginated and contains from page no. 1 to.....

**Date, Signature and Seal of the  
Manufacturer/Bidder**

**Technical Specifications of Required Items ANNEXURE “B”**

**Laboratory Equipments/Liquid nitrogen Tank/Canopy/other  
items**

S.No.	Equipment	Specifications
1.	<b>Ultra High-Resolution Mass spectrometry with HDX and proteomics application</b>	<p><b>Technical Specification</b></p> <p>High Resolution Mass Spectrometry (HRMS) should be a combination of Quadrupole with ultrahigh resolution MS with nano LC and HDX Interface. The complete workstation should be quoted with all required softwares and all pre -requisites for operation of the system.</p> <p><b>A. Sources:</b></p> <ul style="list-style-type: none"> <li>• The System should have ESI. APCI and APPI source capable to handle flow rate from 1uL/min to 1000uL/min or better.</li> <li>• Nano ESI source should handle flow rate from 50nL/min to 2000nl/min for Nano columns up to 50cm length with inbuilt column oven.</li> <li>• Additional Nano source for HDX with flow rate compatibility upto 50 ul/min</li> </ul> <p><b>B. Mass Analyzer:</b></p> <ul style="list-style-type: none"> <li>• The MS should have high-performance advance quadrupole design with pre and post filter quadrupole that works as precursor isolation from 40-2500Da. The quadrupole should work with variable precursor isolation width from 0.4 to 1200Da for DIA experiments.</li> <li>• The HRMS should be based on FTMS principle and has ultra-high-resolution capability of &gt;400,000 FWHM at 200m/z.</li> <li>• The high-resolution MS should have mass range up to</li> </ul>

6000 Da.

- System is cable to demonstrate the Mass Accuracy measurement of <3ppm with external calibration and <1ppm with internal calibration.
- Sensitivity: MS/MS: 50 fg reserpine on column S/N 100:1, SIM: 50 fg reserpine on column S/N 150:1
- Should and scan speed of 40Hz/sec in MS and MS/MS mode.
- Should have Data Dependent Acquisition (DDA), MS2 scan by DDA with Top N experiments, sample dependent SIM targetting, Triggered MS2 by exclusion mass list .MS2 Scan by Data Independent Analysis
- The mass spectrometer must be capable of fast polarity switching acquiring one spectrum in positive and one in negative with <1.4hz cycle time.
- Dynamic Retention Time window correction for PRTC peptides in tMS2 (PRM) scan function
- On-the-fly charge state deconvolution for intelligent ddMS2 on intact proteins applying Smart HCD.
- System should demonstrate in spectrum dynamic range of >5000:1 within one spectrum.

### **C. Nano Liquid Chromatograph (nLC)- 1 No for Proteomics Application**

- Split less Nano LC .
- Must have direct pumping system with Nano flow capability without flow splitting
- System must be compatible with all mobile phase and from acidic to basic pH.
- Flow rate range must be from 50 nL/min to 2000nl/min (18000psi) without flow splitting.
- Standard metered and rapid injection modes should be available.
- Must have sample pickup Injection reproducibility of < 0.2% RSD or better
- Autosampler: with 20 µL injection loops or higher, At least one 96 well plate capacity.6 x 8 vials plus 6 extra standard vials capacity. Peltier type temperature-maintained sample compartment with minimum 5 °C or maximum 20 °C below room temperature. Integral 6-port bio-compatible injection valve. Carryover must be <0.05%. Three solvents must be available for repeated custom wash cycles for thorough cleaning of injection needle.
- Quote Nano Column - with trap column (10 nos each)
- 15cm x 2.1 mm C18 coulms Nos 10
- 50 mm X 1 mm C18, 1.9 u (10 nos)
- 30 x 2.1 mm C18 column 1.9u (nos 5)
- Plug and Play column (10 nos)



- C8 columns (nos 5)
- C18 5um 15mm X 1mm trap column (nos. 10)
- Trap column holder (nos. 10)

**D. Nano Liquid Chromatograph (nLC)- 1 No for HDX Module.**

- RSLC Nano –Nano Cap system consists of:
- Nano Pump: 20 nL/min–50 µL/min using recalibrated flow selector
- Micro Pump: 10–2500 µL/min
- Pressure Range:2–80 Mpa (300–11,600 psi) ,2–50 Mpa (300–7250 psi), loading pump
- Number of Solvent Channels: HPG Nano Pump: 2
- Flow Calibration: Semi-automated
- Proportioning Accuracy:<1% of full scale
- Proportioning Precision: Typically, <0.1% SD
- Retention Time RSD in Gradient Mode at 300 nL/min:<0.2% RSD or <0.1 min SD, whichever is greater
- Gradient Delay Volume:<25 nL (pump) and <350 nL (system in pre-concentration configuration.
- Degasser
- Quote all necessary accessories and kits for interface with HDX

**E.HDX Module**

- The HDX-PAL experimental workstation providing ease of use, high reproducibility, and exceptional data quality for Hydrogen Deuterium Exchange experiments (HDX).
- Walk-away automation for the most complex HDX experimental workflows.
- System should include temperature control valve and column chamber with independent solvent pre-conditioning 0°C to 37°C produce the highest quality data in the shortest time.
- Two High Performance temperature control chamber for label experiments and quenching.
- Room for upto 100 timepoints and 10 reservoirs 0°C to 37°C
- Three UHPLC Valves for back flush and column switching
- Two ambient exchangeable syringes of 10ul to 100ul, one cool syringe tool 250ul capacity. Syringe washing station with 2 solvents.
- Dedicated HDX control system with MS control and data analysis.
- Standard Protease column chiller (0°C to ambient) for independent control of protease and trap column.

		<ul style="list-style-type: none"> <li>• Additional Protease columns (nos. 3)</li> </ul> <p><b>F. System Software and Hardware:</b></p> <ul style="list-style-type: none"> <li>• System software is be capable of detecting, recording and analyzing the data. It should have following capabilities</li> <li>• Software package include latest versions of data acquisition, data processing, qualitative, quantitative analysis, targeted screening, SEQUEST, M.Z-core, Mascot, for label free and labeled quantitation., data mining analysis etc., for proteomics application.</li> <li>• Software for HDX data analysis intact and peptide mapping of Biosimilars.</li> <li>• Software for metabolomics.</li> <li>• High configuration recent i7 dual core processor , with 64 GB Ram, 1 TB HDD ,22inch monitor, Graphics card for control and acquisition of system</li> <li>• High configuration recent i7 dual core processor , with 64 GB Ram, 1 TB HDD ,22inch monitor, Graphics card for Metabolomics software .</li> <li>• Dual Intel® Xeon® Processor E5-2687W (44 core 88 threads) with 256 GB RAM and 4 TB SDD with a DELL Power edge T640 tower server with Windows 10 server. With 22 inch monitor for proteomics database processing.</li> <li>• Microsoft office latest version for data analysis computers.</li> </ul> <p><b>G. Pre-requisites</b></p> <ul style="list-style-type: none"> <li>• Imported Nitrogen Generator with compressor to supply the required flow at required pressure.</li> <li>• A 30 KVA UPS with 2 hr battery back up</li> <li>• LC-MS/HDX plumbing kits (nuts, frits, capillaries etc.,) 2 Nos</li> <li>• 50 ul and 125 ul sample loops (nos. 2, each)</li> <li>• Sample loading syringes (nos 5)</li> </ul> <p><b>H. Warranty and Training</b></p> <ul style="list-style-type: none"> <li>• Warranty: Minimum <b><u>5 years</u> comprehensive warranty</b></li> <li>• Trainings: Multiple trainings and workshops (minimum 5) for instrument operation and applications</li> <li>• Installation at the University of Kashmir, Srinagar</li> <li>• Delivery to the site of installation</li> <li>• Pricing including GST.</li> </ul>
2.	Confocal Microscope	<b>HIGH SENSITIVE SPECTRAL CONFOCAL WORKSTATION WITH LIVE CELL IMAGING</b>

		<p>The imaging workstation should include high sensitive spectral confocal imaging for fixed and live sample imaging for plant samples, cell biology applications, protein-2 interactions, high throughput imaging and imaging of cell culture and tissues. The system should be available with the below mentioned configuration as mentioned below:</p> <p><b>A. Motorized Inverted Fluorescence Research Microscope:</b></p> <ul style="list-style-type: none"> <li>• Fully Motorized Inverted Fluorescence Research Microscope for BF/DIC/Fluorescence preferably with dedicated touch screen TFT display preferably wifi enabled for controlling motorized components of the microscope.</li> <li>• Mot. X-Y stage with Universal sample holders for slides, 35/60 mm Petri dish, labtek chambers with multipoint, tile and mosaic imaging software.</li> <li>• LED / Halogen illumination for transmitted light &amp; 120W/130 W Hg/ metal halide illumination or LED illumination with higher lifetime for Fluorescence should be offered. In case of LED Illumination in fluorescence mode, min 4 LED's should be part of the configuration ( 375nm, 477nm, 552nm and 640 nm or equivalent)</li> <li>• Motorized 6 position DIC nosepiece, Universal Motorized Condenser NA 0.55 or better with modules for DIC, 6 position fluorescence turrets for accommodating fluorescent filters for sample visualization.</li> <li>• High precision Z-focus drive with step size of 10 nm or better.</li> <li>• High resolution confocal grade objectives of 10x/0.40, 20X/0.80, 40x/1.30oil, 60/63x/1.40oil immersion.</li> <li>• Shift free DIC accessories for all objectives.</li> <li>• Band pass fluorescent filters for DAPI, CFP, GFP, YFP, Cy3 and Cy5 should be offered.</li> <li>• An active anti-vibration table with compressed air damping, bread board table top with M-6 threading for the complete microscope system.</li> <li>• System should be quoted with On-stage Incubation system with facility to control Humidity / Temperature</li> </ul>
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		<p>/ CO2 etc. Incubation system should be able to be controlled by Confocal software , slides/different dish sizes/well plates 96 etc. should be accommodated.</p> <ul style="list-style-type: none"> <li>• Microscope system should be equipped with hardware based Focus Drift compensation technology having LED (840nm or higher) based mechanism for Continuous Focus correction monitoring system. Focus correction technology should be usable for Glass as well as Plastic dishes.</li> </ul> <p><b>B. Spectral confocal imaging unit with high sensitive detectors:</b></p> <ul style="list-style-type: none"> <li>• Confocal imaging unit with high sensitive detectors ( spectral Range 400-720nm or better</li> <li>• Laser point scanning and Confocal detection unit with channels for simultaneous detection of fluorophores in high sensitivity mode. Detectors should be capable of working in Intensity and Spectral mode Imaging. System should be a combination of min or more 2 PMT and two highly sensitive GaAsP detector.</li> <li>• Scanner unit should have laser ports for at least 4 lasers to be integrated with the system.</li> <li>• The scanner should have real "ROI" scan capability for fast scan. Maximum scan resolution should be at least 6Kx6K or better per channel and should reduce to 16X16resolution.</li> <li>• Scan speed should be 10 fps or better @ 512x512 and should be able to increase up to 200 fps@512X16 or better.</li> <li>• Resolution/Enhanced Resolution capability by improving resolution in XY 120nm and 300nm. Product offered must be documented on brochure or manufacturer website</li> <li>• Transmitted PMT or Detector for laser based DIC imaging should be included.</li> <li>• The scan field diagonal should be min 24 mm or better. Scan Zoom range minimum 1X to 40X with increments of 0.1X. Scan rotation of 200 degrees or better should be available.</li> </ul> <p><b>C. Solid State Laser module with AOTF control:</b></p> <ul style="list-style-type: none"> <li>• 405 nm,</li> <li>• 488 nm</li> </ul>
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- 561 nm.
- 640 nm.

All lasers should be connected to the scan head through fiber optic cable and should be controlled through AOTF for fast laser switching and attenuation in pixel precise synchronization with the laser scanner for Real ROI scan for FRAP , Photo activation/conversion experiments. All the laser lines should be controlled through a computerized AOTF device for fast laser switching and attenuation.

**D) Control computer and Monitor:**

Latest 64 bit control computer with Intel Xeon Processor, DDR RAM 64 GB or better, HDD: 4TB SATA upgradable to 8 TB or better, DVD, SuperMulti SATA +R/RW, Graphics card 8 GB or better, Gigabit Ethernet, Win 10 64 bit , USB 2.0/3.0, Fire wire. Large 32” LCD TFT monitor.

**E) System control and Imaging Software:**

- Software should be capable of controlling Motorized components of microscope, confocal scan head, laser control including AOTF and Image acquisition & processing for confocal and super resolution imaging.
- Saving of all system parameters with the image for repeatable/reproducible imaging.
- Line, curved line, frame, Z-stack, Time series imaging capabilities.
- Real ROI bleach for FRAP, Photo-activation/conversion experiments.
- Standard geometry Measurements like length, areas, angles etc including intensity measurements.
- Advanced 3D image reconstruction with rendering from a Z-stack image series.
- Co-localization and histogram analysis with individual parameters.
- Live de-blur imaging capability
- Artificial Intelligence feature to remove shot poison noise from noisy samples
- Spectral un-mixing with fingerprinting for separation of overlapping excitation/emission spectra of fluorophores.

		<ul style="list-style-type: none"> <li>• Data un-mixing for separation of overlapping excitation/emission spectra of fluorophores.</li> <li>• Confocal system should be upgradable in future for SIM and Localization based Super resolution microscopy</li> </ul>
3.	<b>Amino acid analyzer</b>	<ul style="list-style-type: none"> <li>• A compact, floor standing / benchtop, dedicated and PC controlled amino acid analyser having following specifications:</li> <li>• Post-column Nin-Hydrin reaction system.</li> <li>• Pump (2 nos. - for buffers and Nin-hydrin reagent).</li> <li>• Maximum delivery pressure - 30 MPa or higher</li> <li>• Flow rate range - 0.005 to 2.000 ml/min</li> <li>• Should have quaternary gradient unit and degasser (6 Channel) installed</li> <li>• Auto-sampler.</li> <li>• Sample vial capacity – 1.5 ml or more.</li> <li>• No. of vials accommodated - 120 or more</li> <li>• Sample injection volume - 0.5 to 100 µL.</li> <li>• Column oven System : Peltier controlled &amp;</li> <li>• Temperature setting range - 10 to 90°C (in 1°C steps)</li> <li>• with active cooling capability</li> <li>• Reaction unit System: Electronic heating (reaction column)</li> <li>• Temperature controlled post-column derivatisation reactor (upto 180° C ±1° C)</li> <li>• Detector: Spectrophotometer - Aplanar concave diffraction grating</li> <li>• Wavelengths - 570 nm &amp; 440 nm.</li> <li>• Column: Pre-filter column for Ammonia and analysis column, 4.6 × 60 mm Length, Packed with ion exchange resin.</li> <li>• Analysis capability: 40 amino acids or more.</li> <li>• Reproducibility of peak retention time: CV 0.3% (Arg), 0.5% (Ala).</li> <li>• Reproducibility of peak area: CV 1.0% (Gly, His)</li> <li>• Detection limit: 2.5 pmol or better</li> <li>• Additional columns and vials (10 each).</li> <li>• Windows 10 based dedicated software for full control of the equipment and data processing for amino acid analysis. Stored methods with all parameters optimized for amino acid analysis.</li> <li>• System should be quoted with suitable software, PC, reagents / buffers, Complete amino acids standard kit and Nitrogen Cylinder with regulator.</li> <li>• Suitable online UPS</li> <li>• Warranty of one year and one year AMC free of cost.</li> </ul>
4.	<b>Dynamic Light Scattering (DLS)</b>	<ul style="list-style-type: none"> <li>• Measurement of size, molecular weight, mobility and zeta potential of dispersed particles and molecules in solution.</li> <li>• Minimum sample volume of 10-12 µL for size</li> </ul>

		<p>measurement.</p> <ul style="list-style-type: none"> <li>• Size range maximum diameter 0.3 nm to 10 microns</li> <li>• Molecular weight range 10000 Da - <math>20 \times 10^8</math> Da</li> <li>• Zeta potential range <math>&gt; \pm 500</math>-1000 mV or more</li> <li>• Mobility range <math>&gt; \pm 20 \mu\text{cm/V.s}</math> or better</li> <li>• Sensitivity: 0.1 mg/mL (lysozyme)</li> <li>• Auto-titrator with degasser.</li> <li>• Two 12mm square glass cuvette with round aperture and stopper</li> <li>• 100 pack of 100 12 mm square disposable polystyrene cuvettes with 100 stoppers</li> <li>• Surface zeta potential cell</li> <li>• Zeta Potential standard (1-2 syringe or more)</li> <li>• Standard - 1 No 220 nm NIST traceable standard</li> <li>• Detector: Instrument should have High resolution Photo Diode detector</li> <li>• Research software: friendly, preferably windows based presentation of input parameters, results and analysis on a single page.</li> <li>• Protein measurement optional</li> </ul>
5.	<b>Real time PCR (qPCR)</b>	<ul style="list-style-type: none"> <li>• The system should be automated for both real-time PCR and post-PCR (end point) analysis using in-built Peltier based PCR machine.</li> <li>• System should support applications including absolute quantitation, simultaneous analysis data for relative quantitation of Unlimited plates of 96 wells each, (4-6 colour multiplexing), allelic discrimination (SNP), dissociation curve analysis as well as pathogen detection and plus/minus assay using internal positive control.</li> <li>• Instrument should have 96 well sample block of 0.1ml capacity, able to run fast and standard run on the same block. It can also have 6 separate Peltier-controlled blocks with a fixed gradient with a 25-degree range.</li> <li>• System should complete Fast 40 cycle protocol in less than 40 minutes and standard protocol in under 2 hours.</li> <li>• The system should have LCD touch display with USB interface to export the data.</li> <li>• The temperature range of the thermoblock should be 4°C to 99°C with accuracy of <math>\pm 0.25^\circ\text{C}</math></li> <li>• The system should have complete solution for Fast Real time PCR machine:</li> </ul> <p style="text-align: right;">Fast instruments, Fast reagents, Fast protocols and Fast</p>

		<p>assays.</p> <p>Sample Ramp Rate: fast Mode: <math>\pm 3.5^{\circ}\text{C}/\text{sec}</math>  Standard Mode: <math>\pm 1.6^{\circ}\text{C}/\text{sec}</math>  Pear Block Ramp Rate: <math>5.5^{\circ}\text{C}/\text{sec}</math>, Temperature  Uniformity: <math>\pm 0.50^{\circ}\text{C}</math>, 30 seconds after clock start.</p> <ul style="list-style-type: none"> <li>• The Excitation source should be single blue LED light source or Tungsten Halogen or high intensity Xenon lamp and emission detection by photodiodes or cooled CCD camera. There should be enough excitation and emission filters to cover majority of dyes.</li> <li>• System should be flexible to support 96 well plates individual tubes and 8 strip tubes. The system should be quoted with interchangeable blocks.</li> <li>• System software should provide simultaneous analysis data for relative quantitation of unlimited plates of 96 wells each.</li> <li>• The system should have Normalization of reaction due to non-PCR related fluctuations variations, should be possible by using ROXTM or any other calibrated dye.</li> <li>• System should support reaction volume 2-30 <math>\mu\text{L}</math>.</li> <li>• All assays should run using Universal Thermal Cycling conditions to eliminate for the such as pipetting Optimisation of PCR machine.</li> <li>• The instrument software must be capable of detecting and analysing a different gene, SNP or pathogen target in every well of the 96/384 well plate. The instrument software should not restrict the number of assays or targets that can be run on a single 96/384 well plate.</li> <li>• The system should have easy door design for loading and unloading 96 well plates or individual 0.2 ml PCR tubes.</li> <li>• System should collect data for all filters for all wells regardless of plate setup. The software should allow reanalysis of data so that data is never lost.</li> <li>• The instrument should be pre-calibrated for at least seven dyes including the following during installation at the customer site: FAMTM/SYBR® Green I, VIC®/JOETM, NEDTM/TAMRATM/ and ROXTM. The user should be able to use any of these dyes in an experiment without needing to recalibrate the instrument. Addition of new dyes should be possible without hardware change.</li> <li>• The system should be supplied with licensed full version</li> </ul>
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		<p>software for primer and probe design with comprehensive assay design and development guidelines for quantitative and qualitative real-time assays, should be provided to enable designing of custom oligo assays.</p> <ul style="list-style-type: none"> <li>• System should be standardized for at least two homogeneous reaction chemistries including SYBR Green I and dual color TaqMan or four colour hybridization probes (FRET).</li> <li>• The system should be offered pre-validated and functionally tested Gene Expression Assays as well as SNP Genotyping Assays and the flexibility to design specific assays for new templates of interest.</li> <li>• The instrument software should utilize a multi-componenting algorithm designed to provide precise deconvolution of multiple dye signals to enable the simultaneous detection of multiple fluorophores.</li> <li>• The system should be supplied with latest configuration desktop system.</li> <li>• The system should have warranty of 3 years.</li> <li>• The system should be CE/ISO certified.</li> <li>• The system should work on 230V,50Hz</li> <li>• User/Technical/Maintenance manuals, Certificate of calibration and inspection from factory to be supplied with system.</li> <li>• Compliance to each of the above points should be separately indicated and evidence presence for each of them (Product brochures should be highlighted wherever required)</li> <li>• The system should be supplied with all the accessories required to function.</li> </ul>
6.	<b>Nanodrop</b>	<p>Sample Volume – 0.5µl.  Sample Number - 1  Path Length: 1mm (auto ranging to 0.05mm)  Light Source: Xenon flash lamp  Detector Type - 2048 – element linear , Silicon CCD array  Wavelength Range – 190 – 840nm  Wavelength Accuracy 1 nm  Spectral Resolution &amp;lt; 1.8nm (FWHM at HG 253.7nm)  Absorbance Precision: 0.002 (1mm path)  Absorbance Accuracy: 2% (at 0.76 absorbance at 257 nm)  Absorbance Range : 0.02-300 (10mm equivalent)  Detection limit: 2ng/µl (ds DNA)  Max.Concentration : 15,000 ng/µl (dsDNA)</p>

		<p>Measurement Time: &lt;5 seconds  Footprint : 14 x 20cm  Sample Pedestal – Material of Construction – 303 stainless steel and quartz fiber  Operating Voltage – 12 vdc  Operating Power consumption 12 – 18 W (max 30W)  Standby Power Consumption – 5W  Software Compatibility – Windows® XP and Vista™ (32 bit).  Increased dynamic range for dilute samples (e.g. to 0.4 ng/uL for sDNA) Support for kinetics experiments  OD measurements for bacterial cultures  Built-in stirring capability  Temperature control at 37°C  Pre-programmed methods for:</p> <p>ssDNA, dsDNA, RNA, oligoDNA, oligoRNA, microarray (fluorescently labeled nucleic acid), Protein (A280), Protein A205, Protein colorimetric (Bradford, BCA, Lowry and Pierce™ 660), Proteins &amp;</p> <p>Labels (labeled proteins), OD600, Kinetics, Custom Methods, UV-Vis  Wireless capabilities should include:  Bluetooth for connecting a keyboard and mouse  Wi-Fi network connection for exporting and archiving data to a server.  The spectrophotometer should be supplied with branded compatible computer system With Licensed Windows Professional Software.</p>
7.	<b>Centrifuge with rotor of 96 well plates</b>	<ul style="list-style-type: none"> <li>• Should enable in a single reaction loading of 32 samples with three replicates of each sample to rule out error of observations</li> <li>• Rotational speed 100 to 3,500 RPM, Timer 1 - 99 min, Maximum centrifugal force 2,300 RCF, Working Temperature Range +10°C to +40°C</li> <li>• Relative air moisture at 20°C 80%, Voltage and frequency 100 - 240V; 50/60Hz, Dimensions (L x W x H) 430 x 410 x 220mm</li> </ul>
8.	<b>Refrigerated Centrifuge for 50ml falcons</b>	<ul style="list-style-type: none"> <li>• Speed Range should be upto 13000rpm or above</li> <li>• The rotor should be capable of holding 50ml falcon tubes</li> <li>• The system should have LCD display with microprocessor based control system</li> <li>• Imbalance detection system built in</li> <li>• It should have soft brake to protect sensitive samples</li> <li>• System should be CE/ISO certified</li> <li>• System should be supplied with at least 3-year warranty, though the rotor should have 8 years warranty or more.</li> </ul>

<p><b>9.</b></p>	<p><b>Gel electrophoresis apparatus</b></p>	<p><b>Horizontal Electrophoresis Kit</b></p> <ul style="list-style-type: none"> <li>• <b>Mini units:</b> Complete Set - Including base gel running unit, safety lid, at least two casting trays and combs. Gel Casting Tray: Standard form; Combs sizes: 1.0 mm -4 wells, 8 wells &amp;12 wells; 2.0 mm - 4 wells, 8 wells &amp; 12 wells</li> <li>• <b>Midi units:</b> Complete set: Including base gel running unit, safety lid, at least two standard casting trays and combs. Gel Casting Tray: standard form; Combs sizes: 1.0 mm - 10 wells, 12 wells, 16 wells,24 wells 2.0 mm - 10 wells, 12 wells, 16 wells &amp; 24 wells</li> <li>• <b>Maxi units:</b> • Complete set: Including base gel running unit, safety lid, at least two standard casting trays and combs • Gel Casting Tray: standard form; • Combs sizes: 1.0 mm -16 wells, 20 wells, 28 wells, 40 wells</li> </ul> <p><b>Vertical Electrophoresis Kit:</b></p> <p><b>Mini unit set:</b></p> <ul style="list-style-type: none"> <li>• Including base gel running unit, safety lid, connecting leads spacers etc. • Gel casting unit including glass plates, combs, casting frame etc. • Comb size includes 0.75mm, 1.0mm, 1.5mm, 2mm etc. • Number of wells 10/12/15 • Clamp based gel casting unit will be preferred • All accessories needed to make the unit fully functional must be included /quoted.</li> </ul> <p><b>Midi Unit Set</b></p> <ul style="list-style-type: none"> <li>• Including base gel running unit, safety lid, connecting leads, spacers etc. • Gel casting unit including glass plates, combs, casting frame etc. • Comb size includes 0.75mm, 1.0mm, 1.5mm, 2mm etc. • Clamp based gel casting unit will be preferred • All accessories needed to make the unit fully functional must be included /quoted.</li> </ul>
<p><b>10.</b></p>	<p><b>Gilson pipettes (2SETS)</b></p>	<ul style="list-style-type: none"> <li>• P2N=min.0.2, max.2</li> <li>• P20N=min 10, max 20</li> <li>• P200N=min 20, max 200</li> <li>• P1000N=min.100, max.1000</li> <li>• With push button, thumb wheel system</li> <li>• Precise volume-locking mechanism</li> </ul>
<p><b>11.</b></p>	<p><b>Autoclave</b></p>	<ul style="list-style-type: none"> <li>• Autoclave should be compact, portable and top loading with swing</li> </ul>

		<ul style="list-style-type: none"> <li>• Should have a double wall chamber quite durable made of stainless steel &amp; outer wall of S.S sheet duly enamel painted. The lid and support ring and legs should be made of durable material such as steel duly enamel painted gasket.</li> <li>• Capacity should be 60 litres with exterior dimension 650mmx640mmx980mm +- 2%.</li> <li>• System should have high temperature accuracy of the order of 0.1<sup>0</sup>C.</li> <li>• Fully automatic internal discharging system</li> <li>• Should have a pressure gauge display of 0.1-0.5 MPa.</li> <li>• Should be supplied with at least 3 years warranty</li> <li>• System should be certified as per the CE/IEC guidelines</li> </ul>
12.	<b>Sonicator</b>	<ul style="list-style-type: none"> <li>• Should have technologically advanced features such as touch screen interface, consistency, reproducibility and a reliable end result.</li> <li>• The machine should be programmable: able to program different parameters like processing time, pulse on/off and amplitude.</li> <li>• Able to precisely control the amplitude (from 1 – 100%).</li> <li>• Guarantee for 3 years with free service.</li> <li>• The unit should be equipped with fault detection circuitry to shut down sonication in the event that a fault occurs.</li> <li>• Preferably Titanium probes with replaceable tip capable of processing 50-500 ml of sample volume.</li> <li>• Should meet internationally recognized safety norms</li> <li>• Certified for conformity by recognized international agencies such CE/ISO</li> </ul> <p>Other features should be:</p> <ul style="list-style-type: none"> <li>• Power(W) - 5-250W (adjustable )</li> <li>• Frequency(khz) - 20-25 KHz Automatic tracking</li> <li>• Probe - 6 Dia</li> <li>• Process capacity - 0.2-300 ml</li> <li>• Store data upto 50 sets</li> <li>• Total working temperature - 1-999 minutes</li> <li>• Temp. Alarm Range- 0-100°C</li> <li>• DISPLAY - LCD DISPLAY</li> <li>• Dimension- 600(L)x300(W)x500(H)</li> </ul>
13.	<b>Refrigerator</b>	<ul style="list-style-type: none"> <li>• The 4 degrees is the logical minimum for a refrigerator wherein samples can be stored for short period of time.</li> <li>• Should have minimum of 4 racks to keep samples wherein samples can be put for immunoprecipitation experiments on a rotator.</li> </ul> <ul style="list-style-type: none"> <li>• Capacity- around 350 Liters or above</li> <li>• Refrigerator type- Frost Free</li> </ul>

		<ul style="list-style-type: none"> <li>• Refrigerator style- Double door refrigerator</li> <li>• Refrigerator shelf type- Tempered Glass</li> <li>• Temp. Range- 0-8°C</li> <li>• Warranty- 2 years</li> </ul>
14.	Western blotting system	<ul style="list-style-type: none"> <li>• <b>Western Blotting Unit:</b> Transfer blot unit for mini/midi vertical electrophoresis including all accessories needed to make the unit fully functional.</li> <li>• Transfer unit must be suitable for mini/midi electrophoresis also. • Provision for cooling.</li> <li>• <b>Semi-dry Blotting unit:</b> • Should use minimal buffer to saturate blotting papers and membranes. • Unit should accommodate mini/midi/maxi gels or multiple mini-gels side-by-side • System should have a built-in power supply with automatic stopping feature. When the buffer becomes depleted, the transfer should stop automatically, saving the transfer before overheating. • Light weight and easy to handle.</li> <li>• <b>Power Supply:</b> • Power Supply suitable for vertical (mini and standard) and horizontal gel electrophoresis, semi-dry and mini tank blotting. • Constant voltage and constant current modes • Output Voltage: Adjustable from 0/5/10V to 500V/600V with an increment of 1 V or less • Output Current: up to 800/1000 mA with increment of 1 mA • Output power : 300W or more • Terminals/ Sockets : 4 Pairs/4 • Safety: All necessary safety provisions like Over load, No load, Sudden change in load, power failure indication, Over Temperature and safe plugs and sockets • Input Voltage: 230V ±10VAC, 50Hz.</li> <li>• Certified for conformity by recognized international agencies such CE/ISO</li> </ul>
15.	Rotating wheel (Rotisserie type rotator)	<ul style="list-style-type: none"> <li>• Should ideally mix tubes in a variety of applications including biological samples such as immunoprecipitation.</li> <li>• Adjustable speed should allow for gentle to more vigorous mixing capabilities for either powdered or liquid samples.</li> <li>• Other features should be:</li> <li>• Motor Type- DC Motor</li> <li>• Tilt Angle - 0-90°C</li> <li>• Speed Range - 10-70 RPM</li> <li>• Speed display - LCD</li> <li>• Time display- LCD</li> <li>• Timer- 1-1199mins</li> <li>• Power-40 W</li> <li>• The instrument should be able to have capacity of 16 x 15ml tubes.</li> <li>• Certified by agencies such CE/ISO.</li> </ul>

16.	<b>Dry bath</b>	<ul style="list-style-type: none"> <li>• Precise digital control and preferably with larger LED digital display having broad temperature range from 5°C up to 150°C.</li> <li>• Easy and user-friendly calibration with rapid temperature increasing rate and an option of used as a water bath.</li> <li>• Leakage proof for heating chamber, Over temperature protection, SSR failure detection Molded aluminum alloy chamber. Function Control software available</li> <li>• Min. programmable temp: 20C</li> <li>• Temp.Accuracy: +/-0.5C</li> <li>• Temp. Increment: 0.1C</li> <li>• Certified by agencies such CE/ISO</li> </ul>
17.	<b>-20<sup>0</sup> freezer</b>	<ul style="list-style-type: none"> <li>• With inner door Front lockable door design with full height handle and vacuum release port Two-times foaming</li> <li>• Technology with double silicon gasket seal Polycarbonate insulated inner doors Insulation thickness: 100 - 155 mm</li> <li>• Two units of Danfoss compressor in parallel connection to reduce noise and improve the cooling rate.</li> <li>• Mixed Refrigerant: CFC Free compressor casters for easy handling Safety functions:</li> <li>• Weight (Net/Gross): 100 kg Input Power: 1100 W, Power Supply: 220V, 50Hz</li> <li>• Certified by agencies such CE/ISO</li> </ul>
18.	<b>Vacuum infiltration pump</b>	<ul style="list-style-type: none"> <li>• Should have double vacuum pump with air Displacement - 45 ltrs/min</li> <li>• Motor Capacity- 1/6 HP</li> <li>• The Pump should have the facility of vacuum gauge with needle valve</li> </ul> <p>Comply to standard safety norms</p>
19.	<b>Incubator</b>	<ul style="list-style-type: none"> <li>• Outer wall made of CRC sheet duly powder coated &amp; inner wall &amp; trays made of stainless steel (SS-304 grade). Triple walled back. Fitted with two air-circulating fans. Gap between inner chamber &amp; outer wall is filled with foamed in-place PUF insulation. Fitted with door operated inner view lamp &amp; transparent see thru inner door. Temperature range from 5°C to 100°C is controlled through microprocessor based digital temperature incubator-cum-controller with LED display. To work on 220volts AC supply.</li> <li>• Volume: 2 Ft</li> <li>• Capacity = 30 liters</li> <li>• No of Shelves: 1Nos</li> <li>• System should be CE/ISO certified</li> </ul>
20.	<b>1.5 ml magnetic rack</b>	<ul style="list-style-type: none"> <li>• Should have strong magnetic base station with removable tube racks</li> <li>• Should have fast and efficient isolation of magnetic beads</li> </ul>

		<p>in 1.5 ml tubes.</p> <ul style="list-style-type: none"> <li>• Should hold 12 x 1.5 ml tubes simultaneously</li> <li>• Should be CE/ISO certified or by any other relevant agency</li> </ul>
21.	<b>Rocker shaker</b>	<ul style="list-style-type: none"> <li>• Should have smooth, uniform and powerful shaking motion with speed range 0-300rpm</li> <li>• Platform size: 295x245mm</li> <li>• Dimensions: 450x260x90mm</li> <li>• Load capacity: up to 5kg</li> <li>• Power supply: 220v 50 Hz</li> </ul>
22.	<b>Steady State Spectrofluorimeter</b>	<ul style="list-style-type: none"> <li>• Measurements mode &amp; Applications: Fluorescence, phosphorescence, chemiluminescence, and bioluminescence</li> <li>• Excitation, emission, constant wavelength synchronous, and constant energy synchronous spectral scanning; 3D excitation/emission scans, 3D synchronous and kinetic scans, Chopper or suitable mechanism should be offered to block the beam when measuring luminescence or phosphorescence. Single or multiple wavelength kinetics alongwith Below Typical performance</li> <li>• Xenon steady state or pulse lamp 450 W /150W /75kW or suitable source</li> <li>• Monochromator: Czerny-Turner/ modified Rowland or equivalent monochromator</li> <li>• Grating: Excitation: 900 lines/mm or suitable grating</li> <li>• Detectors: High performance PMT. The spectrometer should be equipped with a reference photodiode or PMT to monitor excitation lamp intensity fluctuations or reference signals.</li> <li>• Spectral bandwidth: 1.5 to 20 nm or better (continuously variable and computer controlled)</li> <li>• Wavelength range: Excitation range: (200 to 850) &amp; Emission range: (200 to 850)</li> <li>• Wavelength accuracy: <math>\pm 1.5</math> nm or better</li> <li>• Wavelength Repeatability: <math>\pm 0.3</math> or better</li> <li>• Typical Signal to noise ratio <math>&gt; 4000:1</math> RMS sensitivity @ 350 nm excitation, excitation and emission slits 10 nm, 1 s Signal Averaging time (Raman band of water) or better</li> <li>• Resolution : 1.5-2nm or better</li> <li>• Wavelength scan speed <math>&gt; 24000</math>nm/min, or better</li> <li>• Software should be User friendly, original licensed Windows based operating software in the form of CD ROM, it should have built in features like have facility for scan application, kinetics, <math>\mu</math>s life time measurements, concentration</li> <li>• Fully Automated Polarizer Accessory for measuring fluorescence polarization to provide information about a molecule s orientation, conformation, and interaction with</li> </ul>

		<p>other molecules. The accessory should consists of two motorized mechanisms in which the vertical and horizontal polarizers are mounted with polarizers. Wavelength ranges from 279 to 750 nm or better. Should Perform polarization-dependent wavelength scans and single point reads. Measures polarization as a function of temperature using the thermal software application. Should automatically moves out of the optical path when not in use. Should be compatible with Ambient, single cell Peltier, and Water Thermostatted Multicell Holders, Cryostat Mount. Automated polarizer accessory should include excitation and emission filter mechanisms, polarizing film kit.</p> <ul style="list-style-type: none"> <li>• Upgradations: System must be upgradable Microplate Reader Accessory, fiber optics probe &amp; Stop Flow accessories etc</li> <li>• Warranty: One year including UPS &amp; PC</li> <li>• Technical literature and compliance statement must be enclosed. Prices must be upto Srinagar. Offer should be in separate technical and price bid format. Compliance statement and published documents must be included</li> </ul> <p style="text-align: center;"><b>Accessories:</b></p> <ul style="list-style-type: none"> <li>• Variable Temperature Measurement Peltier: single cell Peltier temperature controlled single sample holder for 0 °C - +100 °C , water circulator/pump/fluid circulator ,controlling software alongwith temperature probe should be provided.</li> <li>• Cuvette Pairs.3ml (10mm) &amp; 1ml</li> <li>• Solid ,Powered and Thin Film accessories.</li> <li>• Three Additional genuine License of fluorescence Software's for students.</li> <li>• Suitable i7 or Factory configure PC.3 VKA Online UPS</li> <li>• Three Year replacement Guarantee on Xenon source Or one set of source should be offered</li> </ul>
23.	<p><b>UV-Visible Spectrophotometer with Stopped Flow accessories</b></p>	<ul style="list-style-type: none"> <li>• Double beam Spectrophotometer, Czerny turner monochromator with suitable single or double cuvette option, alongwith below typical performance.</li> <li>• Wavelength Range: 190nm –1100nm.</li> <li>• Measuring modes: Concentration, Absorbance, % Transmission, Multi Wavelength, spectrum Kinetics.</li> <li>• Stray light 370nm: ≤0.009 %T, or better</li> <li>• Resolution: 1.5nm or better</li> <li>• Spectral bandwidth: 1.5nm or better</li> <li>• Detector: Dual silicon detector or PMT</li> <li>• Wavelength Accuracy: +/-0.09 nm or better</li> <li>• photometric accuracy ± 0.0009 Abs or better</li> <li>• linear/photometric range: 4Abs or better</li> <li>• Baseline: 0.0007 Abs or better</li> <li>• Stability: 0.0005 Abs/h or beter</li> <li>• Noise level @500nm (0A) ≤0.00006 Abs</li> <li>• Scan speed: 20000nm/min or better for kinetics</li> </ul>



		<ul style="list-style-type: none"> <li>• Data capturing speed: 70-75 datapoint per second or better for fast kinetic</li> <li>• Stop Flow Accessories: High performance, versatile stopped-flow unit to make kinetic measurements of reactions. With a dead time of 8 ms it can observe reactions on the 10 ms timescale and higher. Temperatures ranging from 0 – 60 °C with Digital temperature display. Should allow mixing ratios from 1:1 up to 1:10. A trigger cable &amp; Pneumatic drive attachment for enhanced reproducibility should be quoted.</li> <li>• Single cell Peltier accessories (0-100 Deg C ) temperature range &amp; stirring mechanism. Lamp replacement guarantee for 3 years or one additional set of lamps must be included</li> <li>• 3.5 ml &amp; 1ml (10 mm) quartz cuvette cell (pair), suitable PC, Laser printer ,02 KVA online UPS with 30 min backup</li> </ul>
24.	<b>Large Format Scanner</b>	<ul style="list-style-type: none"> <li>• <b>Scanner type</b> CIS scanning technology</li> <li>• <b>Size: 44 inch</b></li> <li>• <b>Scan resolution, optical</b> 1200 dpi</li> <li>• <b>Bit depth</b> 48-bit/16-bit</li> <li>• <b>Scan size, maximum</b> 1118 mm</li> <li>• <b>Speed</b> 6-in (150-mm)/sec color 13-in (330-mm)/sec grayscale</li> <li>• <b>Media types</b> Non-abrasive paper, sepia, blueprints, plastic, plastic laminate, foam board, cardboard, newspaper.</li> <li>• <b>Scan file format</b> PDF, PDF/A, TIFF, JPEG, JPEG2000, DWF, multi-page PDF generation</li> <li>• <b>Scan input modes</b> File, email, USB, HDD, network folder, FTP, print</li> <li>• <b>Internal Storage</b> &gt;500 GB</li> <li>• <b>Connectivity</b> Connectivity, standard Dual Gigabit Ethernet (1000Base-T), SuperSpeed USB 3.0</li> <li>• <b>Power and operating requirements</b> Power Input voltage (auto ranging): 100-240 V (±10%), 50/60 Hz, 5 A max</li> <li>• <b>Operating temperature range</b> 0 to 40°C</li> </ul>
25.	<b>Hand held GPS Device</b>	<ul style="list-style-type: none"> <li>• <b>GNSS Accuracy:</b> 1-4 m</li> <li>• <b>Operating System:</b> Android 6.0 to Android 9.0 or Windows based</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>GPS screen size range:</b> 13.4 cm / 5.3" to 15.2 cm / 6"</li> <li>• <b>Screen Type:</b> Color multi-touch</li> <li>• <b>Satellite reception:</b> GPS, GLONASS, Galileo, QZSS, BeiDou, SBAS</li> <li>• <b>Processor range:</b> 1.0 GHz to 2.0 GHz</li> <li>• <b>RAM:</b> 2GB or 4GB</li> <li>• <b>Storage capacity:</b> 8GB or 16 GB internal storage</li> <li>• <b>Waterproof standard:</b> IP65 to IP67 standard</li> <li>• <b>GPS Software:</b> Included</li> </ul>
<p>26.</p>	<p><b>PostScript Plotter with V-Trimmer</b></p>	<ul style="list-style-type: none"> <li>• <b>Plotter specifications</b></li> <li>• <b>Size:</b> 44 inch</li> <li>• <b>Print technology:</b> Thermal Inkjet</li> <li>• <b>Print languages:</b> Adobe PostScript 3, Adobe PDF 1.7, TIFF, JPEG, CALS G4</li> <li>• <b>Model size:</b> 1118 mm</li> <li>• <b>Guaranteed minimum line width:</b> 0.08 mm (ISO/IEC 13660:2001(E))</li> <li>• <b>Theoretical minimum line width:</b> 0.02 mm (PDF addressable @ 1200 dpi)</li> <li>• <b>Line accuracy:</b> ±0.1%</li> <li>• <b>Color accuracy:</b> Median &lt; 1.6 dE2000, 95% of colors &lt; 2.8 dE2000</li> <li>• <b>Color Stability:</b> &lt; 1 dE2000 in less than 5 minutes</li> <li>• <b>Print speed:</b></li> <li>• Fast: 71.4 m<sup>2</sup>/hr on plain media; Normal: 17.2 m<sup>2</sup>/hr on coated media; Best: 4.5 m<sup>2</sup>/hr on glossy media</li> <li>• <b>Print speed color image</b> (draft, coated paper) 50 m<sup>2</sup>/hr</li> <li>• Print speed color image (normal, coated paper) 17.2 m<sup>2</sup>/hr</li> <li>• Print speed color image (normal, glossy paper) 8.6 m<sup>2</sup>/hr</li> <li>• Print speed color image (best, glossy paper) 4.5 m<sup>2</sup>/hr</li> <li>• Maximum optical density (black) 4 L* min/2.5 D</li> <li>• <b>Print quality color (best) Up to:</b> 2400 x 1200 optimized dpi.</li> <li>• <b>Printer drivers included:</b> Raster and PostScript drivers for Windows and macOS; PDF driver for Windows 8 and above</li> <li>• <b>Internal Storage:</b> 500 GB self-encrypting</li> <li>• <b>Memory:</b> 128 GB (virtual)</li> </ul> <p><b>b) CONNECTIVITY AND COMMUNICATIONS</b></p> <ul style="list-style-type: none"> <li>• <b>Connectivity, standard:</b> Ethernet, Fast Ethernet, Gigabit Ethernet, 10/100/1000Base-T Ethernet (802.3, 802.3u, 802.3ab); Hi-Speed USB 2.0 certified interface for direct printing from USB flash drive</li> <li>• <b>Network ready:</b> Standard</li> <li>• <b>Mobile printing capability:</b> Direct print from mobile apps on iOS, Android and Chrome OS;</li> </ul>

		<p><b>c) CARTRIDGES AND PRINTHEADS:</b></p> <ul style="list-style-type: none"> <li>• <b>Number of print cartridges:</b> 9 (cyan, magenta, yellow, matte black, photo black, chromatic red, chromatic green, chromatic blue, gray), optional gloss enhancer</li> <li>• <b>Print heads:</b> 5 universal print-heads (valid for all colors)</li> <li>• <b>Print head nozzles:</b> 2112 per color</li> <li>• <b>Ink drop:</b> 7/3 pl dual-drop weight (M, C, PK, CB, G); 6 pl single-drop weight (Y, CR, MK, CG)</li> <li>• <b>Ink types:</b> Pigment-based</li> </ul> <p><b>d) SUPPORTED PRINTING MEDIA</b></p> <p>Two automatic roll feeds, smart roll-switching, top sheet feed, media output bin, automatic horizontal cutter and vertical trimmer</p> <ul style="list-style-type: none"> <li>• <b>Media types:</b> Photographic, fine art printing material, self-adhesive, banner and sign, bond and coated, backlit</li> <li>• <b>Media sizes supported:</b> A4, A3, A2, A1, A0</li> <li>• <b>Media sizes, custom :</b> 210 x 279 to 1118 x 1676 mm</li> <li>• <b>Media sizes standard (metric rolls):</b> 210 to 1118-mm wide sheets; 279 to 1118-mm rolls</li> <li>• <b>Media width, maximum:</b> 1118 mm</li> <li>• <b>Roll maximum input:</b> 2</li> </ul>
27.	Monochromator based NIRS Analyser	<ul style="list-style-type: none"> <li>• Wavelength range of 400 to 2500 nm,</li> <li>• Principle: Predispersive Monochromator,</li> <li>• Measurement mode: Reflectance and trans reflectance,</li> <li>• Optical bandwidth: 8.75 ±0.1 nm</li> <li>• Spectral resolution : 0.5 nm</li> <li>• Number of data points : 4200,</li> <li>• Absorbance range : up to 2 AU</li> <li>• Wavelength accuracy: &lt;0.05nm</li> <li>• Wavelength precision (Based on a single analyser): &lt;0.005nm,</li> <li>• Wavelength precision, instrument to- instrument (Based on a group of analyzer's) &lt;0.02nm</li> <li>• Photometric noise : 400 – 700 nm &lt; 50 micro au; 700 – 2500 nm &lt; 20 micro au</li> <li>• Networking capability through appropriate software,</li> <li>• Scanning Monochromator with Dual detector Si and PbS detectors,</li> <li>• IP 65 for dust and waterproof protection.</li> <li>• Sample cup identification should be possible with RFID.</li> <li>• Reflectance for dry samples and slurries. Trans-reflectance for liquids.</li> <li>• Internal standards to control the stability of the spectrometer,</li> <li>• Scanning Software Features: Icon based Intuitive and Easy to use,</li> <li>• Clear warning messages for- Product limits-Outliers-Performance control (QC) not passed or followed, User defined fields, History and trend analysis, Printing,</li> </ul>

		<p>Instrument diagnostics.</p> <ul style="list-style-type: none"> <li>• Detailed sample information including spectra and audit trail,</li> <li>• Networking Software: It should able to connect to internet, LAN and WAN and manage all settings on the instrument or instruments in network and also able to control and carry out task such as: Instrument and calibration surveillance, Instrument configurations, Instrument diagnostics for QC management Slope, intercept adjustment, Calibration updates and optimization, Central reporting Export data, Protection of valuable data and calibrations, Online technical support Software should also allow to remotely set up and monitor an instrument in Solo, LAN, WAN.</li> <li>• Fish feed, animal Feed &amp; Flour and grain Calibrations should be provided at the time of installation.</li> <li>• Minimum 10 nos. of similar kind of NIR equipments must have been supplied and installed in last 3 years by the firm in Government/Semi government and cooperatives organizations and details of such customers with their contact details should be provided along with their PO copies.</li> <li>• Performance certificates/ Service reports/installation report of atleast 10 NIR Analysers satisfactorily running should be enclosed.</li> <li>• In case of reseller or authorized distributor participation, The manufacturer should confirm that the reseller/distributor will continue to be their authorized representative in India for the next 5 years and will be responsible for taking care of all After Sales services and such services will in no event be outsourced to any third party or any new distributor appointed by the manufacturer.</li> <li>• If required, the bidder may be asked and should be willing to arrange demonstration of the equipment offered, free of charge at on a mutually agreeable place and date prior to opening of priced bids to ascertain their conformity with tendered specifications.</li> <li>• Equipment should be supplied with Branded PC (Dell/ HP/Lenovo etc. ) intel Core i5 8th generation or above processor, with 8GB RAM, 2TB HDD, 20 inch monitor, original Windows 10, Original Office (Home and Students One time purchase) latest version, and with suitable Printer and online UPS with 2 Hours battery backup.</li> </ul>
28.	<b>SYSTEM : NVIDIA DGX A100 with</b>	<ul style="list-style-type: none"> <li>• GPUs 8 X NVIDIA A100 TENSOR CORE GPUs</li> <li>• GPU Memory 320 GB In Total (8X40GB)</li> <li>• Performance 5 petaFLOPS AI / 10 petaFLOPS INT8</li> <li>• Processor Dual AMD Rome 7742, 128 cores total, 2.25</li> </ul>

		<p>GHz (base), 3.4 GHz (max boost)</p> <ul style="list-style-type: none"> <li>• System Memory 1 TB</li> <li>• System Network 8x Single-Port Mellanox ConnectX-6 VPI 200Gb/s HDR InfiniBand, 1x Dual-Port Mellanox ConnectX-6 VPI 10/25/50/100/200Gb/s Ethernet , Storage OS: 2x 1.92TB M.2 NVMEdrives Internal Storage: 15TB NVME SSD</li> <li>• TF32 Tensor Core</li> <li>• 312 x 8 teraFLOPS (including sparsity)</li> <li>• BFLOAT16 Performance (as mentioned in point below)</li> <li>• BFLOAT16 Performance – 624 x 8 teraFLOPS (including sparsity)</li> <li>• FP64 HPC Perf Score (as mentioned in point below)</li> <li>• 19.5 teraFLOPS</li> <li>• CUDA Cores (as mentioned in point below)</li> <li>• 10368 <b>per GPU</b> (3,456 FP64 CUDA Cores and 6,912 FP32 Cuda Cores)</li> <li>• Tensor Cores (as mentioned in point below)</li> <li>• 432 <b>per GPU</b></li> <li>• Power Requirements (as mentioned in point below)</li> <li>• 6.5 kW Max</li> <li>• Rack space</li> <li>• 6U</li> <li>• GPU communications protocol (as mentioned in point below)</li> <li>• NVSwitches NVLink x 12 (600 GB/s) Multi-instance GPUs (as mentioned in point below)</li> <li>• Various instance sizes with up to 7MIGs @5GB (Per GPU)</li> <li>• Interconnect : (as mentioned in point below)</li> <li>• PCIe Gen4 64 GB/s</li> <li>• OS Support (as mentioned in point below)</li> <li>• Ubuntu Linux OS</li> <li>• USB Port (as mentioned in point below)</li> <li>• 4</li> <li>• RS232 Serial Port (as mentioned in point below)</li> <li>• 1</li> <li>• VGA Port (as mentioned in point below)</li> <li>• 1</li> <li>• Ethernet (RJ45) Ports (as mentioned in point below)</li> <li>• 2</li> <li>• Operating Temperature Range (as mentioned in point below)</li> <li>• Normal AC temperature</li> <li>• Software Support (as mentioned in point below)</li> </ul>
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29.	<b>Sony Camera</b>	<ul style="list-style-type: none"> <li>• A7R4 IV mirrorless 61.0 megapixel with G Master sony24-70mm and 100-400mm lenses</li> </ul>
30.	<b>GPS handsets</b>	<ul style="list-style-type: none"> <li>• Garmin Oregon/Montana 680</li> </ul>
31.	<b>Binoculars</b>	<ul style="list-style-type: none"> <li>• Vanguard 10 x 52</li> </ul>
32.	<b>Range Finders</b>	<ul style="list-style-type: none"> <li>• HAWKE LRF 600 Mag:6x25 FOV:122m</li> <li>• Range : 600m</li> </ul>
33.	<b>Stereomicroscope</b>	<ul style="list-style-type: none"> <li>• Olympus Stereo Microscope</li> <li>• Model Name/Number: SZ61, Magnification : 8x-40x</li> <li>• Eyepiece 10*/22MM FOV</li> <li>• Brand Olympus</li> <li>• Magnification 8x-40x</li> </ul>
34.	<b>Cooling Micro Centrifuge</b>	<ul style="list-style-type: none"> <li>• Remi CM-12 PLUS Cooling Micro</li> <li>• Centrifuge (with 24x1.5 ml Angle Rotor head) byRemi</li> <li>• Max. Speed (RPM). : 16000</li> <li>• Temp Range. : -20<sup>0</sup>C</li> </ul>
35.	<b>Electrophoresis unit with power supply and Thermo Fisher E-Gel Power Snap</b>	<ul style="list-style-type: none"> <li>• Complete Electrophoresis System with Blue LED Illuminator 1139X99</li> <li>• Mfr. No. E1201</li> <li>• Description: myGel InstaView™</li> <li>• Thermo Fisher E-Gel Power Snap Electrophoresis</li> <li>• Model Name/Number E-Gel</li> <li>• Brand Thermo Fisher</li> </ul>

		<ul style="list-style-type: none"> <li>• Excitation Source Blue LED Center Wavelength 465 nm</li> <li>• Camera Type Color, complimentary metal-oxide semiconductor (CMOS)</li> <li>• Gel Image Resolution 1,600 x 1,944 (3MP),8 bits</li> </ul>
36.	<b>Tent: 4 Persons and 6 Persons</b>	Should be 3 or 4 seasons for extreme conditions and glacial expeditions; preferable dimension 150x300x100 cms, Weight; 3-4 Kg, Construction: Outer-210T polyester RipStop, PU coated 7000 mm/cm <sup>2</sup> , Groundsheet-Polyester PU coated 11000 mm/cm <sup>2</sup> with repair kit.
37.	<b>Trekking Poles</b>	Must be all season and all terrain with spring suspension and triple screw locking system, light weight and easy to carry, should have foam handle with adjustable hand straps. Material: Aluminum Alloy/carbon fibre, should have Tungsten tip and cork grips and must stretch between 50 - ~120cm
38.	<b>Trekking Shoes</b>	The shoes should have comfort temperature up to: -5°C in static conditions and -20°C; when moving, Should be breathable with waterproof membrane, Traction on snow Size: 7-10 EU
39.	<b>Gloves</b>	The Gloves must be durably waterproof and breathable, should have strong grip & dexterity with full leather palm.
40.	<b>Mess Tent</b>	Mess tent should be made of tough water-resistant nylon, with external outer fly. Should open from both front and rear ends and should be fitted with a gate flap with heavy duty zipper and cord locks. The tent must have two ventilators on both side walls. Size: 10x8x8 ft.
41.	<b>CAP</b>	The hiking should come with sun protection, removable protection for neck and should be made of quick dry fabric.
42.	<b>Sleeping Bags</b>	Sleeping bag for outdoor use only, 2 layered construction, Inner-soft nylon, Outer-50D 300T Polyester Ripstop, dimensions packed-40x25 cms. Comfort upto -25 °C
43.	<b>Waterproof / Snow proof Jacket</b>	Men's down insulated jacket for outdoor use, should have rising collar, anti-blizzard fur hood, warm, waterproof and comfortable lining for hiking in temperatures up to -40°C, should have 2 way main zipper covered with placket, face pockets with waterproof zippers, chin protection, removable hood, anatomically shaped sleeves at the elbow area, multiple pockets on sides, chest, sleeves with inner pockets. Sizes: M-XXL
44.	<b>Camping Light</b>	The camping light should be small and LED based operable under the rain and snow conditions, should perform well in extreme climate conditions up to -20°C, should be waterproof, with at least 60 lumens output. The camp light should be durable; 1 set of batteries providing not <50 hours of light.

45.	<b>Solar rechargeable lantern</b>	Lantern + USB power hub, dimmable and turbo settings for adjustable light up to 400 lumens. The internal battery should provide come with 1.5A USB output port for recharging phones and other equipment.
46.	<b>Backpack 70 L and 30L.</b>	The back packs should be versatile for long-term trekking with DER back system and duralumin braces. Should come with breathable padding on anatomically shaped waist and shoulder straps, should have multiple pockets and reflective parts. The backpacks must be made of water-resistant and durable polyester, should have internal frame supported by fibre padding and metal rod and should be fitted with utility straps to hold hiking gear/ sleeping bag/ mats.
47.	<b>Anti-Slip Traction Spikes</b>	Anti-slip traction spikes with stainless steel spikes should be suitable for winter hikes and glacial/ice walks.
48.	<b>Dynamic Rope</b>	The dynamic rope should be of high quality with weight <50 gm per meter, and impact force: not <8 kN.
59.	<b>Seat Harness</b>	Seat harness should be lightweight for hill/glacier travel, should be both comfortable and easy to fit with additional features for logging, comfort padding around waist and legs. Sizes: S to XL.
50.	<b>Carabiner</b>	The carabiner should be asymmetric screw gate and easy to use at the end of a lanyard to clip to a belay, should come with key lock system
51.	<b>Mountaineering Sunglasses</b>	Should be multipurpose and for all-round versatile use under snow conditions and on glaciers, must be protected (UV400), Anti-Fog and Anti-Scratch coated.
52.	<b>Walkie-Talkie</b>	Should include option for pre-set channel selections. Glove-friendly controls, optimized for easy handling. Smart Mic Unit with push-to-talk button, on/off switch, volume control, battery indicator and an earphone jack, Rechargeable battery. Should be waterproof and usable range up to 25 Km.
53.	<b>Avalanche Probe</b>	Avalanche probe preferably with poly carbon construction, should be easy and fact to assemble. The probe should be equipped with laser-etched depth markings for measuring snowpack depth. Should be light (not more than 500 gm) and Extendable up to 300 cm. The collapsed length should not be 50 cm and diameter not >1.5 cm.
54.	<b>Camp Axe</b>	The Axe should be constructed with strong stainless-steel, should be equipped with chrome plated steel handle and rubber grip with a nail puller.
55.	<b>Portable Butane Gas Stove with carrying case</b>	Should be equipped with Instastart ignition for matchless lighting system. Should have adjustable burner, durable porcelain coated grate and aluminium burner is to be rust proof for years of use. Should include a carry case.
56.	<b>Portable Water carrier</b>	The water carrier should be of tough polyethylene construction, scratch and impact resistant. Should be



		equipped with fast-flow spigot delivery system with 15-20 L capacity.
57.	<b>Power Bank</b>	Power bank with preferable capacity of 20000mAH, should be fitted with 2 USB ports suitable for mobile and other equipment recharge with output ranging specification of 5V/1A and 5V/2.1A. Should be dual charging both AC & DC
58.	<b>Binocular</b>	The binoculars should have 25x magnification power with large 70 mm objective lens; Carrying case should be included for travel and safe storage; should be tripod adaptable, quick and easy focusing and rugged.
59.	<b>Search torch light long range</b>	Should have operating range up to 2 km and LED based equipped with lithium polymer rechargeable battery; battery backup should be up to 22 hours on standard brightness mode, should be dual charging both AC & DC
60.	<b>FTIR SPECTROMETER</b>	<ul style="list-style-type: none"> <li>• <b>Interferometer</b> Michelson (or suitable) dynamically aligned interferometer, sealed and desiccated optical compartment optimized for highest spectral throughput</li> <li>• <b>Beam Splitter</b> KBr/Ge Mid IR beam splitter</li> <li>• <b>Wavelength Range</b> 7800 – 350 <math>\text{cm}^{-1}</math> or better</li> <li>• <b>Spectral Resolution</b> Resolution must be better than 0.6 <math>\text{cm}^{-1}</math></li> <li>• <b>Source</b> Non-migrating hotspot, single point, Long life source covering entire MIR range</li> <li>• <b>SNR</b> 35000:1 or better (Peak-to-Peak for 1 minute scan).</li> <li>• <b>Laser</b> Temperature controlled solid-state diode laser with long life</li> <li>• <b>Wavenumber Precision</b> 0.001 <math>\text{cm}^{-1}</math> at 2000 <math>\text{cm}^{-1}</math> or better</li> <li>• <b>Wavenumber accuracy</b> 0.05 <math>\text{cm}^{-1}</math> at 2000 <math>\text{cm}^{-1}</math> or better</li> <li>• <b>Detector</b> DTGS /DLATGS detector</li> <li>• <b>Performance Verification</b> Inbuilt/Internal NIST-traceable 1.5 MIL polystyrene film. Internal polystyrene film should have 5 years traceability certificate.</li> <li>• <b>PC Connectivity</b> USB, Wi-Fi connectivity <ul style="list-style-type: none"> <li>• <b>Software</b> The Software should have below features: <ol style="list-style-type: none"> <li>a. Multicomponent search functionality</li> <li>b. Live displays of data collection and spectral data preview</li> <li>c. Visual, drag and drop workflow creator with example templates</li> <li>d. Full Spectral processing and analysis tools (baseline correction, spectral interpretation, peak area, peak height etc.</li> <li>e. Quant prediction for PLS, Beer's Law, CLS etc..</li> </ol> </li> </ul> </li> <li>• <b>Real time feedback</b> Instrument should have multi-coloured LED based Lightbar for the real time feedback of sample match.</li> </ul>

		<ul style="list-style-type: none"> <li>• <b>Library</b> Should be supplied with a genuine and Licensed spectral Library having at-least 25000 spectra or more.</li> <li>• <b>Transmission mode</b> Instrument should also have transmission sample analysis mode and should be supplied with complete Pallet making kit (15ton Hydraulic press, 13mm Kbr die Set of high-quality SS, IR Grade Kbr powder, Agate Motar pestle, Pallet holder etc.)</li> <li>• <b>Warranty</b> 1-year warranty on complete system and <b>minimum 7 years warranty on Source, Laser and Interferometer.</b></li> <li>• <b>Training &amp; Hand holding Support</b> Training should be imparted to at least 2 technical personnel in 3 phases as follows <ul style="list-style-type: none"> <li>i) Basic technique – 1-2 day.</li> <li>ii) During installation – 3 days.</li> <li>iii) Application centre/training centre- 5 days.</li> </ul> <p>In addition to the training, handholding support to minimum 2 of the Technical personnel per FTIR should be provided as and when required throughout the warranty period of 2 years by online / deployment of Service engineer so as to make the Technical personnel efficient in handling the instrument.</p> <p>Installation should be done at our place and at our demand and should b completely free of cost.</p> </li> <li>• Sales after service should be provided by the company person and it should be completely cost free.</li> <li>• <b>Accessories (Optional)</b>FTIR System should have inbuild PC or Should be supplied with external PC having Windows 10 operating system, Core i7 Processor, 8GB RAM, 1TB HDD, 19-inch monitor, keyboard and mouse and Laserjet B &amp; W Printer.</li> <li>• <b>Accessories (Optional)</b> System should have option to upgrade with Touch Screen capability in future. This is required to accommodate the instrument in space constraint laboratory. <ul style="list-style-type: none"> <li>• System should be future upgradable/attached to Diamond ATR assembly as and when required.</li> </ul> </li> </ul>
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**(To be executed on Rs.10/- Stamp paper & attested by Public Notary/Executive Magistrate by the bidder)**

I / We Proprietor/ Partner(s)/ Director(s) of M/S.-----  
hereby declare that the firm/company namely M/S.-----  
-----

----- has not been blacklisted or debarred in the past by Centre for Kashmir Himalayan Biodiversity–Documentation, Bioprospection & Conservation, University of Kashmir, Srinagar or any other Government organization from taking part in Government tenders.

Or

I / We Proprietor/ Partner(s)/ Director(s) of M/S. -----  
hereby declare that the firm/company namely M/S.-----  
-----

-----was blacklisted or debarred by **Registrar, University of Kashmir, Srinagar**, or any other Government Department from taking part in Government tenders for a period of ----- years w. e. f.-----.

The period is over on-----and now the firm/company is entitled to take part in Government tenders. In case the above information found false I/We are fully aware that the tender/ contract will be rejected/cancelled by Centre for Kashmir Himalayan Biodiversity–Documentation, Bioprospection & Conservation, University of Kashmir, Srinagar, and EMD/SD shall be forfeited. In addition to the above Centre for Kashmir Himalayan Biodiversity–Documentation, Bioprospection & Conservation, University of Kashmir, Srinagar, will not be responsible to pay the bills for any completed/ partially completed work.

.....  
**Signature**.....

**Name**.....

**Capacity in which assigned:**  
..... **Name & address of**  
**the firm:** ..... **Date:**  
**Signature of Bidder with seal.**

**Annexure “D”**

**“Q” BID FORMAT**

<b>S. No.</b>	<b>Item Description</b>	<b>Quantity</b>
<b>1.</b>	<b>Mass Spectrophotometer</b>	01
<b>2.</b>	<b>Confocal Microscope</b>	01
<b>3.</b>	<b>Amino Acid Analyzer</b>	01
<b>4.</b>		01
<b>5.</b>		01
<b>6.</b>		01
<b>7.</b>		01
<b>8.</b>		01
<b>9.</b>		01
<b>10.</b>		01
<b>11.</b>		01
<b>12.</b>		01
<b>14.</b>		01
<b>15.</b>		01
<b>16.</b>		01
<b>17.</b>		01
<b>18.</b>		01

This Document is available online in as Excel File. The “Q” Bid has to be submitted electronically in the format given on the Website (BOQ). Technical Quotes should in no case include Rates or hard copies of BOQ. Any bids accompanying BOQ in hard copy format shall be rejected.

**Annexure “E”**

**Technical BID FORMAT**

<b>Sl. No</b>	<b>Documents</b>
1.	Cover letter by bidder (On the Letter Head of the Bidder).
2.	Check List on the letter head of the institute.
3.	Tender Fee.
4.	Earnest Money Deposit (EMD), if required.
5.	Registration Certificate of the Bidder.
6.	Documents in proof of Minimum Average Annual Turnover as per tender Document (Balance Sheet/CA Certificate, etc.)
7.	Documents in proof of Similar work experience (Copy of Purchase Order, etc.)
8.	Affidavit to the effect that the bidder is not Black Listed by any State/Central Universities NIT/IIT/IIT
9.	Documents in proof of Availability of Technical and Financial strength to undertake the Work
10.	Latest Income Tax Return (Last Three Years)
11.	List of Organization/Customer Dealt.
12.	Compliance Sheet
13.	Other Documents (As Mentioned in the tender)

**Annexure “F”**

**List of Organization/Customer Dealt**

Provide at least THREE references with compatible network size and complexity to whom you have provided similar implementation and/or integration services. Please use this format for your response.	
ITEM	RESPONSE
<b>REFERENCE1</b>	
Company / Institution Name Address Name of Equipment Supplied and Installed Contact Name and Title E- mail Telephone	
<b>REFERENCE2</b>	
Company / Institution Name Address Name of Equipment Supplied and Installed Contact Name and Title E- mail Telephone	
<b>REFERENCE3</b>	
Company / Institution Name Address Name of Equipment Supplied and Installed	

Contact Name and Title E-mail Telephone	
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**Compliance Sheet**

**Annexure "G"**

<b>S. No.</b>	<b>Item Name</b>	<b>Brand/Make</b>	<b>Is the item to be supplied as per the specifications as mentioned in BOQ. (Y or N)</b>	<b>Remarks, if any.</b>
<b>1.</b>				
<b>2.</b>				
<b>3.</b>				
<b>4.</b>				
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<b>14.</b>				
<b>15.</b>				
<b>16.</b>				
<b>17.</b>				
<b>18.</b>				

**Signature of Bidder with Seal**