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Tender Details			
		Date : 11-Sep-2019 08:43 PM	
 Print			
Basic Details			
Organisation Chain	Central University of Himachal Pradesh Stores and Purchase- CUHP		
Tender Reference Number	1-25/CUHP/GeM/SoEES		
Tender ID	2019_CUHP_474627_1		
Tender Type	Open Tender	Form of contract	Turn-key
Tender Category	Goods	No. of Covers	2
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No
Payment Mode	Offline	Is Multi Currency Allowed For BOQ	No
Is Multi Currency Allowed For Fee	No		
Payment Instruments		Cover Details, No. Of Covers - 2	
Offline	S.No	Instrument Type	
	1	Bankers Cheque	
	2	Bank Guarantee	
	3	As Per Tender Document	
Cover No	Cover	Document Type	Description
1	Fee/PreQual /Technical	.pdf	Envelop containing Technical bid,EMD and Price of Tender
2	Finance	.pdf	Financial Bid
Tender Fee Details, [Total Fee in ₹ * - 1,000]		EMD Fee Details	
Tender Fee in ₹	1,000	EMD Amount in ₹	3,00,000
Fee Payable To	Central University of Himachal Pradesh	EMD Exemption Allowed	Yes
Fee Payable At	Central University of Himachal Pradesh	EMD Fee Type	percentage
Tender Fee Exemption Allowed	Yes	EMD Percentage	5.0%
		EMD Payable To	Central University of Himachal Pradesh
		EMD Payable At	Central University of Himachal Pradesh
Work /Item(s)			
Title	Equipments for School OF Earth and Environmental Science of Central University of Himachal Pradesh		
Work Description	Purchase of Equipment for Central University of Himachal Pradesh , Kangra		
Pre Qualification Details	Please refer Tender documents.		
Independent External Monitor	NA		

Tender Value in ₹	60,00,000	Product Category	Equipments (Hospital / Lab)	Sub category	NA
Contract Type	Tender	Bid Validity(Days)	180	Period Of Work(Days)	30
Location	Temporary Academic Block, CUHP, Shahpur, Kangra	Pincode	176206	Pre Bid Meeting Place	NA
Pre Bid Meeting Address	NA	Pre Bid Meeting Date	NA	Bid Opening Place	Temporary Academic Block, Shahpur, Distt Kangra HP

Critical Dates

Publish Date	11-Sep-2019 02:00 PM	Bid Opening Date	23-Sep-2019 04:00 PM
Document Download / Sale Start Date	11-Sep-2019 03:00 PM	Document Download / Sale End Date	23-Sep-2019 03:00 PM
Clarification Start Date	12-Sep-2019 09:00 AM	Clarification End Date	20-Sep-2019 05:00 PM
Bid Submission Start Date	12-Sep-2019 09:00 AM	Bid Submission End Date	23-Sep-2019 03:00 PM

Tender Documents

NIT Document	S.No	Document Name	Description	Document Size (in KB)
	1	Tendernotice_1.pdf	Central University of Himachal Pradesh invites tender from the reputed manufacturers or their authorized dealers for supply of Equipment for Earth and Environmental School	317.51

Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	Tender Documents	Tender for Equipment.pdf	Details annexe in Tender Documet	317.51

Tender Inviting Authority

Name	Purchase Officer
Address	Central University of Himachal Pradesh , Temporary Academic Block, Shahpur, Distt Kangra Himachal Pradesh, 176206.



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No. 1-25/CUHP/GeM/SoEES

Dt:

NOTICE INVITING TENDER

Central University of Himachal Pradesh invites tender from the reputed manufacturers or their authorized dealers so as to reach this office on or before scheduled date and time for the Instrument(s), as per specifications given in the Annexure attached to the Tender form. All offers should be made in English and should be written in both figures and words. Tender forms can be downloaded from the website (www.cuhp.ac.in) of the institute.

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

EQUIPMENT DETAILS

S. No.	Ref. No.	Item Description	Qty
1	1-25/CUHP/GeM/SoEES	Electrochemical Workstation	01 No.
2		Incubator Shaker	01 No.
3		Automated Weather Station	01 No.
4		Refrigerated Centrifuge	01 No.
5		Water Velocity Meter	01 Nos
6		PM _{2.5} Sampler	01 Nos
7		Electronic Microbalance(0.1 mg resolution)	01 Nos
8		Electronic Microbalance(0.01 mg resolution)	01 Nos
9		Laser View Finder	01 Nos

- Tenderers have to submit separate tender for each equipment along with separate EMD's upto 5% of quoted price for each equipment shall only be accepted.
- The Envelopes submitted should clearly indicate the Equipment name for which bid is enclosed in it.

Interested bidders may download the tender document from CPPP Portal and also from University website www.cuhimachal.ac.in and deposit Rs. 1000/- (Rupees One Thousand Only) in favour of Finance Officer, Central University of Himachal Pradesh towards tender fees.

IMPORTANT NOTE:

- The **bids** (Technical Bids) will be **opened** in the presence of representatives of tenderers, if any. **If any unscheduled holiday occurs on the date of submission/opening, then next working day shall be the prescribed date of submission/opening. Requests for postponement will not be entertained.** Fax/email bids may not be accepted. The University shall not be responsible for any postal delay about



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non-receipt / non delivery of the bids or due to any reason. Late/Delayed tenders shall not be considered/entertained.

The Hon'ble Vice Chancellor , CUHP reserves the right to accept/reject any offer in part or full without assigning any reason.



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TERMS AND CONDITIONS

Important Conditions of the tender to be abide by the tenderer

1. **Due date:** The tender has to be submitted before the due date. The offers received after the due date and time will not be considered.
2. **Preparation Bids:** The offer/bid should be submitted in two bid systems (i.e.) Technical bid and financial bid. The technical bid should consist of all technical details along with commercial terms and conditions. Financial bid should indicate item wise price for the items mentioned in the technical bid. The Technical bid and the financial bid should be put in separate covers and sealed. Both the sealed covers should be put into a bigger cover along with letter of EMD and to be sealed. The tender number and details should be superscripted on the left side of the outer cover. The Quotations should be valid for 180 days from the date of opening of tender. The Quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to **“The Dean School of Earth and Environmental Science , Temporary Academic Block, Shahpur, Kangra, HP 176206, India”** so as to reach on or before the due date.
3. **Delivery of the tender:** The tender shall be sent to the below mentioned addressee either by post or by courier so as to reach our office before the due date specified in our Schedule. The offer/bid can also be dropped in the tender box on or before the due date specified in the schedule. The tender box is kept in Foyer area of CUHP.
4. **Tender Preparation Expenses:** The tenderer shall solely bear all the costs associated with the preparation and submission of the bid. The University shall in no case be responsible or liable for such costs, regardless of the conduct or outcome of the tender process. In no case, such costs shall be reimbursed by the University.
5. **Opening of the tender:** The offer/bid will be opened by a committee duly constituted for this purpose. The technical bid will be opened first and it will be examined by a technical committee which will decide the suitability as per our specification and requirement. The financial offer/bid will be opened only for the offer/bid which technically meets all our requirements as per the specification. The bidders if interested may participate on the tender opening Date and Time. The bidder should produce authorization letter from their company to participate in the tender opening. Only one representative will be allowed to participate in the tender opening.
6. **Acceptance/Rejection of bids:** The Hon’ble Vice Chancellor, CUHP reserves the right to reject any or all offers without assigning any reason.



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7. **Pre-qualification criteria:**
- Bidders should be the manufacturer / authorized dealer. Letter of Authorization from original equipment manufacturer (OEM) on the same and specific to the tender should be enclosed.
 - An undertaking from the OEM is required stating that they would facilitate the bidder on a regular basis with technology/product updates and extend support for the warranty as well.
 - OEM should be National/international reputed Branded Company.
 - Non-compliance of tender terms, non-submission of required documents, lack of clarity of the specifications, contradiction between bidder specification and supporting documents etc. may lead to rejection of the bid.
8. **Tender Fee/EMD:** Tender fee/EMD is to be obtained from the bidders except those who are registered with the Central Purchase Organization, National Small Industries Corporation (NSIC) or the concerned Ministry or Department.
9. **Refund of EMD:** The EMD will be returned to unsuccessful Tenderer only after the Tenders are finalized. In case of successful Tenderer, it will be retained till the successful and complete installation of the equipment.
10. **RESPONSIBILITY OF PRICES :**
Please quote best minimum prices applicable, **leaving no scope for any further negotiations on prices.** **The quoting party should give a certificate to the effect that** the quoted prices are the minimum and they have not quoted the same item on lesser rates than those being offered to CUHP to any other customer nor they will do so till the validity of offer or execution of the purchase order, whichever is later. We request you to fill the price reasonability certificate format in the enclosed file (Annexure "I")
- The party must have experience of delivery of identical or similar equipment, supplied to any CSIR labs/DBT/DST Universities during last three years along with the final price paid and Performance certificate from them.
11. **Performance Security:** The supplier shall require to submit the performance security in the form of irrevocable bank guarantee issued by any Indian Nationalized Bank for an amount which is equal to the 10% of Purchase Order value within 15 days after the final installation cum acceptance of the equipment at CUHP and Performance Security should be valid for a period of 60 days beyond the date of completion of warranty period of the equipment.
12. **Force Majeure:** The Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include,



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but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

- ii) If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

13. **Risk Purchase Clause:** In event of failure of supply of the item/equipment within the stipulated delivery schedule, the purchaser has all the right to purchase the item/equipment from the other source on the total risk of the supplier under risk purchase clause.

14. Integrity Pact

- a. As per the directives of the Central Vigilance Commission all government departments / organizations / Universities have to adopt an Integrity Pact (IP) to ensure transparency, equity and competitiveness in major public procurement activities. The integrity pact envisages an agreement between the prospective bidders/vendors with the buyer committing the persons/officials of both the parties with the aim not to exercise any corrupt influence on any aspect of the contract. Only those bidders/vendors who are willing to enter in to such an integrity pact with the purchaser would be competent to participate in the bidding.
- b. Integrity Pact also envisages Panel of Independent External Monitors (IEMs) which shall be provided/recommended by CUHP/its labs and Universities with the approval of by CVC.
- c. The integrity pact would be effective from the date of invitation of bids till complete execution of the contract.
- d. The model format of integrity pact (IP) is at Annexure - 3.

15. **Packing instructions:** Each package will be marked on three sides with proper paint/indelible ink, the following:

- i. Item Nomenclature
- ii. Order/Contract No.
- iii. Country of Origin of goods
- iv. Supplier's Name and Address
- v. Consignee details
- vi. Packing list reference number

16. Delivery and Documents:

Delivery of the goods should be made within a maximum of 12 weeks from the date of placement of purchase order and the opening of LC(in case of Imports). Within 24 hours of shipment, the supplier shall notify the purchaser and the insurance company by cable/telex/fax/e mail the full details of the shipment including contract number, railway receipt number/ AAP etc. and date, description of goods, quantity, name of the consignee, invoice etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

- i. 4 Copies of the Supplier invoice showing contract number, goods' description, quantity unit price, total amount;
- ii. Acknowledgment of receipt of goods from the consignee(s) by the transporter;
- iii. Insurance Certificate if applicable;



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- iv. Manufacturer's/Supplier's warranty certificate;



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- v. Inspection Certificate issued by the nominated inspection agency, if any, and the Supplier's factory inspection report; and
 - vi. Certificate of Origin.
 - vii. Two copies of the packing list identifying the contents of each package.
 - viii. The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.
17. **Delayed delivery:** If the delivery is not made within the due date for any reason, the University will have the right to impose penalty 0.5% per week and the maximum deduction is 10% of the contract value / price.
18. **Prices:** The price should be quoted in net per unit (after breakup) and must include all packing and delivery charges. The offer/bid should be exclusive of taxes and duties, which will be paid by the purchaser as applicable. However the percentage of taxes & duties shall be clearly indicated. The price should be quoted without custom duty and excise duty, since CUHP is exempted from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. In case of import supply the price should include all costs including delivery of product upto the destination
19. **Notices:** For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.
- i. **Purchaser:** The Purchase Officer,
Central University of Himachal Pradesh ,
Temporary Academic Block, Shahpur,
Distt: Kangra Himachal Pradesh,
176206.
 - ii. **Supplier:** (To be filled in by the supplier)
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20. **Progress of Supply:** Wherever applicable, supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under:
- i. Quantity offered for inspection and date;
 - ii. Quantity accepted/rejected by inspecting agency and date;
 - iii. Quantity dispatched/delivered to consignees and date;
 - iv. Quantity where incidental services have been satisfactorily completed with date;
 - v. Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;
 - vi. Date of completion of entire Contract including incidental services, if any; and
 - vii. Date of receipt of entire payments under the Contract (In case of stage-wise inspection, details required may also be specified).
21. **Inspection and Tests:** Inspection and tests prior to shipment of Goods and at final acceptance are as follows:



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- After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications attached to the purchase order(if required). Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser shall be present at the supplier's premises during such inspection and testing if need is felt. The location where the inspection is required to be conducted should be clearly indicated. The supplier shall inform the purchaser about the site preparation, if any, needed for installation of the goods at the purchaser's site at the time of submission of order acceptance.
 - The acceptance test will be conducted by the Purchaser(if required), their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation and ascertaining conformity with the ordered specifications and quality. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.
 - In the event of the ordered item failing to pass the acceptance test, a period not exceeding one weeks will be given to rectify the defects and clear the acceptance test, failing which the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.
 - Successful conduct and conclusion of the acceptance test for the installed goods and equipments shall also be the responsibility and at the cost of the Supplier.
22. **Resolution of Disputes:** The dispute resolution mechanism to be applied pursuant shall be as follows:
- i. In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Hon'ble Vice Chancellor, Central University of Himachal Pradesh and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
 - ii. In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
 - iii. The venue of the arbitration shall be the place from where the order is issued.
23. **Applicable Law:** The place of jurisdiction would be Himachal Pradesh, INDIA.

24. Right to Use Defective Goods

If after delivery, acceptance and installation and within the guarantee and warranty period, the



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operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to



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continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

25. Supplier Integrity

The Supplier is responsible for and obliged to conduct all contracted activities in accordance with the Contract using state of the art methods and economic principles and exercising all means available to achieve the performance specified in the contract.

26. Training

The Supplier is required to train the designated Purchaser's technical and end user personnel to enable them to effectively operate the total equipment.

27. Installation & Demonstration

The supplier is required to done the Installation and demonstration of the equipment within one month of the arrival of materials at the CUHP site of Installation, otherwise the penalty clause will be the same as per the supply of materials.

28. **Insurance:** For delivery of goods at the purchaser's premises, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance shall be valid for a period of not less than 3 months after Installation and commissioning.

29. **Incidental services:** The incidental services also include:

- Furnishing of 01 set of detailed operations & maintenance manual.
- Arranging the shifting/moving of the item to their location of final installation within CUHP premises at the cost of Supplier through their Indian representatives.

30. **Warranty:** 1. Warranty period shall be at least 3 years from date of Installation of Goods at the CUHP site of installation. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests. **The warranty should be comprehensive on site.**

Note: If the OEM warranty is for 12 Months, additional extended warranty of 24 months should be quoted separately with or without price. Also, If a different period of warranty has been specified in the 'Technical Specifications of the equipment' then the period mentioned above shall stand modified to that extent.

2. The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall immediately within in 02 days arrange to repair or replace the defective goods or parts thereof free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter. The period for correction of defects in the warranty period is 02 days. If the supplier having been notified fails to remedy the defects within 02 days, the purchaser may proceed to take such remedial action as may be necessary, at the



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supplier's risk and expenses and without prejudice to any other rights, which the purchaser may have against the supplier under the contract.

31 **AMC:** Annual Maintenance Contract (AMC)/Comprehensive Maintenance Contract (CMC) up to next five years after warranty period is over, should be quoted separately.

32 **Delivery Schedule:** The tenderer should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.

32. Governing Language

The contract shall be written in English language. English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the same language.

33. Applicable Law

The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction.

34. Notices

Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX or e mail and confirmed in writing to the other party's address. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

35. Taxes and Duties

Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser. However, VAT in respect of the transaction between the Purchaser and the Supplier shall be payable extra, if so stipulated in the order.

36. **Agency Commission:** Agency commission if any will be paid to the Indian agent in Rupees on receipt of the equipment and after satisfactory installation. Agency Commission will not be paid in foreign currency under any circumstances. The details should be explicitly shown in Tender even in case of Nil commission. The tenderer should indicate the percentage of agency commission to be paid to the Indian agent.

37. Payment:

- Payment will be made through irrevocable Letter of Credit (LC). Letter of Credit (LC) will be established in the favour of foreign Supplier after the submission of performance security. The letter of credit (LC) will be established on the exchange rates as applicable on the date of establishment.
- i. For Imports, LC will be opened for 100% FOB/CIF value. 80% of the LC amount shall be released on presentation of complete and clear shipping documents and 20% of the LC amount shall be released after the installation and demonstration of the equipment at the CUHP site of installation in faultless working condition for period of 60 days from the date of the satisfactory installation and subject to the production of unconditional performance bank guarantee as specified in Clause 9 of tender terms and conditions.



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- ii. Indian Agency commission (IAC), if any shall be paid after satisfactory installation & commissioning of the goods at the destination at the exchange rate prevailing on the date of negotiation of LC documents, subject to DGS&D registration for restricted items.
- iii. All the bank charges within India will be borne by the University and outside India will be borne by the Supplier.
- For Indigenous supplies, 100% payment shall be made by the Purchaser after delivery, inspection, successful installation, commissioning and acceptance of the equipment at CUHP in good condition and to the entire satisfaction of the Purchaser and on production of unconditional performance bank guarantee as specified in Clause 11 of tender terms and conditions.

In case of indigenous supply the 100% payment will be made through bank transfer after receipt & installation of the equipment. The following bank details to be submitted along with tender:

- i. Name of Beneficiary
- ii. Account No.
- iii. Name of Bank:
- iv. IFSC Code:
- v. MICR Code:
- vi. Swift Code:

38. **User list:** Brochure detailing technical specifications and performance, list of industrial and educational establishments where the items enquired have been supplied must be provided.

39. Manuals and Drawings

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

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

41. **Terms of Delivery:** The item should be supplied to our destination in case of local supply. The Installation/Commissioning should be completed as specified.

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



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The supplier shall visit the University and see the site where the equipment is to be Installed and may offer his advice and render assistance to the University in the preparation of the site and other pre Installation requirements.

43. **Installation:** The equipment or machinery has to be Installed or commissioned by the successful bidder within 30 days from the date of receipt of the item at CUHP. In case of any mis-happening/damage to equipment and supplies during the carriage of supplies from the origin of equipment to the Installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance company as per his convenience. CUHP will not be liable to any type of losses in any form.
44. **Spare Parts:** The Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
 - In the event of termination of production of the spare parts:
 - Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
 - Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

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

45. **Defective Equipment:** If any of the equipment supplied by the Tenderer is found to be substandard, refurbished, unmerchantable or not in accordance with the description/specification or otherwise faulty, the committee will have the right to reject the equipment or its part. The prices of such equipment shall be refunded by the Tenderer with 18% interest if such payments for such equipment have already been made. All damaged or unapproved goods shall be returned at suppliers cost and risk and the incidental expenses incurred thereon shall be recovered from the supplier. Defective part in equipment, if found before Installation and/or during warranty period, shall be replaced within 45 days on receipt of the intimation from this office at the cost and risk of supplier including all other charges.

46. Termination for Default

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

- If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the order, or within any extension thereof granted by the Purchaser; or
- If the Supplier fails to perform any other obligation(s) under the Contract.
- If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices

in competing for or in executing the Contract. For the purpose of this Clause:

- “**Corrupt practice**” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
- “**Fraudulent practice**” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition;”



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- In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.
47. **Shifting:** After 1-2 years once our new building is ready, the supplier has to shift and reinstall the Instrument free of cost.
48. **Downtime:** During the warranty period not more than 5% downtime will be permissible. For every day exceeding permissible downtime, penalty of 1/365 of the 5% FOB value will be imposed. Downtime will be counted from the date and time of the filing of complaint with in the business hours.
49. **Training of Personnel:** The supplier shall be required to undertake to provide the technical training to the personnel involved in the use of the equipment at the University premises, immediately after completing the Installation of the equipment for a minimum period of one week at the supplier's cost.
50. **Disputes and Jurisdiction:** Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within Himachal Pradesh.
51. **Compliance certificate:** This certificate must be provided indicating conformity to the technical specifications.
52. **Acknowledgement:** It is hereby acknowledged that we have gone through all the conditions mentioned above and we agree to abide by them.

SIGNATURE OF TENDERER
ALONG WITH SEAL OF THE COMPANY WITH DATE



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BID PARTICULARS

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



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Compliance statement for the tender specifications

Tender Ref No.: 1-25/CUHP/GeM/SoEES/

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



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Annexure – 1

PRICE REASONIBILITY CERTIFICATE (to be submitted in financial bid envelope)

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

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

Seal and Signature of the tenderer



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Format of the Integrity Pact INTEGRITY PACT

Between

Central University of Himachal Pradesh (CUHP) hereinafter referred to as "The Principal".

Andherein referred to as "The Bidder / Contractor."

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for.....The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/ transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - (b) The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - (c) The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary action.

Section 2 – Commitments of the Bidder(s)/Contractor(s)

The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

- (a) The Bidder(s)/Contractor(s) will not, directly or through any other Person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.



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(b) The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, Certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

(c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any.

Similarly the

Bidder(s)//Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s)/Contractor(s).

Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" is annexed and marked as Annexure.

(e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2) The Bidder(s)/Contractor(s) will not Instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future Contracts If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as per the procedure mentioned in the "Guidelines on Banning of business dealings". Copy of the "Guidelines on Banning of business dealings" is annexed and marked as Annex -"B".

Section 4 – Compensation for Damages

(1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.

(2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous transgression

(1) The Bidder declares that no previous transgressions occurred in the last 3 (three) years with any other Company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the procedure mentioned in "Guidelines on Banning



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of business dealings”.

Section 6 – Equal treatment of all Bidders/Contractors/Sub-contractors

- (1) The Bidder(s)/Contractor(s) undertake(s) to demand from all Subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidders/Contractors/Sub contractors (1)

The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

(2) The Monitor is not subject to Instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Dean , SoEES. The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.

(4) The principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

(5) As soon as the Monitor notice, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit nonbinding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(6) The Monitor will submit a written report to the Dean, SoEES within 30 days from the date of reference or intimation to him by the Principal and should the occasion arise, submit proposals for correcting problematic situations.

(7) Monitor shall be entitled to compensation on the same terms as being extended to/provided to Director, CUHP.

(8) If the Monitor has reported to the Dean, SoEES, CUHP, a substantiated suspicion of an offence under relevant IPC/PC Act, and the THE Dean, SoEES CUHP has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

(9) The word ‘Monitor’ would include both singular and plural.



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Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by THE DIRECTOR, CUHP.

Section 10 – Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and Jurisdiction is the Registered Office of the Principal, i.e. Himachal Pradesh.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & On behalf of the Principal)
(Office Seal)

(For & On behalf of Bidder/Contractor)
(Office Seal)

Place.....

Place.....

Date.....

Date.....

Witness 1:
(Name & Address): _____

Witness 2:
(Name & Address): _____



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TECHNICAL SPECIFICATIONS OF THE EQUIPMENTS

1. Electrochemical Workstation

Technical Specifications:

Compliance voltage: ± 20 V or better at ± 400 mA or more

Maximum Output Current: ± 400 mA or better at ± 20 V or more

Output Voltage Range: ± 10 V or more

Current Ranges: smallest current range: ± 10 nA to current range 100 mA in multiple ranges or more

Potentiostat Rise/fall Time: 300 ns or better

Interface: USB interface for connection with PC

Hardware for EIS measurements: Qty 1

Hardware and software for Electrochemical Impedance Spectroscopy measurements in potentiostatic and galvanostatic control, over frequency range of 10 μ Hz to 1 MHz and variable temperature. It should be possible to perform EIS measurements over entire frequency range from 10 μ Hz to 1 MHz upto 400 mA currents. Data presentation: Nyquist, Bode, Admittance, Dielectric, Mott-Schottky, Data analysis: Fit and Simulation, Find circle, Element subtraction

Hardware for sophisticated electrocatalysis research for conducting experiments on oxygen reduction reaction (ORR), Hydrogen Evolution Reaction (HER), Water Splitting and Carbon Dioxide Reduction :

(1)Module for conversion of the system into a two channel potentiostat with two working electrodes sharing the same AE & RE:Qty 1

(2)Rotating Ring Disc Electrode :Qty 1

Specifications: Speed control Manual and software, Motor speed range 1500-8000 RPM, Manual speed setting 150 - 8,000 RPM in 1 RPM steps, Acceleration/deceleration 3,800 RPM/s \pm 10, Maximum current 400 mA \pm 5.

RRDE Tips: GC Disc and Pt Ring 1no

(3)Photo-electrochemical H-Type Cell for studying HER & OER catalysis of water-splitting:Qty 1

A Magnetic Mount Photo-electrochemical H-Cell is required for two-compartment photoelectrochemical analysis separated by Nafion membrane with exposure area: 1 cm², Electrolyte volume: 2x10 mL, Substrate size: 25 mm x 25 mm, Substrate thickness: 3 mm \pm 0.5

Electrochemistry Cell:

It should consist of the following:

- 20 mL to 80 ml glass cell
- Base plate and stand
- Gas purging tube minimum 2 no
- 300 ml cell 1 no
- Disc working electrodes of 3 mm of GC
- Pt and Au² number each
- Pt wireCounter electrode minimum 2 no
- Ag/AgCl reference electrode double junction type for use in Aqueous and Non-Aqueous media 2 no
- Polishing kit and gas purging accessories minimum 2no
- Screen printed electrodes of Au, 2 Pt, C 50 each along with necessary cable to attach with the instrument.



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Electrochemical Software: Qty 1

Software should have facility to record additional signal viz EQCM, bi-potentiostat etc. Import/export ASCII. Ready-to-use Vis & Generic interface for .Net applications should be included. It should have facility to display up to 4 plots simultaneously. The software should support following basic electrochemical measurements: Cyclic Voltammetry, Sampled DC Voltammetry, Tafel Plots, Differential Pulse Voltammetry, Square Wave Voltammetry. Electrochemical methods like Chrono-Amperometry, Chrono-Coulometry & Chrono-Potentiometry. The software upgradation should be free of cost

Photokit for Photovoltaic Measurements consisting of following: Qty 1

- Optical bench with ruler
- Calibrated photodiode holder
- LED cover holder
- One standard LED with kit
- Various types of LED's to be quoted as optional

Computer & Printer: Qty 1

Compatible branded PC with i7 configuration, Laser Printer, 2 KVA Online UPS with one hour back up should be quoted.

Installation: Free of Cost

Warranty : 3 years (CMC)

Optional : Price for additional channels

Upgradation: The system should be upgradeable with accessories 10A current Booster, Electrochemical Quartz Crystal Microbalance, UV Visible Spectrophotometer etc

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments. Free training and installation by the trained engineer should be done.

2. Incubator Shaker

Technical Specifications:

Stackable units with flasks up to 6 Liters Temperature range **4°C to 60°C**; $\pm 0.5^\circ\text{C}$

Precisely monitor and control chamber temperature over complete range with $\pm 0.1^\circ\text{C}$ accuracy at 37°C

Over temperature safety feature with independent thermostat provides additional backup by controlling heat if main temperature controller fails.

Solid-state DC brushless motor, variable speed control from **20 to 450rpm** ± 1

Continuous and timed operation from 0.1 hour up to 999 hours. View speed, operating time and temperature simultaneously on three individual LED displays. Visual/audible signals alert user to temperature deviations.

Shaker shutdown and audible/visual alarms signal if unit operates $\pm 10\%$ of set speed, preventing the shaker from walking Triple eccentric drive handles heavy workloads, provides uniform agitation.

User-adjustable speed calibration can be performed using a digital handheld tachometer.

Retains parameters during power failure and restarts unit automatically after power is restored.

RS-232 interface allows remote monitoring of speed, time and temperature

Corrosion-resistant stainless-steel chamber accommodates a variety of **24 x 24 inch**.

Durable powder-coated, cold-rolled steel exterior construction

Electrical outlet inside chamber provides power for safe operation of shakers, stirrers or rotator.

Compatible stabilizer should be supplied along with equipment.

Certifications: IEC/UL 61010 for Electrical Safety & European CE



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Separate Platform should be provided for below mentioned Flask Volumes.

Flask:	50ml-	minimum 36
	100/125ml-	minimum 25
	500ml-	minimum 16

Non Shakable Tray should be provided in the incubator Chamber for Petri Plates incubation.

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments. Free training and installation by the trained engineer should be done.

3. Automated Weather Station

Technical Specifications:

(i). General Technical Requirements

- Sensors working life time should be specified.
- Calibration requirement and frequency for each sensor should be defined.
- Required in-house and mobile calibration equipment be identified and priced.
- Recommended and mandatory spares should be listed with a detailed price list.
- Required factory level and onsite training should be listed and priced.
- Manual for the installation, maintenance and calibration should be provided in a print and multimedia format.
- Sensor must be coated to protect against dust and chemicals.
- Air temperature and humidity sensors must be protected in a naturally ventilated radiation shield.
- All sensors interchangeable and shall be independently operated by the electronics and data processing unit so that a possible failure of any of the sensors shall not affect the performance of the remaining sensors.
- The system must have lightning protection
- The AWS should comprise of the following:
 - a) Tilt able pole mast
 - b) Electronic enclosure
 - c) Power supply
 - d) Communications
 - e) Sensors
 - f) Mounting accessories
 - g) Data collection and display software
 - h) Service packages

I. Sensors

The system consist at least maximum and minimum air temperature, relative humidity, wind speed and direction, rain gauge, pressure and solar radiation.



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Sr. No.	Parameter Measured	Specification
1.	Wind Speed (Anemometer)	<ul style="list-style-type: none">Measuring range: 0.0 to 55m/s or betterResolution: < 0.1 m/s or betterAccuracy: ± 0.5 m/s or betterOperating Temp: -10°C to $+60^{\circ}\text{C}$ or betterRelative Humidity: 5 - 100% or better
2.	Wind Direction (Wind Vane)	<ul style="list-style-type: none">Measuring range: 0 to 360 Deg. or betterOperating temperature: -10°C to $+60^{\circ}\text{C}$ or betterResolution: 1° or betterAccuracy: ± 3 Deg. Or better
3.	Air Temperature	<ul style="list-style-type: none">Measurement range: -20°C to $+60^{\circ}\text{C}$ or betterResolution: 0.1°C or betterAccuracy: $\pm 0.3^{\circ}\text{C}$. or better
4.	Relative Humidity	<ul style="list-style-type: none">Range: 0 - 100%Accuracy: + 2% RH or betterOperating Temp. range: -10°C to $+60^{\circ}\text{C}$
5.	Solar Radiation (Pyranometer)	<ul style="list-style-type: none">Spectral range (50% points): 310 nm to 2800 nmSensitivity: $20 \mu\text{V}/\text{Wm}^2$ or betterResponse Time: 5 Sec or betterMaximum irradiance: $4000 \text{W}/\text{m}^2$ or betterOperating temperature: -10°C to $+60^{\circ}\text{C}$Expected daily accuracy: $\pm 5\%$ or better
6.	Rain, Precipitation	<ul style="list-style-type: none">Resolution/Sensitivity: 0.25 mm or betterRainfall capacity: UnlimitedAccuracy: $\pm 2\%$ (at $< 50 \text{mm}/\text{hr.}$) or betterMeasuring Principle: Tipping bucket - double spoon
7.	Pressure	<ul style="list-style-type: none">Range: 500-1100hPaOperating temperature range $-10- 60^{\circ}\text{C}$Resolution: 0.10hPaCalibration uncertainty: $\pm 0.15\text{hPa}$Total accuracy: $\pm 0.25\text{hPa}$Long term stability: $\pm 0.10\text{hPa}$Sensor type: solid stateResponse time: 10 seconds or better



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- The AWS data output format should include the most common file formats in order to enable easy uploading of data to a common spreadsheet, GIS or database software for further refinement and storage.

II. Data logging

A multipurpose Meteorological Data Measurement Logger to receive data from various meteorological sensors and store the values within it at minimum of one-year back up. The stored data should be retrieved by direct connection to the logger with laptop computer. The logger should be able to handle various types of sensors in order to expand the system. The logger must be housed in a rugged; water and dust proof sealed enclosure with pad locks that can withstand direct exposure to harsh environment.

III. Power Supply

- AWS should be powered direct from the mains supply or from a solar panel.
- The power supply should include back up battery, charging regulator and solar panel. The remote stations use a battery with a regular charge from the solar panel when the sun shines. The system should include rechargeable, sealed and maintenance free backup batteries sufficient for keeping the station running at least for three months without recharging. The backup batteries must have a charge regulator with protection against battery overcharge or deep discharge. The charger must have an indication of the battery condition and charging state. Working time on a full charge and the total working time of the battery should be specified.

IV. Communication

- A PC-Based Central Receiving Station can be installed at Office.
- The system must have a serial-pass-through-mode which allows direct communication via maintenance line with any smart sensor connected to the system via serial interface.
- The system must have a connection port to which a PC can be connected in order to perform system initialization, device software update, and configurations, download stored data and monitor the unit operation.

V. Central Data Processor and gateway

The central data processor should have the following features.

- Central Station should have a Database Management Software System
- Data collection, processing, displaying, archive (back up)
- The software should have capabilities to real time data as well as "Archived" historical data at a pre-defined interval programmed in the base station software automatically without user intervention.
- The data management software should process raw data in 15 minutes to hourly, daily, monthly, etc.
- The central system should operate with a well-known operating system like MS-Windows, Linux, with the latest versions.

VI. Accessories

- All sensors should be supplied with cables that are UV proof to ensure good performance for years.
- All support arms holding sensors should be manufactured from anodized aluminum or galvanized steel and fitted to the tower-scaffold by means of stainless steel and/or hot galvanized clamps and stock of screws.
- Spare parts will be available for a period of 3 years.
- The sensors provided should come calibrated from the factory with Certificates of Calibration.
 - Users and technical service manuals be included.
 - Tools for installation and maintenance must be included.
 - Sensor tester, pole mast arm for rain gauge installation, battery charger.



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VII. Equipment Enclosure:

All parts of the electronic and data processing unit must be enclosed in a sealed robust enclosure with easy access to all components with mounting options at least to a mast or a wall. The enclosure shall have the following

- All connections must be through waterproof connectors, one connector for each sensor or device.
- All connectors must be clearly labeled as to their function.
- The connectors shall be installed at the bottom side of enclosure to reduce the risks of water or humidity penetration.
- The enclosure shall be properly vented with a device, which will not allow humidity to enter in the enclosure.

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments. Free training and installation by the trained engineer should be done.

4. Refrigerated Centrifuge

Technical Specifications:

Bench top refrigerated Centrifuge.

Max RCF: 30000 x g or better

Max Rpm: 17000 RPM or better

Control System: Microprocessor

Drive System: Direct, brushless induction low profile motor

Rotor Locking System: Should be automatic & should not require any tool for exchange of rotors.

Machine Should have Imbalance Detection System:

Machine Should have Multiple programs

Temperature Range: -5 to 40-degree C

Machine Should have Acceleration Deceleration Rates

Centrifugation Chamber Stainless Steel

Max Timer Range: 9.99hrs (Approx) + continuous

Certifications: European CE marked/BIS mark UL-61010 (Please attach certificates)

Machine should be supplied with following rotors:

Fixed angle rotor 24 x 2ml RPM: 17000 or more & G force 30000 xg.

Swing out rotor for Cell culture with 8 x 50 mL and 8 x 15 ml adapter RPM: 4000 & RCF: 3000 x g Microplate 96 well Plate rotor with RPM: 4000

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments.

Free training and installation by the trained engineer should be done.

5. Water Velocity Meter (ADCP)



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Technical Specifications:

Acoustic Doppler Current Profiler (ADCP) with Modular Survey Boat

River Surveyor specifications

- Profiling Range 0.06-40m
- Depth range 0.20-80m
- Accuracy $\pm 0.25\%$ measured velocity
- Resolution 0.001m/s
- Multi-Band - Multiple acoustic frequencies
- Vertical acoustic beam
- 360° compass and two-axis tilt sensor
- Reverberation control with ping rates to 70Hz
- Bottom-tracking
- RTK GPS range 0.3-80m
- Compatible with portable surveyor boat provided
- Field Tough book with supporting software for processing the data

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments.

Free training and installation by the trained engineer should be done.

6. PM_{2.5} Sampler

Technical Specifications:

Size Selection: Omni-directional air inlet with PM₁₀ separation through an impactor followed by PM_{2.5} separation through a “Well Impactor Ninety-Six” (WINS) Impactor

Flow Rate: 1 m³/hr (16.7 L/min) controlled by mass flow controller

Vacuum Pump: Oil Free, non-pulsating pump driven by induction motor for stable flow rate

Power requirement: Nominal 180-240 V, Single Phase, 48-52Hz AC mains supply.

Filter Holder: Filter holder designed to accept any standard 47 mm diameter filter media

Sample Volume: Dry Gas meter records the total air volume sampled

Elapsed time indicator: Real Time clock records the operating time for each sample

Flow recorder: Digital Microcontroller based system records flow rate, volume of air sampled, air temperature and filter temperature in non-volatile flash memory

Calibration unit: Leak Check & Flow rate measurement adaptor

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments.

Free training and installation by the trained engineer should be done.

7. Electronic Microbalance (0.1mg resolution)



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TAB, Shahpur, District Kangra, (H.P)]

Technical Specifications:

Calibration	Internal
Maximum capacity	220 g
Weighing platform dimensions \varnothing	90 mm
Readability	0.1 mg
Repeatability	0.1 mg
Linearity	0.2 mg
Settling time	2 s
Sensitivity temperature drift	2.0 ppm/ $^{\circ}$ C
Applications	Formulation, Totaling, Dynamic Weighing, Piece Counting, Density, Percent Weighing, Check Weighing, Statistics, Free Factor

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments. Free training and installation by the trained engineer should be done.

8. Electronic Microbalance (0.01mg resolution)

Technical Specifications:

- Semi micro balance
- **Maximum capacity** – 60/210 gm
- **Readability** – 0.01 mg
- **Pan Size-** 80mm dia grid pan or better
- **Perfect self Auto calibration/ Temp. control smart calibration (PSAC)** - Should perform automatic internal calibration if temperature changes or defined time interval elapsed.
- **Brilliant readability** – should have High contrast graphical display with backlit.
- Should have brilliant MONOTECH/ Better Technology.
- Should have alpha numeric LCD backlit display with A.E.P.
- **Should have password protection.**
- Should have multiple application modes- PCS, % weighing, animal/dynamic weighing, check weighing, determination, Formulation etc...
- Should have multiple measuring units
- Should have full capacity tare range
- Should have RS232 OR USB communication facility
- **Should have inbuilt overload tracker for overload Protection.**
- Should have ISO GLP Compliance.
- Should have automatic shut -off function for power saving.

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/

For Any query please contact Dr. Dilbag Singh 7018042007



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9. Laser View Finder

Technical Specifications:

- 360° tilt sensor
- Digital zoom “Path Finder”
- Measuring accuracy $\pm 1\text{mm}$
- Range 0.05 - 200m
- Small and handy Tripod
- Water and Dust Proof
- Shock Proof
- Smart Horizontal Mode
- Height tracking
- Night Mode
- Good Battery Backup > 25 hrs

Installation: Free of Cost

Warranty: 3 Years (CMC)

The vendor/ supplier should have proven record of supply of the instrument in minimum 5 (five) National Laboratories/ University.

The vendor/ supplier should have proven record of minimum 3 years of supply experience of such instruments. Free training and installation by the trained engineer should be done.