

BABA GURU NANAK UNIVERSITY NANKANA SAHIB



BIDDING DOCUMENTS FOR Purchase of Science Lab Equipment

Tender No. BGNU/Tender/2026-27/12

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Section-I: Invitation to Bids

1.1 INVITATION TO BIDDERS

Tender Notice

Bid Ref No. BGNU/Tender/2026-27/12 for Purchase of Science Lab Equipment

Baba Guru Nanak University Nankana Sahib invite e-procurement bids under PPRA Rules, on **item wise basis**, from the Bidders i.e., firms/companies/sole proprietor/engaged in manufacturing/trading, registered with relevant Registration Authorities and Tax Departments/ Authorities (Income Tax & Sales Tax). The details of the tender are given below:

S#	Tender #	Tender Name	Qty	Estimated Price	Closing Date & Time	Opening Date & Time
1.	BGNU/2026-27/12	Purchase of Science Lab Equipment	Details in Tender Document	22.500 million	09-11-2026 till 10:00 AM	09-11-2026 at 10:30 AM

- Bidding shall be conducted through E-Procurement (**Single Stage Two Envelope**) as specified in the Punjab Procurement Rules PPRA 2014 which is open to all eligible bidders as defined in the bidding document.
- Interested eligible bidders can participate through Punjab e-procurement System
<https://ep.punjab.gov.pk/auth/login>
- The bidding documents containing all Terms & Conditions, requirements, Specification etc. are immediately available under Rule 25(1), free of cost, at PPRA i.e. <http://ppra.punjab.gov.pk>, Punjab e-Procurement System website i.e. <https://ep.punjab.gov.pk> and <http://bgnu.edu.pk>.
- All bids on **item wise basis** must be uploaded through e-procurement System
<https://ep.punjab.gov.pk/auth/login> before closing date and time.
- E-bids would be opened under PPRA Rule 30(1) in presence of bidders or their representatives.
- All Bids must be accompanied by a Bid Security of 2% of the estimated cost, to be deposited electronically through the facility available at Punjab e-Procurement System (EP).
- Bid Validity will be 120 days.
- The URL of the website of the PPRA is (<http://eproc.punjab.gov.pk/viewTender.aspx>) and the response time shall be calculated exclusively from 23.10.2026 the date of publication of the advertisement on the website of the PPRA.
- In case of official holiday on the day of submission, next day will be treated as closing date.

Secretary Purchase Committee

Baba Guru Nanak University, Nankana Sahib.

Ph.056-9201171, www.bgnu.edu.pk Email: purchase@bgnu.edu.pk

Section-II: Instructions to Bidders (ITB)

2.1. Introduction

2.1.1 Scope of Bid

- i) Baba Guru Nanak University, Nankana Sahib invites Bids for the provision of Goods as specified in the Section-IV Bid Data Sheet (BDS) and Section III - Technical Specifications & Section VII-Schedule of Requirements. The successful Bidders will be expected to deliver, install / commissioning the goods within the specified period and timeline(s) as stated in the BDS.

2.1.2 Source of Funds

- i) Baba Guru Nanak University, Nankana Sahib has available Regular Budget. The University intends to apply the provided funds / a portion of this budget to make eligible payments under the contract for which the Invitation to bids has been issued.

2.1.3 Eligible Bidders

- i) The Invitation to Bids is open to companies/sole proprietor/registered with relevant Registration Authorities and Tax Departments/ Authorities (Income Tax & Sales Tax & Punjab Sales Tax etc.)
- ii) Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by Baba Guru Nanak University to provide consultancy services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation to Bids [if applicable].
- iii) Government-owned enterprises may participate only if they are duly/legally authorized in this regard by the respective/relevant competent forum/authority.
- iv) Bidders shall not be under a declaration of blacklisting by the Baba Guru Nanak University Nankana Sahib.
- v) A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be non-Responsive. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if they:

- a) Are associated or have been associated for the procurement of the goods to be purchased under this Invitation for Bids, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring Agency to provide consulting services for the preparation of the design, specifications and other documents to be used.
 - b) Have controlling shareholders in common; or
 - c) Receive or have received any direct or indirect subsidy from any of them; or
 - d) Have the same legal representative for purposes of this Bid; or
 - e) Have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Procuring Agency regarding this Bidding process; or
- xii) **A Bidder may be ineligible if –**
- (a) The Bidder is declared bankrupt or, in the case of company or firm, insolvent;
 - (b) Payments in favor of the Bidder is suspended in accordance with the judgment of a court of law other than a judgment declaring bankruptcy and resulting, in accordance with the national laws, in the total or partial loss of the right to administer and dispose of its property;
 - (c) Legal proceedings are established against such Bidder involving an order suspending payments and which may result, in accordance with the national laws, in a declaration of bankruptcy or in any other situation entailing the total or partial loss of the right to administer and dispose of the property;
 - (d) The Bidder is convicted, by a final judgment, of any offence involving professional conduct;
 - (e) The Bidder is debarred and blacklisted due to involvement in corrupt and fraudulent practices in accordance with the provision of section 17A of PPRA

Act, 2009 and Rule-21, read with Schedule appended with, Punjab Procurement Rules, 2014.

(f) The Bidder is debarred and blacklisted in general (i.e., to the extent of Baba Guru Nanak University Nankana Sahib) due to consistent performance failure in accordance with the section 17A of PPRA Act, 2009 and Rule-21, read with Schedule appended with, Punjab Procurement Rules, 2014.

(g) The firm, supplier and contractor are blacklisted/debarred by any international organization.

xiii) Bidders shall provide to the Procuring Agency evidence of their eligibility, proof of compliance with the necessary legal requirements to carry out the contract effectively.

xiv) Bidders shall provide such evidence of their continued eligibility satisfactory to the Procuring Agency, as the Procuring Agency shall reasonably request.

2.1.4. Eligible Goods and Services

- i) All goods and related services to be supplied under the Contract shall have their origin in eligible source countries, defined in the *Bid Data Sheet (BDS/Technical Specification)*,
- ii) For purposes of this clause, “origin” means the place where the goods are mined, grown, or produced, or the place from which the related services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially-recognized product is obtained that is substantially different in basic characteristics or in purpose or utility from its components.
- iii) The origin of goods and services is distinct from the nationality of the Bidder. *In any case, the requirements of Rules 10 & 26 of PPR-14, shall be followed.*

2.1.5. Cost of Bidding

- i) The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Baba Guru Nanak University, Nankana Sahib hereinafter referred to as “the Procuring Agency,” will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

**2.1.6. One person
one bid**

- i) As per Rule 36A of Punjab Procurement Rules 2014, a Bidder shall submit only one Bid in the same bidding process individually as a Bidder.

2.2. The Bidding Documents

**2.2.1. Content of
Bidding Documents**

- (a) The goods required, Bidding procedures, and contract terms are prescribed in the Bidding documents. The Bidding documents, inter alia, include:
 - (b) Invitation to Bids
 - (c) Instructions to Bidders (ITB)
 - (d) Technical Specifications
 - (e) Bid Data Sheet
 - (f) General Conditions of Contract (GCC)
 - (g) Special Conditions of Contract (SCC)
 - (h) Schedule of Requirements
 - (i) Bid Form
 - (j) Manufacturer's Authorization Form
 - (k) Bidder Profile Form
 - (l) General Information Form
 - (m) Affidavit
 - (n) Bid Security Form
 - (o) Technical Bid Form
 - (p) Contract Form
 - (q) Financial Bid Form / Price Schedule
 - (r) Performance Guarantee Form

- (s) Check List
- (t) The Bidder is required to examine all instructions, forms, terms, and specifications in the Bidding documents. Failure to furnish all information as required by the Bidding documents or to submit a Bid not responsive to the Bidding documents in every respect will be at the Bidder's risk and may result in the rejection of its Bid.
- (u) In case of discrepancies between the Invitation to Bid and the Bidding Documents listed in **ITB 2.2.1 (i)** above, the said Bidding Documents, not in conflict with any provision of PPR-14, will take precedence.
- (v) The Procuring Agency is not responsible for the completeness of the Bidding Documents and their addenda, if they were not obtained directly from the Procuring Agency or from its website or website of PPRA. Re-confirming from the Procuring Agency that all pages/ contents have been properly and clearly received is the prime responsibility of the Bidder.

2.2.2. Clarification of Bidding Documents

- i) A prospective Bidder requiring any clarification of the Bidding documents may notify the Procuring Agency in writing or by email at the Procuring Agency's address indicated in Invitation to Bid/ Tender Notice/ Advertisement. The Procuring Agency will respond in writing to any request for clarification of the Bidding documents which it receives no later than seven (7) days prior to the deadline for the submission of Bids prescribed in the Bid Data Sheet. Written copies of the Procuring Agency's response (including an explanation of the query but without identifying) will be sent to all prospective Bidders that have received the Bidding documents.
- ii) A prospective Bidder requiring any clarification of the Bidding Documents may notify the Procuring Agency in writing or in electronic form that provides record of the content of communication at the Procuring Agency's address indicated in the BDS.
- iii) The Procuring Agency will within three (3) working days after receiving the request for clarification, respond in writing or in electronic form to any request for clarification provided that such request is received not later than seven (7) days prior to

the deadline for the submission of Bids. As prescribed in ITB 2.2.2 (i), above. However, this clause shall not apply in case of alternate methods of Procurement.

- iv) Copies of the Procuring Agency's response will be uploaded on the website of procuring agency on given date and forwarded to identified Prospective Bidders through an expeditious identified source of communication, e.g.: e-mail etc., including a description of the inquiry, but without identifying its source.
- v) Should the Procuring Agency deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB 2.2.3.
- vi) If indicated in the BDS, the Bidder's designated representative is invited at the Bidder's cost to attend a pre-Bid meeting at the place, date and time mentioned in the BDS. During this pre-Bid meeting, prospective Bidders may request clarification of the schedule of requirement, the Evaluation Criteria or any other aspects of the Bidding Documents.

2.2.3. Amendment of Bidding Documents

- i) At any time prior to the deadline for submission of Bids, but not later than three (3) days before the closing date of the submission of Bid, the Procuring Agency, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, may modify the Bidding documents by amendment. Any such change/amendment in the Bidding documents shall be provided in a timely manner, preferably through electronic means also, not later than three (3) days, and on equal opportunity basis as per Rule-25(3) OR Rule 25(4) of PPR-14 as the case may be.
- ii) In order to allow prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Procuring Agency, at its discretion, may extend the deadline for the submission of Bids, as per rule 29 of PPR-14, in the manner similar to the original advertisements, so as to avoid any inconvenience and to doubly ensure level playing field for all prospective bidders.

2.3. Preparation of Bids

2.3.1. Language of Bid

- i) The Bid prepared by the Bidder, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Procuring Agency shall be written in the language

specified in the Bid Data Sheet. Supporting documents and printed literature furnished by the Bidder may be in same language.

2.3.2. Bid Form

- i) The Bidder shall complete the Bid Form and the appropriate Price Schedule (Financial Bid) furnished in the Bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.

2.3.3. Bid Prices

- i) The Bidder shall indicate on **form 8.10** the unit prices (where applicable) and total Bid price of the goods it proposes to supply under the contract.
- ii) Prices indicated on the Price Schedule shall be **item wise**.
- iii) The Bidder's separation of price components in accordance with ITB Clause 2.3.3(ii) above will be solely for the purpose of facilitating the comparison of Bids by the Procuring Agency and will not in any way limit the Procuring Agency's right to contract on any of the terms offered.
- iv) Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet. A Bid submitted with an **adjustable price quotation** will be treated as non-responsive and may be rejected.

2.3.4. Bid Currencies

- i) Prices shall be quoted in **Pak Rupees**.

2.3.5. Documents Establishing Bidder's Eligibility and Qualification

- i) Pursuant to ITB Clause 2.1.3, the Bidder shall furnish, as part of its Bid, documents establishing the Bidder's eligibility to Bid and its qualifications to perform the contract if its Bid is accepted.
- ii) The documentary evidence of the Bidder's eligibility to Bid shall establish to the Procuring Agency's satisfaction that the Bidder, at the time of submission of its Bid, is eligible as defined under ITB Clause 2.1.3.
- iii) The documentary evidence, of the Bidder's qualifications to perform the contract if its Bid is accepted, shall establish to the Procuring Agency's satisfaction:

- (a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' Manufacturer or producer to supply the same in Pakistan;
- (b) that the Bidder has the financial, technical, and production capability necessary to perform the contract;
- (c) that the Bidder meets the qualification criteria listed in the Bid Data Sheet.

2.3.6. Documents Establishing Goods' Eligibility and Conformity to Bidding Documents

- i) Pursuant to ITB Clause 2.1.4, the Bidder shall furnish, as part of its Bid, documents establishing the eligibility and conformity to the Bidding documents of all goods and related services which the Bidder proposes to supply under the contract.
- ii) The documentary evidence of the eligibility of the goods and services shall consist of a statement in the Price Schedule/Financial Bid Form of the country of origin of the goods and services offered which shall be confirmed by a Certificate of Origin issued at the time of shipment.
- iii) The documentary evidence of conformity of the goods and services to the Bidding documents may be in the form of literature, drawings, data and shall consist of:
 - (a) a detailed description of the essential technical and performance characteristics of the goods;
 - (b) an item-by-item commentary on the Procuring Agency's Technical Specifications demonstrating **responsiveness** of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- iv) For purposes of the commentary to be furnished, the Bidder shall note that **standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers** designated by the Procuring Agency in its Technical Specifications, are intended to be descriptive only and not restrictive.
- v) Pursuant to the requirements as indicated in ITB 2.3.6, the Bidder shall furnish, as part of its Bid, all those documents establishing the eligibility in conformity to the terms and

conditions specified in the Bidding Documents for all goods and related services which the Bidder proposes to deliver.

- vi) The required documents and other accompanying documents must be in English.

2.3.7. Bid Security

- i) The Bidder shall furnish, as part of its Bid, a Bid security in the amount specified in the Bid Data Sheet.
- ii) The Bid security is required to protect the Procuring Agency against the risk of Bidder's conduct which would warrant the security's forfeiture Pursuant to ITB Clause 2.3.8. (vii).
- iii) The Bid security shall be in Pakistan Rupees and shall be in one of the following forms:
- iv) **Bank Guarantee, Bank call-deposit (CDR), Demand Draft (DD), Pay Order (PO) or Banker's cheque** valid for 3(three) months beyond the validity of bids.
- v) Any Bid not secured in accordance with ITB Clauses 2.3.8 (i) and (ii) may be rejected by the Procuring Agency as non-responsive.
- vi) Unsuccessful Bidders' Bid security will be discharged or returned as promptly as possible but not later than 7 (seven) days after the expiration of the period of Bid validity prescribed by the Procuring Agency pursuant to ITB Clause 2.3.8 (ii) or along with unopened financial proposal as per rule 38(2)(a)(vii) of PPR-14, which shall take precedence, and is as under:
- vii) The successful Bidder's Bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 2.6.1, and furnishing the Performance Guarantee, pursuant to ITB Clause 2.6.2.
- viii) The Bid security may be forfeited:
 - a. If a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or
 - b. In the case of a successful Bidder, if the Bidder:
 - i. Fails to sign the contract in accordance with ITB Clause 2.6.3; or

- ii. Fails to furnish Performance Guarantee in accordance with ITB Clause 2.6.2; or
- iii. If the blacklisting proceedings under Section-17A of PPRA Act, 2009 read with Rule-21 of PPR-14 are initiated and the bidder is declared blacklisted after due process of law.

2.3.8. Period of Validity of Bids

- i) Bids shall remain valid for the period specified in the Bid Data Sheet after the date of Bid opening prescribed by the Procuring Agency. A Bid valid for a shorter period may be rejected by the Procuring Agency as non-responsive.
- ii) In exceptional circumstances, the Procuring Agency may solicit the Bidder's consent to an extension of the period of validity (as per rule-28 of PPR-14). The request and the responses thereto shall be made in writing (or by email). The Bid security provided under ITB Clause 2.3.8 shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid security. A Bidder accepting the request will not be required nor permitted to modify its Bid.

2.3.9. Format and Signing of Bid

- i) The bidder shall furnish the required bid security through the electronic bid-security mechanism prescribed by the Punjab Procurement Regulatory Authority (PPRA) and the Punjab e-Procurement System.
- ii) The Bidder shall authorize a person/ person for signing, submission and further correspondence with Procuring Agency on behalf of bidder. Authority letter must be part of bid. However, in case of any issue bidder shall be responsible for all consequences.
- iii) The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person duly authorized to bind the Bidder to the contract. All pages of the Bid, shall be signed and stamped by the authorized person.
- iv) Any interlineation, erasures, or overwriting shall be valid only if they are initialed by the authorized person for signing the Bid.
- v) The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a

written confirmation as specified in the BDS and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid, shall be signed and stamped by the authorized person.

- vi) Any interlineations, erasures, or overwriting shall be valid only if they are signed by the person or persons signing the Bidder.
- vii) The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid and to contract execution if the Bidder is awarded the contract.

2.4. Submission of Bids

2.4.1 Sealing and Marking of Bids

- i) As per Rule 24, the Bid will be uploaded secretly.
- ii) The Bid shall:
 - a. be addressed to the Procuring Agency at the address given in the Bid Data Sheet; and
 - b. bear the title of procurement Activity indicated in the Bid Data Sheet, the Invitation to Bids (ITB) title and number indicated in the Bid Data Sheet, and a statement: “DO NOT OPEN BEFORE.... (Time and date),” *[to be completed with the time and the date specified in the Bid Data Sheet, pursuant to ITB Clause 2.4.2.]*
- iii) The inner envelopes shall also indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared “late”.
- iv) If the outer envelope is not sealed and marked as required by ITB Clause 2.4.1 (i), the Procuring Agency will assume no responsibility for the Bid’s misplacement or premature opening.
- v) **In case of Single Stage Two Envelope Procedure**, The Bid shall comprise of two proposals submitted simultaneously, one called the Technical Proposal and the other Financial Proposal. Each Bidder shall submit his bid online as under:

- a) Bidder shall submit his TECHNICAL PROPOSAL and FINANCIAL PROPOSAL online through Punjab e-procurement System separately on item wise basis.
- vi) The Proposals shall:
 - a) be addressed to the Procuring Agency at the address provided in the BDS;
 - b) bear the name and identification number of the contract as defined in the BDS; and provide a warning not to open before the time and date for bid opening, as specified in the BDS, pursuant to ITB 2.4.2;

2.4.2 Deadline for Submission of Bids

- i) Bids must be uploaded by the bidder on item wise basis no later than the time and date specified in the Bid Data Sheet.
- ii) The Procuring Agency may, at its discretion and as per rule 29 of PPR-14, extend this deadline for the submission of Bids by amending the Bidding documents in accordance with ITB **Clause 2.2.2 & 2.2.3** in which case all rights and obligations of the Procuring Agency and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.
- iii) Bids shall be received by the Procuring Agency at the forum specified under BDS no later than the date and time specified in the BDS.

2.4.3. Late Bids

- i) No Bid will be uploaded after the deadline for submission of Bids prescribed by the Procuring Agency pursuant to ITB Clause 2.4.2 will be rejected.
- ii) The Procuring Agency shall not consider for evaluation any Bid that will be contrary to the desired items.

2.4.4. Modification and Withdrawal of Bids

- i) Withdrawal, resubmission, replacement or modification of a bid before the prescribed submission deadline shall be permitted only in accordance with the applicable procurement rules and the facilities and procedures prescribed by the e-Procurement System. Any such action shall be reflected in the electronic procurement record, as applicable. No Bid may be modified after the deadline for submission of Bids.
- ii) No Bid may be withdrawn in the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified by the Bidder on the Bid Form. Withdrawal of

a Bid during this interval may result in the Bidder's forfeiture of its Bid security (along with other remedies available under PPR-14), pursuant to the ITB Clause 2.3.8 (vii).

2.5. Opening and Evaluation of Bids

2.5.1. Opening of Bids by the Procuring Agency

- i) The Procuring Agency will open all Bids online, in public, in the presence of Bidders' or their representatives who choose to attend, and other parties with a legitimate interest in the Bid proceedings at the place, on the date and at the time, specified in the BDS. The Bidders' representatives present shall sign a register/attendance sheet as proof of their attendance.
- ii) First, files marked "WITHDRAWAL" shall be opened and read out and the file with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding Withdrawal Notice contains a valid authorization to request the withdrawal and is read out at bid opening.
- iii) Second, file marked "SUBSTITUTION" shall be opened. The file containing the Substitution Bid shall be exchanged for the corresponding Original Bid being substituted, which is to be returned to the Bidder unopened. No file shall be substituted unless the corresponding Substitution Notice contains a valid authorization to request the substitution and is read out and recorded at bid opening.
- iv) Next, file marked "MODIFICATION" shall be opened. No Technical Proposal and/or Financial Proposal shall be modified unless the corresponding Modification Notice contains a valid authorization to request the modification and is read out and recorded at the opening of the Bids. Any Modification shall be read out along with the Original Bid except in case of Single Stage Two Envelope Procedure where only the Technical Proposal, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Financial Proposal, both Original and Modification, will remain unopened till the prescribed financial bid opening date.

- v) **In case of Single Stage Two Envelope Procedure**, the Procuring Agency will open the Technical Proposals in public at the address, date and time specified in the **BDS** in the presence of Bidders' designated representatives who choose to attend and other parties with a legitimate interest in the Bid proceedings. The Financial Proposals will remain unopened and will be held in custody of the Procuring Agency until the specified time of their opening.
- vi) The files holding the Technical Proposals shall be opened one at a time, and the following read out and recorded: (a) the name of the Bidder (b) the presence of a Bid Security (c) Any other details as the Procuring Agency may consider appropriate.
- vii) Bidders are advised to send in a representative with the knowledge of the content of the Bid who shall verify the information read out from the submitted documents. Failure to send a representative or to point out any un-read information by the sent Bidder's representative shall indemnify the Procuring Agency against any claim or failure to read out the correct information contained in the Bidder's Bid.
- viii) No Bid will be rejected at the time of Bid opening except for late Bids which will be returned unopened to the Bidder, pursuant to 2.4.3 (i).
- ix) The Procuring Agency shall prepare minutes of the Bid opening. The record of the Bid opening shall include, as a minimum: the name of the Bidder and whether or not there is a withdrawal, substitution or modification, the Bid price if applicable.
- x) The Bidders' representatives who are present shall be requested to sign on the attendance sheet. The omission of a Bidder's signature on the record shall not invalidate the contents and affect the record.
- xi) Minutes of the Financial Bid Opening shall be recorded and uploaded by the procuring agency on its website or shared to all bidders through e-mail.
- i) Information relating to the examination, clarification, evaluation and comparison of Bids and recommendation of

**2.5.2.
Confidentiality**

contract award shall not be disclosed to Bidders or any other persons not officially concerned with such process until the time of the announcement of the respective evaluation report in accordance with the requirements of rule 37 of PPR-14.

- ii) Any effort by a Bidder to influence the Procuring Agency processing of Bids or award decisions may result in the rejection of its Bid.
- iii) Notwithstanding ITB Clause 2.2.2 from the time of Bid opening to the time of contract award, if any Bidder wishes to contact the Procuring Agency on any matter related to the Bidding process, it should do so in writing or in electronic forms that provides record of the content of communication.

2.5.3. Clarification of Bids

- i) As per rule 33(2) of PPR-14, to assist in the examination, evaluation and comparison of Bids and post-qualification of the Bidders, the Procuring Agency may, at its discretion, ask any Bidder for a clarification of its Bid including breakdown of prices to determine its reasonability. **Any clarification submitted by a Bidder that is not in response to a request by the Procuring Agency shall not be considered.**
- ii) The request for clarification and the response shall be in writing or in electronic forms that provide record of the content of communication. In case of Single Stage Two Envelope Procedure, **no change in the prices or substance of the Bid shall be sought, offered, or permitted.**
- iii) The **alteration or modification** in The Bid which in any way affect the following parameters **will be considered as a change in the substance of a bid:**
 - a) Evaluation & qualification criteria;
 - b) Required scope of work or specifications;
 - c) All securities requirements;
 - d) Tax requirements;
 - e) Terms and conditions of bidding documents.
 - f) Change in the ranking of the Bidder
- iv) From the time of Bid opening to the time of Contract award if any Bidder wishes to contact the Procuring Agency on any matter related to the Bid it should do so in writing or in

electronic forms that provide record of the content of communication.

2.5.4. Preliminary Examination

- i) The Procuring Agency will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.
- ii) Arithmetical errors will be rectified on the following basis: -
 - a. 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 shall prevail, and the total price shall be corrected. If the Supplier does not accept the correction of the errors, its Bid may be rejected, and its Bid security may be forfeited.
 - b. If there is a discrepancy between words and figures, the amount in words will prevail.
- iii) Prior to the detailed evaluation, the Procuring Agency will determine the responsiveness of each Bid to the Bidding documents, pursuant to ITB Clause 2.5.5. For purposes of these Clauses, a responsive Bid is one which conforms to all the terms and conditions of the Bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions, such as those concerning Bid Security (ITB Clause 2.3.8), Applicable Law (GCC Clause 30), Taxes and Duties (GCC Clause 32) & mandatory Registrations/ Renewals will be deemed to be a material deviation. The Procuring Agency's determination of a Bid's responsiveness is to be based on the contents of the Bid itself without recourse to extrinsic evidence.
- iv) If a Bid is not responsive, it will be rejected by the Procuring Agency and may not subsequently be made responsive by the Bidder by correction of the non-conformity.
- v) Prior to the detailed evaluation of Bids, the Procuring Agency will determine whether each Bid:
 - a) Meets the eligibility criteria defined in ITB 2.1.3 and ITB 2.1.4;

- b) Has been prepared as per the format and contents defined by the Procuring Agency in the Bidding Documents;
- c) Has been properly signed;
- d) Is accompanied by the required securities; and
- e) Is responsive to the requirements of the Bidding Documents.

The Procuring Agency's determination of a Bid's responsiveness will be based on the contents of the Bid itself.

2.5.5. Examination of Terms and Conditions; Technical Evaluation

- i) The Procuring Agency shall examine the Bid to confirm that all terms and conditions specified in the **GCC** and the **SCC** have been accepted by the Bidder without any material deviation or reservation.
- ii) The Procuring Agency shall evaluate the technical aspects of the Bid submitted to confirm that all requirements specified in Section III-Technical Specifications, Section VII – Schedule of Requirements & Evaluation Criteria as provided in BDS, have been met without material deviation or reservation.
- iii) If after the examination of the terms and conditions and the technical evaluation, the Procuring Agency determines that the Bid is not responsive in accordance, it shall reject the Bid.

2.5.6. Correction of Errors

- i) Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -
 - a) If there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the Procuring Agency there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;
 - b) If there is an error in a total corresponding to the addition or subtraction of sub-totals, **the sub-totals shall prevail** and the total shall be corrected; and
 - c) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.
 - d) Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bid, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.

	<ul style="list-style-type: none"> ii) The amount stated in the Bid will, be adjusted by the Procuring Agency in accordance with the above procedure for the correction of errors. The concurrence of the Bidder shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, its Bid will then be rejected, and the Bid Security may be forfeited or the Bid Securing Declaration may be executed in accordance with ITB 2.3.8.
2.5.7. Conversion to Single Currency	<ul style="list-style-type: none"> i) Not Applicable
2.5.8. Post-Qualification & Evaluation of Bids	<ul style="list-style-type: none"> i) The Procuring Agency will determine to its satisfaction whether the Bidder is qualified to perform the contract satisfactorily, in accordance with the evaluation criteria listed in BDS & pursuant to ITB Clause 2.1.3. ii) The determination will take into account the Bidder's financial, technical, and production/ supplying capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 2.3.6, as well as such other information required for eligibility/qualification expressed in Bid Data Sheet as the Procuring Agency deems necessary and appropriate. iii) The Procuring Agency will technically evaluate and compare the Bids which have been determined to be responsive, pursuant to ITB Clause 2.5.5, as per Technical Specifications required. iv) The financial evaluation of a Bid will be on the basis of form of Price Schedules/ Financial Bid form 8.10 to be decided by the Procuring Agency which must include clear cut instruction regarding item wise or package wise evaluation inclusive of prevailing taxes, duties, fees etc.
2.5.9. Contacting the Procuring Agency	<ul style="list-style-type: none"> i) Subject to ITB Clause 2.5.3, no Bidder shall contact the Procuring Agency on any matter relating to its Bid, from the time of the Bid opening to the time the evaluation report is made public i.e., 10 days before the contract is awarded. If the Bidder wishes to bring additional information or has grievance to the notice of the Procuring Agency, it should do so in writing/ electronically.

- ii) Any effort by a Bidder to influence the Procuring Agency during Bid evaluation, or Bid comparison may result in the rejection of the Bidder's Bid.

2.5.10. Grievance Redressal

- i) As per Rule-67 of PPR-14, Procuring Agency shall constitute a Grievance Redressed Committee (GRC) comprising of odd number of persons with proper powers and authorization to address the complaints. The GRC shall not have any of the members of the Procurement Evaluation Committee. The Committee may preferably have one subject specialist depending upon the nature of the procurement in addition to one person with legal background as per their availability to the Procuring Agency.
- ii) Any Bidder feeling aggrieved can file its written complaint against the eligibility parameters or any other terms and conditions prescribed in the Bidding documents found contrary to provision of Rule 33, and the same shall be addressed by the Procuring Agency well before the proposal submission deadline.
- iii) Any party can file its written complaint against the eligibility parameters or any other terms and conditions prescribed in the bidding documents found contrary to provision of Rule 34 and the same shall be addressed by the Procuring Agency well before the proposal submission deadline.
- iv) Any Bidder feeling aggrieved by any act of the Procuring Agency after the submission of his Bid may lodge a written complaint concerning his grievances not later than ten days after the announcement of the Final evaluation reports. In case of single stage - two envelope bidding procedure any bidder feeling aggrieved from technical evaluation may file a grievance within 5 days of announcement of the technical evaluation report. After completion of the technical evaluation process, the procuring agency shall immediately upload the technical evaluation report on the website of PPRA and Procuring Agency for obtaining/ receiving grievance petitions from the prospective bidders (if any).
- v) In case, the complaint/grievance is filed after the issuance of the final evaluation report, **the complainant cannot raise any objection on technical evaluation of the report.**

- vi) The **GRC shall investigate and decide upon the complaint within fifteen days of the receipt of the complaint.** Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.

2.6. Award of Contract

2.6.1. Notification of Award

- i) Prior to the expiration of the period of Bid validity, the Procuring Agency will notify the successful Bidder in writing by registered letter and by email to be confirmed in writing by registered letter, that its Bid has been accepted.
- ii) The notification of award will constitute the formation of the Contract.
- iii) Upon the successful Bidder's furnishing of the Performance Guarantee pursuant to ITB Clause 2.6.2 (i), the Procuring Agency will promptly notify each unsuccessful Bidder and will discharge its Bid security, pursuant to ITB Clause 2.3.8 (v).

2.6.2. Performance Guarantee

- i) **Within Fifteen (15)** days of the receipt of notification of award from the Procuring Agency, the successful Bidder shall furnish the **Performance Guarantee** in accordance with the Conditions of Contract, in the Performance Guarantee Form provided in the Bidding documents, or in another form acceptable to the Procuring Agency.
- ii) Failure of the successful Bidder to comply with the requirement of ITB Clause (i) above or ITB Clause 2.6.3 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid security along with other remedies available under PPR-14. After that, the Procuring Agency may decide to award the contract to the next lowest evaluated Bidder, keeping in view the Bid validity time, or call for new Bids keeping in view the concept of value for money as defined under rule-2(ae) read with Principles of Procurement as enunciated in rule-4 of PPR-14.

2.6.3. Signing of Contract/ Issuance of Purchase Order

- i) At the same time as the Procuring Agency notifies the successful Bidder that its Bid has been accepted, the Procuring Agency will send the Bidder the Contract Form provided in the Bidding documents, incorporating all agreements between the parties.

	<ul style="list-style-type: none"> ii) Under rule-63 of PPR-14, where the Procuring Agency requires formal signing of contract, within Seven (7) days of receipt of the Contract Form, the successful Bidder shall sign and mention date of the contract and return it to the Procuring Agency.
2.6.4. Award Criteria	<ul style="list-style-type: none"> i) Subject to ITB Clause 2.6.2, under rule-55 of PPR-14, the Procuring Agency will award the contract to the successful Bidder whose Bid has been determined to be responsive and has been determined to be the lowest evaluated Bid, provided that the Bidder has been determined to be qualified to perform the contract satisfactorily.
2.6.5. Procuring Agency's Right to Vary Quantities at Time of Award	<ul style="list-style-type: none"> i) The Procuring Agency reserves the right at the time of contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions, on the analogy of rule-59 (c)(iv) of PPR-14 (not more than 15%).
2.6.6. Procuring Agency's Right to Accept or Reject All Bids	<ul style="list-style-type: none"> i) As per rule 35 of PPR-14, the Procuring Agency reserves the right to accept or reject all Bids or proposals (and to annul the Bidding process) at any time prior to the acceptance of any Bid or proposal, without thereby incurring any liability towards the Bidders. ii) The Bidders shall be promptly informed about the rejection of the Bids, if any iii) The Procuring Agency shall upon request communicate to any Bidder, the grounds for its rejection of all Bids or proposals, but shall not be required to justify those grounds.
2.6.7. Re-Bidding	<ul style="list-style-type: none"> i) If the Procuring Agency rejects all the Bids under rule 35, it may proceed with the process of fresh Bidding but before doing that it shall assess the reasons for rejection and may, if necessary, revise specifications, evaluation criteria or any other condition for Bidders.

2.6.8. Corrupt or Fraudulent Practices

- i) The Procuring Agency Bidders, Suppliers, and Contractors observe the highest standard of ethics during the procurement and execution of contracts.

“Corrupt practices” in respect of procurement process, shall be as given in S-2 (d) of PPRA, Act, 2009,

ii) Blacklisting & Debarment:

Blacklisted Consultants and those found involved in “Corrupt Practices” are not allowed to participate in bidding.

Requirements & Procedure for Blacklisting & Debarment will be

As per as per S-17A of PPRA, Act, 2009 and *rule 21 and sub-rule (6) of rule 21 of PPR-14*

Section-III. Technical Specifications

3.1. Technical Specifications

Sr #	Instrument/Item	Specifications	Qty
1.	Infrared Thermometer	<p>Temperature Measurement Range -32°C to 380°C / -26°F to 716°F</p> <p>Accuracy ±2% or ±2°C, whichever is greater</p> <p>Resolution 0.1°C / 0.1°F</p> <p>Repeatability ±1% or ±0.1°C</p> <p>Distance-to-Spot Ratio 12:1</p> <p>Emissivity 0.95 Preset</p> <p>Spectral / Response Wavelength 8–14 μm</p> <p>Response Time 500 ms</p> <p>Temperature Units °C / °F</p> <p>Laser Targeting Yes</p> <p>Data Hold Yes</p> <p>Display LCD with Backlight</p> <p>Auto Power Off Yes</p> <p>Power Supply 2 × 1.5V AAA Batteries</p> <p>Operating Temperature 0°C to 40°C</p> <p>Storage Temperature -20°C to 60°C</p>	1 No.
2.	Nuclear Radiation Detector	<p>Condition: 100% Brand New</p> <p>Item Type: Radiation Detector</p> <p>Material: ABS</p> <p>Size: Approx.135x70x25mm / 5.3x2.8x1.0in</p> <p>Weight: Approx.200g/7.1oz</p> <p>Detector: Energy compensated FM tube (Geiger counter tube)</p> <p>Energy Range: 50KVE-1.5MEV ≤ ±30%</p> <p>Measurement Shows: dose rate is displayed per second, protection alarm is less than 5 seconds</p> <p>A Dose Equivalent Rate: 0.01~1000MSV (maximum 10MSV/H)</p> <p>B Cumulative Dose Equivalent: 0.01MSV~500.0MSV</p> <p>Quite Inherent Error: ≤ ±15% (137CS 1msv/h)</p> <p>A Dose Rate: 0.5, 1.0, 1.5, 2.0, 2.5, 5.0, 10.0, 50.0, 100 MSV</p> <p>B Cumulative Dose Rate: 0.05, 0.5.1.0.2.0, 5.0, 10.0, 20.0, 50.0, 100MSV</p> <p>Operating Environment: Temperature -10 ° ~ +45 ° Relative humidity: ≤ 95% (+45 °)</p> <p>Voltage: 3V</p> <p>Rated Power: 50Hz</p>	1 No.
3.	Electro Magnetic Field Radiation Detector	<p>Electric Field (EF): 1 V/m to 1999 V/m</p> <p>Magnetic Field (MF): 0.01 μT to 99.99 μT</p> <p>Resolution</p> <p>EF Resolution: 1 V/m</p> <p>MF Resolution: 0.01 μT</p> <p>Performance</p> <p>Alarm Function: Sound and light alert</p> <p>Display: LCD with backlight</p> <p>Sampling Time: Approx. 0.5 seconds</p> <p>Measurement Mode: Dual mode (EF + MF)</p> <p>General</p> <p>Power Supply: 3 × 1.5 V AAA batteries</p>	1 No.

		<p>Operating Temperature: 0 °C to 50 °C</p> <p>Design: Compact and lightweight portable device</p> <p>Applications</p> <p>Measuring EMF radiation from mobile phones and WiFi routers</p> <p>Checking radiation levels in homes and offices</p> <p>Detecting EMF from electrical wiring and appliances</p> <p>Industrial and environmental radiation monitoring</p> <p>Safety inspection and health awareness applications</p> <p>Educational and research purposes</p>	
4.	Air Quality Monitor	<p>Item Weight 2.12 pounds</p> <p>Product Dimensions 5.4 x 1.4 x 2.9 inches</p> <p>Batteries 1 Lithium Metal battery is required. (included)</p> <p>Material Plastic</p> <p>Battery Cell Type Lithium-Ion</p> <p>Measuring Range</p> <p>Measuring range (PM2.5): 0~999 ug/m³</p> <p>Measuring range (PM10): 0~999 ug/m³</p> <p>Measuring range (CO₂): 0~5000 PPM</p> <p>Operating environment: Temperature range: 0-50 °C / Humidity range: 0-90% RH</p>	1 No.
5.	Air-Velocity Meter With Infrared Thermometer	<p>Measurement Type Air Velocity, Air Flow & Temperature</p> <p>Air Velocity Range 0.4 to 25.0 m/s</p> <p>Air Velocity Units m/s, km/h, mph, knots, ft/min</p> <p>Air Velocity Resolution 0.1 m/s, 0.1 km/h, 0.1 mph, 0.1 knots, 1 ft/min</p> <p>Air Velocity Accuracy ±(2% + 2 digits)</p> <p>Air Flow Units CMM (m³/min), CFM (ft³/min)</p> <p>Air Flow Range 0 to 999,900 CMM / CFM</p> <p>Air Flow Modes Instant, 2/3 Vmax, Average</p> <p>Temperature Range 0 to 50°C / 32 to 122°F</p> <p>Temperature Resolution 0.1°C / 0.1°F</p> <p>Temperature Accuracy ±0.8°C / ±1.5°F</p> <p>Temperature Sensor Thermistor</p> <p>Air Velocity Sensor Low-friction ball-bearing vane</p> <p>Vane Diameter 72 mm</p> <p>Display Large 13 mm (0.5") LCD, dual-function display</p>	1 No.

		<p>Sampling Time Approx. 0.8 second</p> <p>Data Hold Yes</p> <p>Maximum / Minimum Function Yes, with recall</p> <p>Auto Power Off Yes</p> <p>Low Battery Indicator Yes</p> <p>Probe Separate vane probe</p> <p>Data Interface RS-232 PC interface</p> <p>Power Supply 9V battery (006P / MN1604 / PP3 or equivalent)</p> <p>Operating Temperature 0 to 50°C</p> <p>Operating Humidity Less than 80% RH</p> <p>Housing Material Durable, lightweight ABS plastic</p> <p>Instrument Dimensions 180 × 72 × 32 mm</p> <p>Weight Approx. 381 g</p>	
6.	Multiparameter Environmental Monitoring Kit	<p>Particle Measurement</p> <p>PM2.5 Range: 0 to 999 ug/m³</p> <p>PM10 Range: 0 to 999 ug/m³</p> <p>Resolution: 1 ug/m³</p> <p>Accuracy: ±10%</p> <p>Gas Measurement</p> <p>TVOC Range: 0 to 5.00 mg/m³</p> <p>Resolution: 0.01 mg/m³</p> <p>Accuracy: ±20%</p> <p>C6H6 Range: 0 to 3.00 mg/m³</p> <p>Resolution: 0.01 mg/m³</p> <p>Accuracy: ±(10% or 0.03)</p> <p>Environmental Measurement</p> <p>Temperature: 10°C to 45°C</p> <p>Humidity: 10%RH to 90%RH</p> <p>Temperature Accuracy: ±2°C</p> <p>Humidity Accuracy: ±5%RH</p> <p>Display & Functions</p> <p>2.8-inch IPS Color Display</p> <p>Real-Time Trend Graph</p> <p>History View: Yes</p> <p>Alarm Settings: Yes</p> <p>Buzzer Warning: Yes</p>	1 No.

		<p>Light Alarm Prompt: Yes Data Logging</p> <p>Storage Capacity: 5000 Records Data Export: Yes PC Software Analysis: Yes Recording Modes: Continuous / Timed Power Supply</p> <p>18650 Rechargeable Battery Battery Runtime: 6 Hours or More Physical Characteristics</p> <p>Dimensions: 146 × 80 × 68mm Weight: Approx. 206g Portable handheld design Applications Indoor air quality monitoring PM2.5 and PM10 dust testing VOC and benzene detection Factory environmental safety checks HVAC and ventilation analysis Schools and hospital air monitoring Laboratory testing in Pakistan Workplace pollution inspections</p>	
7.	Renewable-Energy Environmental Laboratory training system	<p>Horizontal-axis permanent magnet synchronous wind turbine: Output power:300 W Output (rectified) voltage:> +12 V Blade rotation diameter: 1.2 m Number of blades: 3 Blade material: Fiberglass Starting wind speed: 1 m/s Entry wind speed: 1.5 m/s Safe wind speed: 25 m/s Yaw: Program-controlled automatic yaw Yaw motor: Operating voltage (DC 24V), rotational speed (25 rpm) wind velocity indicator: Output voltage: 0–5 V Wind bowls: 3 propeller fan: Flow rate: 2100 m³/h Voltage: 380 V (controlled by the frequency converter) Total pressure: 215 Pa Frequency: 50 Hz Power: 0.37 kW Rotational speed: 1400 r/min Axial fan support bracket Axial fan housing Wind Direction Control Motor: Reduction ratio: 1:40 Voltage: AC220V Linkage mechanism for the driving mechanism: Ratchet wheel Wind Direction Control Motor: Reduction ratio: 1:40 Voltage: AC220V Linkage mechanism for the driving mechanism: Ratchet wheel Battery Module: Power: 20 W Error: ±5% Output voltage: 17.2 V Output current: 1.17 A Open-circuit voltage: 21.4 V</p>	1 No.

		<p> Short-circuit current: 1.27 A Work environment temperature: 45°C ± 2°C Dimensions: 430 × 430 × 28 mm Sun-tracking sensor: Output voltage: 0–5 V Tracking accuracy: 1° Structure: 4-bridge circuit Delineascope: Armature mechanism: Turbine-worm gear structure (2 reduction boxes) Voltage: 220V Frequency: 50 Hz Current: 1.36 A Maximum power: 300 W Sun-Chasing Mechanism: Structure: Turbine-Worm Gear Mechanism (Reduction Gearbox) Drive: DC motor Number of axes: Dual-axis 2D Power Supply Control Unit Equipped with a leakage protection circuit breaker, AC220V and DC24V status indicator lights, and a power socket. Wind Power Control Power Supply Unit: Wind farm rotation direction: clockwise or counter-clockwise Unit: Axial fan control: Air supply Yaw control: Yaw, Stop Automatic control: Start, Emergency Stop PLC: S7-200 CPU224 frequency transformer: MM420-0.37Kw adjustable resistor: Range: 0–1000 Ω; continuously adjustable (with scale) Power Supply Control Unit: Equipped with a leakage protection circuit breaker, AC220V and DC24V status indicator lights, and a power socket. Photovoltaic Control Power Supply Unit: Equipped with a leakage protection circuit breaker and AC220V/DC24V status indicator lights touch screen: 7" – Color functional module: DSP Core Board 2812, Communication Control Board, Photovoltaic Power Generation Main Circuit Board DC Input Unit: Ammeter: PA1951-AK1G, DC 0–5 A Voltmeter: PZ195U-AK1G, DC 0–500 V Interface: RS485 Photovoltaic Power Supply Control Unit: Solar panel tracking direction: East, South, West, North Spotlight control: Light 1, Light 2 Spotlight movement direction: East–West, West–East, Stop Automatic control: Start, Emergency Stop PLC: S7-200 CPU226 adjustable resistor Range: 0–1000 Ω; continuously adjustable (with scale) Inverter Output Display Unit: Ammeter: AC 0–5 A Voltmeter: AC 0–500 V Interface: RS485 Inverter Control Power Supply Unit: Equipped with a leakage protection circuit breaker and AC220V/DC24V status indicator lights dc-to-ac converter: Input voltage: DC 12V Input voltage range: DC 9.5 V–15.5 V Output voltage: AC 220 V ±5% Rated output current: 1.4 A Output frequency: 50 Hz ± 0.5 Hz Rated power: 300 VA Output waveform: Sinusoidal wave Waveform distortion: <5% </p>	
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		<p>Conversion efficiency:>85%</p> <p>Experimental Module: Sinusoidal Wave Inverter Principle Module</p> <p>Switching Mode Power Supply: Input voltage: AC 220V</p> <p>Output voltage: DC 24V</p> <p>Output current: 5 A</p> <p>frequency transformer: MM420-0.37Kw</p> <p>Motor load: Power: 40 W</p> <p>Voltage: AC220V</p> <p>Rotational speed: 1350 rpm</p> <p>Analog stage lighting load: Light-emitting module labeled "KNT"</p> <p>Valve-regulated sealed lead-acid battery: Capacity: 12V,18Ah/20Hr</p> <p>DC motor load: DC microcontroller load</p> <p>IPC: 6 serial ports, including keyboard and mouse</p> <p>Mesh Plate Laboratory Bench: Vertical mesh panel basic structure: the bottom consists of a toolbox + 4 wheels; the top consists of the vertical mesh panel.</p> <p>Dimensions: 800 (length) × 600 (width) × 2000 (height)</p> <p>External frame composition: aluminum alloy profiles;</p> <p>Embedded powder-coated steel plate</p> <p>Steel plate dimensions: 1200 mm × 820 mm</p> <p>Steel plate thickness: 2 mm</p> <p>Steel plate hole specifications: Upper hole dimensions – 6 × 10 mm; left–right hole spacing – 6 mm; top–bottom hole spacing – 6 mm with an 8 mm offset;</p> <p>The mesh panel is equipped with sliding drawers, each featuring a profiled frame and a 2 mm steel plate base;</p> <p>The bottom of the mesh frame is equipped with pulleys.</p> <p>Microsoft Operating System Software: Window XP</p> <p>experiment guidebook: Wind-Solar Hybrid Power Generation System Practical Training Guide</p>	
8.	Noise Dosimeter	<p>Sound Measurement</p> <p>Range: 30 dB–130 dB</p> <p>Resolution: 0.1 dB</p> <p>Frequency Range: 30 Hz–8 kHz</p> <p>Sampling Rate: 2 times/sec</p> <p>Frequency Weighting: A/C</p> <p>Display Counts: 2000</p> <p>General</p> <p>Display: Backlit LCD</p> <p>Auto Ranging: Yes</p> <p>Auto Power Off: Yes</p> <p>Low Battery Indicator: Yes</p>	1 No.

		<p>Power Supply: 4 × 1.5 V AAA batteries</p> <p>Dimensions: 193 × 60 × 29 mm</p> <p>Weight: ~222 g</p>	
9 .	Airborne Particle Counter	<p>Product Type: Handheld Particle Counter</p> <p>Particle Size Channels: 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm</p> <p>Number of Channels: 6 Channels</p> <p>Flow Rate: 0.1 CFM (2.83 L/min)</p> <p>Counting Accuracy: ±5%</p> <p>Applicable Standards: JIS B9921 and ISO 21501-4</p> <p>Maximum Measurable Concentration: 10% for 2,000,000 particles/ft³</p> <p>Counting Efficiency: 50 ±20% for PSL particles near minimum measurable size; 100 ±10% for PSL particles 1.5–2 times the minimum measurable size</p> <p>False Count: ≤1 particle / 5 minutes</p> <p>Size Resolution: ≤15% for PSL particles near 0.3 µm</p> <p>Display: 4.3-inch Color LCD</p> <p>Touch Panel: Resistive Touch Panel</p> <p>Standard Communication: USB Host and USB Device</p> <p>USB Host Functions: Printer and USB Flash Memory</p> <p>USB Device Function: PC Connection</p> <p>Optional Communication: RS485, Ethernet and Wi-Fi via optional stand/base</p> <p>Recording Media: Internal Memory</p> <p>Data Storage: Up to 10,000 records</p> <p>Data Format: CSV</p> <p>Languages: English, Japanese, Chinese and Spanish</p> <p>Internal Power Supply: Replaceable Li-ion Rechargeable Battery</p>	1 No.

		<p>External Power Supply: AC Adapter, 100–240 V</p> <p>Continuous Operating Time: Approx. 5 hours (single measurement)</p> <p>Main Body Operating Temperature: 10 to 40°C</p> <p>Main Body Operating Humidity: 0 to 85% RH, non-condensing</p> <p>Probe Operating Temperature: 0 to 50°C</p> <p>Probe Operating Humidity: 2 to 98% RH, non-condensing</p> <p>Dimensions: W213 × H100 × D55 mm</p> <p>Weight: Approx. 650 g</p>	
10 .	Analytical Balance	<p>Capacity: 300g</p> <p>Readability: 0.0001g</p> <p>Calibration: External</p> <p>Repeatability: 0.0001g</p> <p>Linearity: ± 0.0002g</p> <p>Weighing Units: gram, carat, ounce, pound, troy ounce, Newton</p> <p>Stabilization Time: ≤ 4 seconds</p> <p>Display: 4.3 inch capacitive touch screen</p> <p>Pan Size: 85mm</p> <p>Assembled Dimensions & Net Weight: 360*220*320mm, 6KG</p> <p>Shipping Dimensions & Gross Weight: 520*380*500mm, 9.5KG</p> <p>Communication: USB</p> <p>Power Supply: DC12V 1A</p>	1 No.
11	Kater's Pendulum Apparatus	<p>Height of apparatus with pendulum: 1.25 m approx.</p> <p>Length of pendulum rod: 1.2 m</p> <p>Separation of bearing points: 800 mm</p> <p>Period of adjusted pendulum: 1794 ms with $g = 9.81 \text{ m/s}^2$</p> <p>Total weight: 6.3 kg approx.</p>	1 Set
12	Digital Oscilloscope	Digital storage oscilloscope; bandwidth: 200 MHz; 2 analog channels; maximum real-time sampling rate: 1 GS/s; record length: ≥ 20 kpoints; 7-inch WVGA color display; ≥ 32 automatic measurements; dual-window FFT with simultaneous time/frequency-domain display; advanced edge/pulse/run triggering; trigger frequency counter; USB 2.0 host and device interfaces; fanless design; 5-year warranty; complete with 2×200 MHz passive probes and power cable.	1 No.
13	Magnetic Field and Air-Coil	Complete Helmholtz coil magnetic-field apparatus; digital milli-teslameter: range 0–2 mT, resolution 0.001 mT; DC current supply: 50–400 mA, stability $\leq 1\%$; matched Helmholtz coil pair: 500 turns each, outer diameter 21 cm, inner diameter 19 cm; adjustable coil separation with provision for Helmholtz configuration; Hall-effect magnetic-field probe/sensor; measurement error $\leq 5\%$; complete with connecting leads and necessary accessories.	1 Set
14	Magnetic Moment and Magnetic Field Apparatus	Complete university-level apparatus for determination of the magnetic moment of a bar magnet and investigation of magnetic-field properties. Includes sensitive deflection magnetometer/compass box with graduated 0–360° scale , circular tangent galvanometer/field coil with selectable turns , minimum two laboratory-grade bar magnets with non-magnetic holders, adjustable non-magnetic stand with leveling arrangement/spirit level, 0–12 V	1 Set

		regulated DC power supply , variable rheostat/current-control arrangement, 0–2 A DC ammeter , commutator/current-reversing switch, measuring scale, complete insulated connecting leads and necessary accessories. Suitable for determination of magnetic moment, study of magnetic field along the axis of a current-carrying coil, verification of tangent law, investigation of the relationship between magnetic field and current/number of turns, and determination of the horizontal component of Earth's magnetic field .	
15	EMF and Internal Resistance Measurement Apparatus	Complete university-level potentiometer apparatus; 10-wire uniform potentiometer with graduated scale and piano-type jockey; regulated DC supply: 2 V/4 V, 2 A with overload and short-circuit protection; sensitive centre-zero galvanometer: 30-0-30; three-dial decade resistance box: 1–1110 Ω in 1, 10 and 100 Ω steps; Leclanché/test cell with holder; one-way and two-way keys; connecting leads. Suitable for determination and comparison of cell EMF, determination of internal resistance by potentiometer method and verification of potentiometer principle. Complete set	1 Set
16	Ultrasonic Bath Sonicator	Capacity (Liters): 10 L Frequency: 40 Hz HF-Peak Out: 407W Heat Temp:: Ambient to 80 °C Tank size inner (mm): 290 x 240 x 150 Heat temp 0C: Ambient to 900C Display: FND Timer (min.): 0 ~ 60 min Drain valve: 1/2"NPT HF-peak out (W): 200W Power: 590W Weight net (kg): 6.4 kg	1 Set
17	Ultrasonic Probe Sonicator	<ol style="list-style-type: none"> Equipped with a 7-inch TFT touchscreen displaying time, temperature, power, continuous mode, and pulse mode. Real-time working parameters and countdown of the running status shall be displayed on the screen. Real-time display of ultrasonic frequency on the screen interface. Two operation modes shall be available: <ul style="list-style-type: none"> Continuous ultrasonication mode. Intermittent ultrasonication mode. Ultrasonic running time shall be no less than 999 minutes. In intermittent mode, an ON/OFF second timer shall be available, with the following settings: <ul style="list-style-type: none"> Ultrasonic time: Adjustable from 0.1 seconds to 99.9 seconds. Interval time: Adjustable from 0.1 seconds to 99.9 seconds. Total time (ultrasonic time + interval time): Adjustable up to no less than 999 minutes. Ultrasonic frequency: 20–25 kHz, with automatic frequency tracking and self-adaptation. Rated ultrasonic power: 600 W, adjustable from 1% to 100%, with a power adjustment step of at least 1%. Processing volume: <ul style="list-style-type: none"> Maximum processing volume: At least 500 mL. Minimum processing volume: No more than 0.1 mL. Sample volume range: 0.1–500 mL. Standard delivery shall include a No. 6 probe horn. Probe horns with diameters of 2 mm, 3 mm, 10 mm, and 15 mm shall be available to accommodate different sample types and processing volumes. Soundproof Chamber and Workbench: <ul style="list-style-type: none"> Soundproof chamber workbench. 	1 Set

		<ul style="list-style-type: none"> • Power cabinet. • Soundproof chamber with soundproof cotton installed inside. • Visual window for observing reactions during operation. <p>13. Accessories and Components:</p> <ul style="list-style-type: none"> • One set of transducer (aluminum alloy or titanium alloy, optional). • One titanium alloy probe. • One special tool kit. • One temperature probe. <p>14. Lifting Platform Control:</p> <p>A separate remote controller shall be provided for operating the lifting platform inside the soundproof chamber. A remote control for ultrasonic ON/OFF operation shall also be acceptable for bid response purposes.</p> <p>15. Power Supply: 220 V, 50 Hz.</p> <p>16. Probe Specifications and Recommended Sample Volumes:</p> <ul style="list-style-type: none"> • $\Phi 2$ mm probe: 0.5–20 mL. • $\Phi 3$ mm probe: 10–50 mL. • $\Phi 6$ mm probe: 10–150 mL. • $\Phi 8$ mm probe: 20–300 mL. • $\Phi 10$ mm probe: 20–500 mL 	
18	Analytical Balance	Capacity: 210g Readability 0.0001g Repeatability (S.D.): 0.0002g Linearity (+/-): 0.0003g Minimum Weight (USP, Typical): 0.002g Pan Size: 3.5" $\varnothing$ / 80mm $\varnothing$ Weighing Units: mg, g, ct, GN, N, dr, oz, ozt, dwt, mm, tl.T, tl.H, tl.S, T, custom unit Stabilisation Time (sec): 2 Interface: RS-232 / USB Calibration Internal automatic calibration Display: Backlit LCD with 0.9" / 24mm high digits Power Supply: 18VDC 50/60Hz 830mA adapter Operating Temperature: 15° to 35°C Housing: ABS plastic Draught Shield Chamber: 192x195x230mm Overall Dim: 224x374x338mm Net Weight: 13.7lb / 6.2kg	2 Nos.
19	Magnetic Stirrer with Hot Plate	Material Body: Powder Coated Aluminum Material Plate: Ceramic Coated Aluminum (Chemical/Acid Resistance, Easy to Clear) Stirring Capa. & Motor Rating: Max. 20Lit, 9/4 W Speed & Control Resolution: 80 ~ 1,500rpm, 5rpm Temp. Range & Accuracy: Max. 3800C, +0.30C at Set Temperature Temp. Resolution: 0.10C-Display, 0.50C-Control Temp. Uniformity: Specially Designed Heating Module: Temp. Difference 10%less	1 No.

		<p>Heating Power/Consumption: 600W</p> <p>Timer & Alarm: 99hr 59 min, (Continuous run) Error status & Timer-end</p> <p>Display: Digital LCD Display with Back-Light Function</p> <p>Controller: Digital Feedback Controller with Jog Shuttle Switch</p> <p>(Turn+Push)</p> <p>Stirring Bar: 3cm bar-included, Usable: up to 5cm bar</p> <p>Safety Circuit: Over temp. Protection.</p> <p>Permissible Temp. & RH%: Ambient +5~500C, 85%RH</p> <p>Dimension & Weight: 206 x 307 x h99mm, 3.3kg</p> <p>Packing Size & Gross weight: 400 x 280 x h200mm, 5kg</p> <p>Power supply & Cord/Plug: 1 Phase, AC 120V, 60Hz, or AC 230V, 50/60Hz, with Cord Plug</p> <p>Including: External Temperature Probe</p>	
20	Bench-top pH Meter	<p>pH Range: -2.00 to 16.00 pH, -2.000 to 16.000 pH,</p> <p>pH Resolution 0.01 pH, 0.001 pH pH Accuracy (@25°C/77°F): ±0.01 pH, ±0.002 pH</p> <p>pH Calibration: automatic, up to three points (five points†) calibration, 5 standard (7 standard†) buffers available (1.68†, 4.01 or 3.00, 6.86, 7.01, 9.18, 10.01, 12.45†) and two custom buffers† pH Temperature Compensation: automatic, -5.0 to 100.0°C (23.0 to 212.0°F) (using built-in temperature sensor)</p> <p>Electrode Diagnostics: standard mode: probe condition, response time and out of calibration range</p> <p>mV Range: ±1000.0 mV</p> <p>mV Resolution: 0.1 mV</p> <p>mV Accuracy: ±0.2 mV</p> <p>ORP Range: +2000mV</p> <p>Resolution: 0.1mV</p> <p>Accuracy: ±0.2 mV(+999.9mV): +1mV (+2000mV)</p> <p>Calibration: One-point calibration Temperature Range: -20.0 to 120.00C, -4.0 to 248.00F, Resolution: 0.10C:0.10F</p> <p>Accuracy: +0.50C: +0.90F</p> <p>Additional Specification:</p> <p>Probe: digital glass body pH electrode with 3.5mm (1/8") connector and 1m (3.3') cable</p> <p>Connectivity: 1 USB port for storage:1 micro USB port for charging and PC Connectivity. Environment: 0 to 500C (32 to 1220F); RH max 95% non-condensing</p> <p>Power supply: 5VDC adapter (included)</p> <p>Dimensions: 202 x 140 x 12mm (7.9" x 5.5" x 0.5") Weight: 250 g (8.82oz.)</p>	1 No.
21	Fume Hood	<p>External: 1200 x 805 x 2320 mm</p> <p>Dimensions W x D x Hota): 47.3x 31.7 x 91.3"</p> <p>Workspace: 1000 x 630 x 1170 mm</p> <p>(W x D x H): 39.4 x 24.8 x 46"</p> <p>Front Sash Max Opening: 720 mm / 28.3"</p> <p>Production / Test Standard: EN-14175 / CE / ASHRAE 110-1995</p>	1 No.

		<p>Air Velocity: 0.6±0.1m/s, 120 ±20FPM</p> <p>Cabinet Material: White Polypropylene</p> <p>Work Table Material: HPL/ Ceramic / Epoxy / PP</p> <p>Optional Control System: VAV system with 7" color touch screen</p> <p>Standard Options: Water tap/ gas tap / vacuum tap/ pp sink</p> <p>Power Supply Options: 220V/110V 50/60 Hz, Single/triple phase</p> <p>Illumination: >800 LUX LED lights</p>	
22	Water Bath with Thermostat	<p>CE Certified ■ PL(Product Liability) Insurance</p> <p>■ with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System</p> <p>■ Digital Fuzzy Control System Implementing Superior Temperature Accuracy</p> <p>■ Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function</p> <p>* User's Self-Compensation Function to Control Difference between Real Temperature and Indicated Temperature (±10.0°C).</p> <p>* 304 Stainless-steel Bath & Lid for Superior Durability & High Thermal Efficiency/Constant.</p> <p>* Digital Timer Function(99hr 59min) : 'Delay Time' and 'Operation Time' can be Controlled.</p> <p>* Storage Function for the Set Values of Temperature and Timer.</p> <p>* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled).</p> <p>Capacity: 11 Lit</p> <p>Temperature Range & Accuracy: Ambient +50C~1000C, +0.10C</p> <p>Temperature Resolution: 0.10C-Display, 0.10C-Control</p> <p>Temp Uniformity & Probe: ± 1.0 0C, PT100</p> <p>Heater Power: 1K</p> <p>Timer: 99 hr 59 min (Delay & Continuous run), Error Status</p> <p>Display: Digital LCD display with Back-Light Function</p> <p>Controller: Digital fuzzy controller with jog-shuttle switch (Turn + Push)</p> <p>Safety Devices: Over temp/ -Current Protection, Sensor Error Detection</p> <p>Material internal: Stainless steel (#304)-Internal, Power Coated</p> <p>Lid: Steel-External Including stainless steel flat lid, Optional Dome Lid.</p> <p>Drain valve: None</p> <p>Dimension (w x d x h)</p> <p>Effective Space: 302 x 240 x h110mm</p> <p>Internal: 302 x 240 x h150mm</p>	1 No.

		<p>External: 325 x 265 x h260mm</p> <p>Packing Size (mm) and 350 x 300 x h310mm,</p> <p>Gross Weight (kg): 10kg</p> <p>Power Supply: 1 Phase, AC120 V, 60Hz or AC 230 V, 50/60Hz.</p>	
23	Laboratory Drying Oven	<p>Circulation method: Forced air circulation</p> <p>Operating temperature range: Room temp. +10~260°C</p> <p>Temp. control accuracy: $\pm 1^{\circ}\text{C}$ (at 210°C)</p> <p>Temp. distribution accuracy: $\pm 2.5^{\circ}\text{C}$ (at 210°C)</p> <p>Max. temp. reaching time: Approx. 60min (at room temp. +10°C~210°C),</p> <p>Approx. 90min (at room temp. +10°C~260°C)</p> <p>Interior material: Stainless steel plate</p> <p>Exterior material: Cold rolled steel plate with chemical proofing coating</p> <p>Heat insulating material: Glass wool</p> <p>Heater: Stainless pipe heater 1.2kW</p> <p>Fan type / Motor: Scirocco fan / Condenser type motor 10W</p> <p>Cable port 30 mm I.D.×1 pc. (Right side)</p> <p>Exhaust port: 30 mm I.D.×2 pcs.(The top)</p> <p>Temp. controller: PID control by microprocessor</p> <p>Temp. setting method: Operation menu key and digital setting by UP/DOWN key</p> <p>Temp display method Measured temp. display: Green 4-digit</p> <p>digit LED</p> <p>LED</p> <p>Timer: 1min-99 hr 59 min</p> <p>Operation functions: Fixed temp. operation, auto stop operation.</p> <p>Additional functions: Deviation correction, parameter lock</p> <p>Sensor: Temp. controller: Pt100 thermal resistance, Overheat protection:</p> <p>controller Liquid-expansion temp.</p> <p>Safety device: Self-diagnosis (Abnormal temp. sensing, Overheat prevention of upper temp. limit), Parameter lock, Independent overheat protector,</p> <p>Overcurrent EL</p> <p>Internal dimensions (WxDxH): 450x450x450mm</p> <p>External dimensions (WxDxH): 560x601x820mm</p> <p>Internal Capacity: 90L</p> <p>Shelf Plate with standard load: 9 steps</p> <p>Shelf rest pitch: 35mm</p> <p>Power source 50/60Hz. AC220V 6.5A</p> <p>Weight: Approx. 50kg</p> <p>Shelf plate: Stainless steel 2 pcs.</p> <p>Shelf bracket: 4 pcs.</p>	1 No.

24	Binoculars	Astronomical binoculars; magnification: 15×; objective aperture: 70 mm; ED objective glass; BaK-4 Porro prisms; fully multi-coated optics with high-transmission coating; field of view: $\geq 4.4^\circ$; exit pupil: approximately 4.7 mm; generous eye relief; individual focus; tripod adaptable; waterproof/nitrogen-purged and rubber-armored body. Complete with heavy-duty astronomical tripod, tripod adapter, lens caps, carrying case and neck strap. Suitable for observation of the Moon, Jupiter and its major moons, Venus, bright star clusters, bright nebulae and other celestial objects.	1 No.
25	Trinocular Metallurgical Microscope	<p>Optical System: Infinity-corrected optical system (IOS) Observation Modes: Brightfield on transmitted light; Brightfield, simple polarized light and oblique illumination on incident light Microscope Head: Trinocular Siedentopf type, fixed 50/50 light split, 30° inclined, 360° rotatable Interpupillary Distance: 50–75 mm adjustable Dioptric Adjustment: Provided on left eyepiece tube Eyepieces: WF10×/22 mm, high eye-point, with rubber cups Nosepiece: Quintuple revolving nosepiece, ball-bearing rotation</p> <p>Objectives: Strain-free IOS W-PLAN MET objectives, no-cover-glass type, anti-fungus treated: 5× / 0.12 10× / 0.25 20× / 0.40 50× / 0.75</p> <p>Specimen Stage: Double-layer rackless mechanical stage with tempered glass plate Stage Dimensions: 233 × 147 mm X-Y Movement Range: 78 × 54 mm Vernier Scale Accuracy: 0.1 mm Specimen Holder: Provided</p> <p>Focusing Mechanism: Coaxial coarse and fine focusing Coarse Focus: Adjustable tension Fine Focus Graduation: 0.002 mm Upper Stop: Provided to prevent contact between objective and specimen</p> <p>Condenser: Swing-out condenser, N.A. 0.2/0.9, iris diaphragm, focusable and centerable</p> <p>Incident Illumination: High-efficiency X-LED⁸ white LED Incident LED Power: 8 W Incident Light Color Temperature: 6,300 K Incident Illumination: Köhler system Incident Field Diaphragm: Provided, centerable Incident Aperture Diaphragm: Provided, centerable Oblique Illumination: Provided for relief contrast Polarizer: Provided Analyzer: Provided</p> <p>Transmitted Illumination: X-LED³ white LED Transmitted LED Power: 3.6 W Transmitted Light Color Temperature: 6,300 K Transmitted Illumination: Full Köhler type</p>	1 No.

		<p>Transmitted Field Diaphragm: Provided LED Brightness Control: Provided</p> <p>Power Supply: 100–240 VAC, 50–60 Hz / 6 VDC external power supply Maximum Power Requirement: 13 W</p>	
26	UV Lamp Wired	Laboratory UV lamp; dual wavelength: 254 nm (short-wave) and 365 nm (long-wave); UV output: ≥ 4 W; wavelength selection by switch; 220–240 V AC, 50 Hz; UV-resistant protective housing with integrated reflector/filter; wired power connection with ON/OFF switch; suitable stand for hands-free operation; supplied with UV-blocking safety goggles.	1 No.
27	Electric Conductivity meter	<p>EC Range: 0.00 to 29.99 $\mu\text{S/cm}$, 30.0 to 299.9 $\mu\text{S/cm}$, 300 to 2999 $\mu\text{S/cm}$, 3.00 to 29.99 mS/cm, 30.0 to 200.0 mS/cm, up to 500.0 mS/cm (absolute EC)**</p> <p>EC Resolution: 0.01 $\mu\text{S/cm}$, 0.1 $\mu\text{S/cm}$, 1 $\mu\text{S/cm}$, 0.01 mS/cm, 0.1 mS/cm</p> <p>EC Accuracy: $\pm 1\%$ of reading ($\pm 0.05 \mu\text{S/cm}$ or 1 digit, whichever is greater)</p> <p>1 point offset calibration (0.00 $\mu\text{S/cm}$ in air), 1 point slope calibration in</p> <p>EC Calibration: EC standard 84 $\mu\text{S/cm}$, 1413 $\mu\text{S/cm}$, 5.00 mS/cm, 12.88 mS/cm, 80.0 mS/cm and 111.8 mS/cm</p> <p>TDS Range: 0.00 to 14.99 ppm (mg/L), 15.0 to 149.9 ppm (mg/L), 150 to 1499 ppm (mg/L), 1.50 to 14.99 g/L, 15.0 to 100.0 g/L, up to 400.0 g/L (absolute TDS)**</p> <p>TDS Resolution: 0.01 ppm, 0.1 ppm, 1 ppm, 0.01 g/L, 0.1 g/L</p> <p>TDS Accuracy: $\pm 1\%$ of reading (± 0.03 ppm or 1 digit, whichever is greater)</p> <p>TDS Calibration: through EC calibration</p> <p>EC/TDS Temperature Compensation: Automatic -5 to 100° C (23 to 212° F); NoTC - none</p> <p>absolute conductivity.</p> <p>Temperature Correction Coefficient: 0.00 to 6.00% / °C (for EC and TDS only). Default value is 1.90% / °C</p> <p>EC to TDS Conversion Factor: 0.40 to 0.80 (default value is 0.50)</p> <p>Salinity (% NaCl) Range: 0.0 to 400.0% NaCl</p> <p>Salinity (% NaCl) Resolution: 0.1% NaCl</p> <p>Salinity (% NaCl) Accuracy: $\pm 1\%$ of reading</p> <p>Salinity (% NaCl) Calibration: Single point with HI 7037L Standard</p> <p>Salinity (PSU) Range: 2.00 to 42.00 PSU</p> <p>Salinity (PSU) Resolution: 0.01 PSU</p> <p>Salinity (PSU) Accuracy : $\pm 1\%$ of reading</p> <p>Salinity Range: 0.0 to 80.0 g/L*</p> <p>Salinity Resolution (ppt): 0.01 g/L</p> <p>Salinity Accuracy (ppt): $\pm 1\%$ of reading</p> <p>Temperature Range: -20.0 to 120.0 °C ; -4.0 to 248.0 °F**</p>	1 No.

		<p>Temperature Resolution : 0.1 °C; 0.1 °F</p> <p>Temperature Accuracy: ±0.5 °C; ±0.9 °F</p> <p>EC/TDS Probe: EC/temperature probe</p> <p>Logging Type : Manual Log on</p> <p>Demand (Max. 200 logs); Manual Log on</p> <p>Stability (Max. 200 logs); Interval Logging 100 lots,</p> <p>Max. 600 logs/lot</p> <p>Logging Memory: Up to 1000 records</p> <p>Connectivity: 1 micro USB port for charging and PC connectivity,</p> <p>1 USB port for storage</p> <p>GLP: yes</p> <p>Battery Type/Life: Built-in rechargeable battery with up to 8 hours of continuous use</p> <p>Power Supply: 5 VDC adapter (included)</p> <p>Environment: 0 to 50°C (32 to 122°F), RH max 95% non-condensing</p> <p>Dimensions : 202 x 140 x 12.7mm (8" x 5.5" x 0.5")</p> <p>Weight: 250 g (8.82 oz)</p>	
28	Automatic Touch Screen Polarimeter	<p>Instrument Type: Automatic Digital Polarimeter</p> <p>Measurement Modes:</p> <p>Optical Rotation</p> <p>Specific Rotation</p> <p>Concentration</p> <p>International Sugar Degree</p> <p>Measurement Range:</p> <p>±89.99° (Optical Rotation)</p> <p>±259°Z</p> <p>Minimum Reading:</p> <p>0.001° (Optical Rotation)</p> <p>Accuracy:</p> <p>±0.01° (-45° ≤ Optical Rotation ≤ +45°)</p> <p>±0.02° (Optical Rotation < -45° or Optical Rotation > +45°)</p> <p>Repeatability:</p> <p>0.002° (Optical Rotation), standard deviation</p> <p>Minimum Sample Transmittance:</p> <p>1%</p> <p>Light Source:</p> <p>LED cold light source</p> <p>Operating Wavelength:</p> <p>589.3 nm (Sodium D-line)</p> <p>Temperature Control:</p> <p>Built-in Peltier temperature control</p> <p>Temperature Control Range:</p> <p>10°C–50°C</p> <p>Temperature Control Accuracy:</p> <p>±0.2°C</p> <p>Temperature Resolution:</p> <p>0.1°C</p> <p>Display:</p> <p>8-inch TFT color touchscreen</p> <p>Operating System:</p> <p>Android</p> <p>Sample Cell:</p>	1 No.

		<p>Accommodates measuring cells up to 200 mm</p> <p>Data Storage: 8 GB</p> <p>Communication / Output: 3 × USB RS-232 Wi-Fi</p> <p>Data Output Anti-Tampering: Available</p> <p>Graphic / Atlas Function: 4 hours continuous</p> <p>Printer: Small dot-matrix printer and wireless laser printer supported</p> <p>Automatic Calibration: Available / Optional</p> <p>Power Supply: 220 V AC ±10%, 50 Hz</p> <p>Rated Power: 250 W</p> <p>Net Weight:26 kg</p>	
29	water bath shaker	<p>■ Innovative Easy-to-Use Digital Fuzzy Controller</p> <p>■ Patented Jog-Shuttle Control System and Digital LCD Display with Back-Light Function</p> <p>■ CE Certified</p> <p>■ “PL(Product Liability) Insurance”</p> <p>Capacity: 18 Lit.</p> <p>Max. Qty of Erlenmeyer Flask: 250ml x 4ea</p> <p>Temp. Range: Ambient +5 °C to 100 °C ±0.1°C</p> <p>Temp. Resolution: 0.1°C – Display, 0.1°C – Control</p> <p>Temp. Uniformity & Probe: ± 0.5 °C, PT100</p> <p>Heater Power: 1.4 kW</p> <p>Shaking Speed & Resolution: 20 ~ 250rpm, 1rpm-Display/1rpm-Control.</p> <p>Shaking Stroke (mm): Adjustable 15,20,30 Available (20 as factory Default)</p> <p>Timer & Alarm: 99hr 59min (Delay & continuous run), Error status & Timer-end</p> <p>Display: Digital LCD display with back light function</p> <p>Controller: Digital fuzzy controller with jog-shuttle switch (Turn + Push)</p> <p>Safety Circuit: Over temp./Current protector, sensor error detector.</p> <p>Rack: Including Stainless Steel Spring Rack: Universal-Type</p> <p>Drain valve: Mounted.</p> <p>Material: Stainless Steel(#304)-Internal, Powder Coated Steel-External.</p> <p>Dimension (w x d x h) Internal (mm): 300 x 300 x h200</p> <p>Dimension (w x d x h) External (mm): 563 x 353 x h340</p> <p>Packing Size (mm): 620 x 420 x h450</p> <p>& Gross Weight (kg): 24kg</p> <p>Power Supply: 1 phase AC 120V, 60 Hz or 220V, 50/60 Hz.</p>	1 No.
30	Air Sampler	<p>Air sampler Petri dish size 90 mm; body material aviation aluminium; built-in rechargeable lithium battery; AC/DC support; suitable for laboratory air sampling applications.</p>	1 No.

31	Digital Homogenizer	<p>Speed Range & Resolution 2,000 ~ 27,000rpm (without load), 10 rpm-Control</p> <p>Working Range 1 ~ 2,500ml</p> <p>Motor Rating (Input / Output) Input : 300W , Output : 160 W</p> <p>Timer & Alarm 10sec ~ 15min, Timer-end</p> <p>Alarm</p> <p>Display Digital LCD with Back-Light</p> <p>Function</p> <p>Controller Digital Feedback Controller</p> <p>(Remote Type)</p> <p>Safety Device Over Load & Over Heat</p> <p>Protector</p> <p>without Dispersing Tool</p> <p>Material Aluminum Die-casting and ABS-Unit, Stainless steel (# 304)-Tool</p> <p>Permissible Temp. & Moisture Ambient +5 ~ 50°C, 85%</p> <p>Extension Arm Size $\Phi 12.7 \times L250$mm</p> <p>Dimension & Weight 60×75×h215mm, 2.5kg</p> <p>fPacking Size & Gross Weight 580×340×h230mm, 6 kg</p> <p>Power Consumption 160W</p> <p>Electrical Reqs. 1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz</p>	1 No.
32	Digital melting point apparatus	<p>Visual and Automatic Determination includes a color display to observe the phase transition, equipped with a video camera and a video replay function which allows reviewing the melting point determination.</p> <p>suit for color samples, which tradition automatic melting point apparatus not available.</p> <p>Multi-user ID Classify Function</p> <p>Adopt User ID management function. Users ID are available for adding, deleting and jurisdiction setting.</p> <p>All Screen Design</p> <p>Adopt a 8 inch capacitive touch screen, with the brilliant Android system, let the operating easier.</p> <p>Amazing Data Processing & Exporting</p> <p>The methods, atlas and detailed result are available for storage. Connecting printer or all data export are both available.</p> <p>Compliant with GLP, GMP(EU,UPS&CN)</p> <p>Capillary position capacity: 4</p> <p>Capillary size: Outer Φ 1.4 mm, length 110 mm</p> <p>Magnification of lens: 8</p> <p>Display: Color 8-inch Touch Screen</p> <p>Temperature range: RT–300°C</p> <p>Temperature accuracy: 0.4 at 200°C; 0.7 at 300°C</p> <p>Temperature resolution: 0.1°C</p> <p>Temperature repeatability: 0.2°C</p> <p>Temperature gradients: 0.1°C-20°C</p> <p>Video & Camera: Camera</p> <p>Automatic find melting point: No</p> <p>Storage capacity: 8G</p> <p>Methods storage: 10</p> <p>Communication ports: USB×3, RS232, Wi-Fi, RJ45</p>	1 No.

		Printer: Thermal printer	
33	Media Suction Pump	Power: DC12V, 1.0A ▶ Max. vacuum: 313 mbar abs. ▶ Max. liquid flow rate: 0.5 L/min ▶ Motor: 12W Brushless DC Motor ▶ Hose barb: ID6 ▶ Material contact with filtrate: SS316, FKM, Silicone, PP, PA66 ▶ Adaptor: Spin-lock Materials: ▶ Housing material – SS304 Adaptor – SS316, Valve plate – EPDM (Ethylene Propylene Diene Monomer) Diaphragm: EPDM (Ethylene Propylene Diene Monomer) Fluid Path Inlet – SS316 ▶ Fluid outlet port – SS316 ▶ Fluid path hose – Silicone tube ▶ O-ring – FKM ▶ Draining hose – silicone	1 No.
34	Poly sealer	Impulse-type poly bag sealer, 32-inch (800 mm) sealing length, suitable for sealing polyethylene/polypropylene bags, adjustable sealing time, heat-resistant sealing bar, sturdy metal body, tabletop operation, 220–240 V AC	1 No.
35	Digital Balance standard size with capacity of 500g	<ul style="list-style-type: none"> - Backlit LCD display - Colour coded keys - Level indicator with adjustable levelling feet - Removable draft shield supplied on 0.001g readabilities - Robust metal housing - Sealed keypad - Pan lifter to easily remove samples <p>Maximum capacity: 1600g Readability: 0.01g Repeatability (S.D):0.02g Linearity (+/-): 0.04g Pan size: 160mm Ø Weighing units: g,kg,ct,GN,N,lb,oz,ozt,dwt,custom unit Stabilization Time (sec):3 Interface: RS-232/USB Display: Backlit LCD with 20mm-hig digits Power supply:18VDC 800mA adapter Overall Dim. 220x310x270mm (wxdxh)</p>	2 Nos.
36	Compact Digital Waving Rotators	<p>Speed range: 5~60 rpm Angle range: 0⁰ ~ 90⁰ Motor: 35W Program Function: 10 steps, 6 programs Timer & Alarm: 99hr 59min (with continuous run) Error status & time-end. Display: Digital LCD Display with Back-Light Function. Controller: Programmable Digital feedback controller with jog shuttle. Temp. Resistance: Lower than 65 (Dry air). Safety Circuit: Overload Protector for motor. Dimension (wXdXh)(mm): 200x250xh260 mm. Weight: 8.5kg. Others: CE Certified, PL(Product Liability) Insurance</p> <p>Storage function (RPM, Timer) Locking mode (Jog-Shuttle input disabled) User self compensation function</p>	1 No.

		<p>end) Packing Size (wXdXh) (mm): 370 x 240 x h430mm & Gross Weight: 6kg Power Consumption: 40W Power Supply & Cord Plug: 1 Phase, AC 120V, 60Hz or AC 230VAC, 50/60Hz with cord/Plug.</p>	Alarm (Error Status and Timer)	
37	Large Capacity Orbital Shaker	<p>Shaking Platform Size: 255×255 mm Shaking Motion: Orbital Motion Reciprocating Motion Speed Range & Max. Load: 10 ~ 300 rpm, 10kg Amplitude of Rotation (mm): 10 mm Motor: Brushless DC Motor Permissible Temp. & Moisture: Ambient +5 ~ 50°C, 80% Timer & Alarm: 99hr 59min (with Continuous run.), Error status & Timer-end Display: Large Size Digital LCD with Back-Light Function Controller: Digital Fuzzy Controller with Touch Button, Jog-dial Program Function: 10 Steps, 6 Programs Packing Dimension & Weight 345×420×h205 mm, 13.5kg Safety Circuit Overload Protector for Motor Power Consumption 45 W</p>		1 No.
38	Dissecting Tray	Stainless steel dissecting tray, corrosion-resistant, with removable wax/cork lining, suitable for biological dissection and specimen handling; approximate size 30 × 20 × 5 cm, with smooth edges and easy-to-clean surface.		5 No.
39	Heating Mantles	<p>with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System</p> <ul style="list-style-type: none"> ☐ Lower Profile for Space-saving Convenience ☐ Highly-processed Aluminum Case Offers Robust Standing, ☐ Ideal for Repetitive Extraction (Kjeldahl, Soxhlet and other Extraction Easy Handling Procedure), Reflux and Distillation Laboratory Applications ☐ Nickel Chrome Heating Element - Coil Type ☐ Analog Controller Built-in System : Acid-Resistant, Long Life Time ☐ CE Certified ☐ Ideal for DURAN / Kimax / Pyrex & Iwaki-brand Round Flasks with Glassware Supporting Rod & Clamp <p>Flask Capacity (ml): 500/1000ML Flask Dia (mm): 83~86 Bottom: Round Watts(W): 840 Inside Depth (mm): 50 Dimension W x D x H (mm): 800 x 240 x 110 Power 230V.</p>		2 No.
40	Sieve Shaker	Digital sieve shaker for accurate particle-size separation; capacity for up to 7 standard test sieves; variable shaking intensity/time control; suitable for 200 mm diameter sieves; robust laboratory-grade construction; uniform and reproducible sieving action; supplied with sieve holding clamps, cover and		1 No.

		receiving pan; 220–240 V AC	
41	Compound Microscope	<p>Observation mode: Brightfield, phase contrast. Head: Trinocular (2-position 100/0, 50/50), 45° inclined. Interpupillary distance: Adjustable between 50 and 75 mm. Dioptric adjustment: On the left eyepiece tube. Eyepieces: WF10x/22 mm, high eye-point and with rubber cups. Nosepiece: Quintuple revolving nosepiece, rotation on ball bearings. Objectives: IOS LWD W-PLAN PH 10x/0.25 IOS LWD W-PLAN PH 20x/0.40 IOS LWD W-PLAN PH 40x/0.65 All with anti-fungus treatment. Specimen stage: Fixed stage, 250×160 mm, with glass and metal stage inserts. Focusing: Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Condenser: LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Transmitted illumination: X-LED8 with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multiplug 100-240Vac/6Vdc external power supply a) Camera Professional ultra-high definition yet very easy to use 4K camera with 2160p, 8 MP resolution, large SONY CMOS sensor and HDMI connection to clearly reveal the sample's finest details on-screen and perform measurements. No software installation is required with image and video capturing on SD card when in HDMI mode. At any time, it can be connected to PC and used via the downloadable, free of charge software (Windows), which is always available to enable the latest updates. The compact and elegantly designed housing conceals the very latest in camera technology. Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them. Ideal to be connected to all the trinocular tube of different brands using the focusable CMount adapter (to be purchased separately). Wireless mouse, SD card and built-in software included. » Simple operation, built-in software » Universal connection to any microscope brand » Ultra HD 4K 2160p images and videos » Dual output mode (HDMI/USB)</p>	1 No.

		<ul style="list-style-type: none"> » High frame rate » Reliable color fidelity » C-mount connection (via dedicated adapter, on any microscope) » HDMI cable, mouse and SD card included » Downloadable, free of charge software » ProView software for Windows <p>c) Fluorescence Attachment Android & Smart LED 36” CPU: ARM Advanced Multi-Core Cortex CA55 Graphics: ARM Advanced Multi-Core Mali G31 RAM: 1.5 GB DDR3 ROM: 8 GB Flash System: Google TV Voltage Range: 100-240V 50/60Hz Net Dimension (Without Stand): 715.7*79.3*421.9mm Net Dimension (With Stand): 715.7*180.8*464.1mm Packaging Dimension: 800x118x495 mm Gross Weight: 5.1kg</p>	
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Note: All Equipment should be in warranty of minimum one year.

Section-IV: Bid Data Sheet

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) Section II. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

A. Introduction		
BDS Clause Number	ITB Number	Amendments of, and Supplements to, Clauses in the Instruction to Bidders
1.	2.1.1	<p>Name of Procuring Agency: Baba Guru Nanak University, Nankana Sahib.</p> <p>The subject of procurement: Purchase of Science Lab Equipment</p> <p>Period for delivery of goods: 90 days</p> <p>Commencement date for delivery of Goods: After Issuance of Letter of Acceptance (Award Letter)</p>
2.	2.1.2	<p>Financial year for the operations of the Procuring Agency: 2026-2027</p> <p>Name of Project/ Grant (Development or Non-Development): Development</p> <p>Name of financing institution: Baba Guru Nanak University, Nankana Sahib.</p>
3.		Ineligible country(s): NA
4.	2.3.6(iii)	Demonstration of authorization by manufacturer: Required
B. Bidding Documents		
5.	2.2.2	The address for clarification of Bidding Documents: Secretary Purchase Committee, Baba Guru Nanak University, Nankana Sahib.
6.	2.2.2	Pre-bid meeting will not be held
C. Bid Price, Currency, Language and Country of Origin		
8	2.3.1	Language: English
10	2.3.4	The price quoted shall be Inclusive of all applicable Taxes
11.	2.3.4	The price shall be fixed

12.	2.1.4 (ii)	Country of origin:
D. Preparation and Submission of Bids		
13.	2.1.3	<p>Qualification Criteria/Knock down criteria</p> <p>Minimum requirement for a Bidder to participate in the Bidding process which, include the following:</p> <ul style="list-style-type: none"> i. At least three years of experience in supplying scientific, laboratory, educational or research equipment. Supported by documentary evidence of business registration and/or previous supply contracts. ii. The bidder must have successfully completed at least three (03) relevant supply contracts during the last five (05) years with public-sector and/or reputed private-sector organizations. Copies of relevant purchase orders/contracts along with satisfactory completion or performance certificates must be submitted. (Purchase order of minimum value of Rs.2.000 million will be considered) iii. Registration with relevant tax authority i.e., FBR/PRA etc. as active tax payer (Sales Tax and Income Tax). iv. Minimum average annual turnover during last three years = 10 million (Only Income Tax Returns for last three years required) v. Affidavit to the effect that: - <ul style="list-style-type: none"> ● Bidder is not currently blacklisted by the procuring agency. ● The documents/photocopies provided with Bid are authentic. In case of any fake/bogus document found at any stage, the Bidder shall be blacklisted as per Law/ Rules. ● The provided information is correct. <p>(Affidavit on fresh judicial stamp paper of Rs.100/- shall be submitted by the bidders)</p> vi. The bidder must be either: <ul style="list-style-type: none"> ● The original manufacturer of the offered equipment; OR ● An authorized dealer/distributor of the manufacturer of the offered equipment.

		<p>The bidder shall submit the following relevant documents:</p> <ul style="list-style-type: none"> • Manufacturer: Documentary evidence establishing its manufacturing status and applicable quality management certification, where required. • Authorized Dealer/Distributor: A valid authorization certificate/letter issued by the original manufacturer or its authorized principal, covering the offered brand/equipment and confirming the bidder's authorization to supply the same. <p>vii. Post supply maintenance certificate required with details of qualified technical staff.</p>
14.	2.3.6 & 2.3.7	Equipment required for No. of years of operation.: Not applicable
15.	2.2.2	Bid shall be Address to: Secretary Purchase Committee Baba Guru Nanak University Nankana Sahib.
16.	2.4.2	<p>The deadline for online Bid submission is</p> <p>a) Day: Monday</p> <p>b) Date: 09-11-2026 Time: 10:00 AM</p>
17.	2.5.1	<p>date/ Month/ Year/Time, and place for Bid opening.</p> <p>09-11-2026 Time: 10:30 AM</p> <p>Meeting Room, Baba Guru Nanak University, Nankana Sahib.</p>
18.	2.6.2	Amount of Performance Guarantee is: 5% (Withheld for One Year)
19.	2.3.8	<p>Estimated Contract Price: Rs 22.500 million</p> <p>Amount of Bid security is @2% of the Estimated Cost: Rs. 450,000/-</p>
20.	2.3.9	Bid validity period after opening of the Bid is: 120 days.
21.	2.3.9	Number of copies of the Bid to be provided are: Online (Punjab e-procurement System).
E. Opening of Bids		

22.	2.5.1	The Bid opening shall take place at: Meeting Room, Baba Guru Nanak University, located at Danish School Hostel Buildings, Nankana Sahib. Timing: 09-11-2026 Time: 10:30 AM
23.	2.3.5	The currency that shall be used for Bid evaluation and comparison purposes to convert all Bid prices expressed in various currencies is: PKR
24	2.3.6	Sample of the Quoted item: N/A

G. Award of Contract

2.6.5	Percentage for quantity increase or decrease is: 15%
2.6.2	The Performance Guarantee shall be: 5% Withheld for one year
2.6.2	The Performance Security shall be in Electronic form as per facility available in the Punjab e-Procurement

Section-V: General Conditions of Contract

1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) “The Contract” means the agreement entered into between **Baba Guru Nanak University, Nankana Sahib** and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (b) “The Contract Price” means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) “The Goods” means all of the equipment, machinery, and/or other materials which the Supplier is required to supply to the Procuring Agency under the Contract.
- (d) “The Services” means those services ancillary and related to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, maintenance & repair and other such obligations of the Supplier covered under the Contract.
- (e) “GCC” means the General Conditions of Contract contained in this section.
- (f) “SCC” means the Special Conditions of Contract.
- (g) “The Procuring Agency” means **Baba Guru Nanak University, Nankana Sahib.**
- (h) “The Procuring Agency’s country” is Pakistan
- (i) “The Supplier” means the Bidder or firm supplying the Goods and Services under this Contract.
- (j) “The Project Site,” where applicable, means the place or places named in SCC.
- (k) “Day” means calendar day.

2. Application	2.1. These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.
3. Country of Origin <i>[where applicable]</i>	<p>3.1. All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules, as further elaborated in the SCC.</p> <p>3.2. For purposes of this Clause, “origin” means the place where the Goods were mined, grown, or produced, or from where the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product is obtained that is substantially different in basic characteristics or in purpose or utility from its components.</p> <p>3.3. The origin of Goods and Services is distinct from the nationality of the Supplier. In any case, the requirements of rules 10 & 26, PPR-14, shall be followed.</p>
4. Standards	4.1. The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the goods’ country of origin. Such standards shall be the latest issued by the concerned institution.
5. Use of Contract Documents and Information; Inspection and Audit by the procuring agency.	<p>5.1. The Supplier shall not, without the Procuring Agency’s prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring Agency in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.</p> <p>5.2. The Supplier shall not, without the Procuring Agency’s prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of executing the Contract.</p> <p>5.3. Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring Agency and shall be returned (all copies) to the Procuring Agency on completion of the Supplier’s performance under the Contract if so, required by the Procuring Agency.</p>

5.4. The Supplier shall permit the Procuring Agency to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the donors, if so, required by the donors.

6. Patent Rights

6.1. The Supplier shall indemnify the Procuring Agency against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring Agency's country.

7. Performance Guarantee

7.1. Within **fifteen (15) days** of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring Agency the Performance Guarantee in the amount specified in SCC/Bid Data Sheet & clause 2.6.2 of ITB.

7.2. The proceeds of the Performance Guarantee shall be payable to the Procuring Agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

7.3. As per Rule-56 of PPR-14, the performance guarantee shall be denominated in the currency of the Contract acceptable to the Procuring Agency and shall be in one of the following forms:

- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring Agency's country, in the form provided in the Bidding documents or another form acceptable to the Procuring Agency; or
- (b) a Bank Guarantee, Bank call-deposit (CDR), Demand Draft (DD), Pay Order (PO) or Banker's cheque cashier's or certified cheque or CDR.

7.4. The performance guarantee will be discharged by the Procuring Agency and returned to the Supplier after one year following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

8. Inspections and Tests

8.1. The Procuring Agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring Agency. SCC and the Technical Specifications shall specify what inspections and tests the Procuring Agency requires and where they are to be conducted. The

Procuring Agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives nominated for these purposes.

8.2. The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at the Goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s) (if so, allowed by the Procuring Agency), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring Agency.

8.3. Should any inspected or tested Goods fail to conform to the Specifications, the Procuring Agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring Agency.

8.4. The Procuring Agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring Agency's Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring Agency or its representative prior to the goods' shipment from site of the Supplier.

8.5. Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

9. Packing

9.1. The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2. The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Procuring Agency.

10. Delivery and Documents

10.1. Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of

shipping and/or other documents to be furnished by the Supplier are specified in SCC.

10.2. Upon delivery, the Procuring Agency shall give receiving certificate to the supplier with the statement that, "completion certificate along with satisfactory report shall be issued after due inspection as per clause-8 of GCC, which will enable the supplier to put up the bill".

10.3. Documents to be submitted by the Supplier are specified in SCC.

11. Insurance

Not Required

12. Transportation

12.1. The Supplier is required under the Contract to transport the Goods to a specified place of destination within the Procuring Agency's country, insurance and storage, as shall be specified in the Contract, and related costs shall be included in the Contract Price.

13. Incidental Services

13.1. The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) satisfactory performance for specified time/ quantity on-site and/or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Procuring Agency's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

13.2. Prices charged by the Supplier for incidental services shall be included in the Contract Price for the Goods and shall not exceed:

- (i) the prevailing rates charged for other parties by the Supplier for similar services; and

- (ii) original price of goods.

14. Spare Parts

14.1. As specified in SCC, 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:

- (a) such spare parts as the Procuring Agency may choose to purchase from the Supplier, provided that this choice shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) in the event of termination of production of the spare parts:
 - (i) advance notification to the Procuring Agency of the pending termination, in sufficient time to permit the Procuring Agency to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the Procuring Agency, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

15.1. The Supplier warrants that the Goods supplied under the Contract **are new, unused, of the most recent or current models selected by the Procuring Agency**, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring Agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

15.3. The Procuring Agency shall promptly notify the Supplier in writing of any claims arising under this warranty.

15.4. Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring Agency.

15.5. If the Supplier, having been notified, fails to rectify the defect(s) within the period specified in SCC, within a reasonable period, the Procuring Agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any

other rights which the Procuring Agency may have against the Supplier under the Contract/relevant provision of PPR-14 including Blacklisting.

16. Payment

16.1. The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.

16.2. The Supplier's request(s) for payment shall be made to the Procuring Agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.

16.3. As per rule-62 of PPR-14, payments shall be made promptly by the Procuring Agency, but in no case later than thirty (30) days after submission of an invoice or claim by the Supplier, provided the work is satisfactory.

16.4. The currency of payment is PKR

17. Prices

17.1. Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its Bid, with the exception of any price adjustments authorized in SCC.

18. Change Orders

18.1. The Procuring Agency may at any time, by a written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract, only if required for the successful completion of the job, in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring Agency;
- (b) the method of shipment or packing;
- (c) the place of delivery; and/or
- (d) the Services to be provided by the Supplier.

18.2. If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be

amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Procuring Agency's change order. But, in no case, the overall impact of the change should exceed 15% of the contract cost and no provisions of PPR-14 should be violated.

19. Contract Amendments

19.1. Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by the mutual consent through written amendment signed by the parties. No variation in finalized brands/ makes/models shall be allowed except in special conditions where the manufacturer has stopped producing or suspended that model or the latest model of similar series or version has been launched by the manufacturer or non-availability due to international mergers of the manufacturers or similar unavoidable constraints.

20. Assignment

20.1. The Supplier shall not assign the whole of contract to anybody else. However, some parts of contract or its obligations may be assigned to sub-contractors with the prior written approval of the procuring agency.

21. Sub-contracts

21.1. The Supplier shall notify the Procuring Agency in the Bid of all subcontracts to be assigned under this Contract. Such notification, in the original Bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

21.2. Subcontracts must comply with the provisions of GCC Clause 20.

22. Delays in the Supplier's Performance

22.1. Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring Agency in the Schedule of Requirements-

22.2. If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring Agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring Agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

22.3. Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless

an extension of time is agreed upon pursuant to GCC Clause 22.2 without the imposition of liquidated damages.

23. Liquidated Damages

23.1. Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring Agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to GCC Clause 24 along with other remedies available under PPR-14.

24. Termination for Default

24.1. The Procuring Agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC Clause 22;
- (b) if the Supplier fails to perform any other obligation(s) under the Contract; or
- (c) if the Supplier, in the judgment of the Procuring Agency has engaged in corrupt practices in competing for or in executing the Contract. For the purpose of this clause, corrupt practices will be defined as per Section-2 (d) of The PPRA Act, 2009.

24.2. In the event the Procuring Agency terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Procuring Agency 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 Procuring Agency for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

25. Force Majeure

25.1. Notwithstanding the provisions of GCC Clauses 22, 23, and 24, the Supplier shall not be liable for forfeiture of its Performance Guarantee, liquidated damages, or termination for default if and to the extent that its

delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

25.2. For purposes of this clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring Agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes. Both, the Procuring Agency and the Supplier, may agree to exclude certain widespread conditions e.g.: epidemics, pandemics, quarantine restrictions etc. from the purview of "Force Majeure".

25.3. If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring Agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring Agency 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. Any difference of opinion concerning "Force Majeure" may be decided through means given herein below.

**26. Termination
for Insolvency**

26.1. The Procuring Agency may at any time terminate the Contract by giving written notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring Agency.

**27. Termination
for Convenience**

27.1. The Procuring Agency, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring Agency's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

27.2. The Goods that are complete and ready for shipment (if applicable) within thirty (30) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring Agency on the Contract terms and prices. For the remaining Goods, the Procuring Agency may choose:

- (a) to have any portion completed and delivered at the Contract terms and prices; and/or

- (b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.

28. Resolution of Disputes

28.1. After signing the contract or issuance of purchase order, The Procuring Agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

28.2. If, after thirty (30) days from the commencement of such informal negotiations, the Procuring Agency and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanisms may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed and/or arbitration as per rule 68 of PPR-14 and in accordance with Arbitration Act-1940.

29. Governing Language

29.1. The Contract shall be written in the language specified in SCC. Subject to GCC Clause 30, the version of the Contract written in the specified language 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.

30. Applicable Law

30.1. The Contract shall be interpreted in accordance with the laws of Punjab (Pakistan) unless otherwise specified in SCC.

31. Notices

31.1. Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by any information technology mean for the time being in use and acceptable in ordinary course of business to the other party's address specified in SCC.

31.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

32. Taxes and Duties

32.1. Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods & Services to the Procuring Agency. In case of imposition of new taxes/duties or concession thereof after the deadlines for the submission of bids the effect thereof shall be borne or availed by the procuring agency as the case may be.

Section-VI. Special Conditions of Contract

Special Conditions of Contract

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

1. Definitions (GCC Clause 1)

GCC 1.1 (g)—The Procuring Agency is: Baba Guru Nanak University, Nankana Sahib.
Supplier is:

2. Country of Origin (GCC Clause 3):

3. Performance Guarantee (GCC Clause 7)

GCC 7.1—As per rule 56 of PPR-14, the amount of Performance Guarantee, as a percentage of the Contract Price, shall be: **5% (withheld for one year)**

GCC 7.4—the Performance Guarantee shall be retained to cover the Supplier's warranty obligations or defect liability period in accordance with Clause GCC 15.2 for minimum one year.

4. Inspections and Tests (GCC Clause 8)

Inspection will be conducted at the site of the Supplier prior to the delivery or after the delivery of items at the final destination.

5. Packing (GCC Clause 9)

GCC 9.2— Original Packing by the manufacturer

6. Delivery

Delivery of items will be made to following Location(s):
Baba Guru Nanak University Nankana Sahib.

The Supplier shall provide Delivery Challan showing goods' description, quantity to the Procuring Agency.

7. Warranty

(GCC Clause 15): The supplier warrants that the goods supplied are original, new and as per specifications given in the bid document. All items should be in warranty of minimum one year.

8. Sample provision

Sample not required.

9. Payment (GCC Clause 16)

GCC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:

Payment for Goods supplied:

GCC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:

- After the signing of Inspection / Satisfactory Report Supplier shall provide the invoice showing goods' description, quantity, unit price, and total amount along with the **Digital Sales Tax invoice** and Import documents (if applicable)
- Payment may be made in Pak. Rupees in the following manner:

Lump sum modality.

10. Prices (GCC Clause 17)

GCC 17.1—Prices shall be fixed and shall not be adjusted.

11. Liquidated Damages (GCC Clause 23)

GCC 23.1—Applicable rate: Maximum 10 Percent

Maximum deduction: Applicable rate shall be **one-half (0.5) percent per week**, and the maximum shall not exceed ten (10) percent of the Contract Price after that Procuring Agency may proceed for the termination of contract along-with other remedies available under PPR-14.]

12. Resolution of Disputes (GCC Clause 28)

GCC 28.2—The dispute resolution mechanism to be applied pursuant to GCC Clause 28.2 shall be as follows:

As per rule-68 of PPR-14, in the case of a dispute between the Procuring Agency and the Supplier, the dispute shall be referred for arbitration in accordance with the Arbitration Act 1940.

13. Governing Language (GCC Clause 29)

GCC 29.1—The Governing Language shall be: English

14. Applicable Law (GCC Clause 30)

GCC 30.1-The Contract shall be interpreted in accordance with the laws applicable in the jurisdiction of the province of Punjab (Pakistan):

15. Notices (GCC Clause 31)

GCC 31.1—Procuring Agency's address for notice purposes: Secretary Purchase Committee
Baba Guru Nanak University, located at Danish Schools Hostel Buildings, Nankana Sahib.

—Supplier's address for notice purposes:

Section-VII. Schedule of Requirements

7.1 Schedule of Requirements

Delivery Period will be 90 days after issuance of Letter of Acceptance.

Sr #	Instrument/Item	Specifications	Qty
1.	Infrared Thermometer	Temperature Measurement Range -32°C to 380°C / -26°F to 716°F Accuracy $\pm 2\%$ or $\pm 2^\circ\text{C}$, whichever is greater Resolution 0.1°C / 0.1°F Repeatability $\pm 1\%$ or $\pm 0.1^\circ\text{C}$ Distance-to-Spot Ratio 12:1 Emissivity 0.95 Preset Spectral / Response Wavelength 8–14 μm Response Time 500 ms Temperature Units $^\circ\text{C}$ / $^\circ\text{F}$ Laser Targeting Yes Data Hold Yes Display LCD with Backlight Auto Power Off Yes Power Supply $2 \times 1.5\text{V}$ AAA Batteries Operating Temperature 0°C to 40°C Storage Temperature -20°C to 60°C	1
2.	Nuclear Radiation Detector	Condition: 100% Brand New Item Type: Radiation Detector Material: ABS Size: Approx.135x70x25mm / 5.3x2.8x1.0in Weight: Approx.200g/7.1oz Detector: Energy compensated FM tube (Geiger counter tube) Energy Range: 50KVE-1.5MEV $\leq \pm 30\%$ Measurement Shows: dose rate is displayed per second, protection alarm is less than 5 seconds A Dose Equivalent Rate: 0.01~1000MSV (maximum 10MSV/H) B Cumulative Dose Equivalent: 0.01MSV~500.0MSV Quite Inherent Error: $\leq \pm 15\%$ (137CS 1msv/h) A Dose Rate: 0.5, 1.0, 1.5, 2.0, 2.5, 5.0, 10.0, 50.0, 100 MSV B Cumulative Dose Rate: 0.05, 0.5, 1.0, 2.0, 5.0, 10.0, 20.0, 50.0, 100MSV Operating Environment: Temperature $-10^\circ \sim +45^\circ$ Relative humidity: $\leq 95\%$ ($+45^\circ$) Voltage: 3V Rated Power: 50Hz	1
3.	Electro Magnetic Field Radiation Detector	Electric Field (EF): 1 V/m to 1999 V/m Magnetic Field (MF): 0.01 μT to 99.99 μT Resolution EF Resolution: 1 V/m MF Resolution: 0.01 μT Performance Alarm Function: Sound and light alert Display: LCD with backlight Sampling Time: Approx. 0.5 seconds Measurement Mode: Dual mode (EF + MF) General	1

		Power Supply: 3 × 1.5 V AAA batteries Operating Temperature: 0 °C to 50 °C Design: Compact and lightweight portable device Applications Measuring EMF radiation from mobile phones and WiFi routers Checking radiation levels in homes and offices Detecting EMF from electrical wiring and appliances Industrial and environmental radiation monitoring Safety inspection and health awareness applications Educational and research purposes	
4.	Air Quality Monitor	Item Weight 2.12 pounds Product Dimensions 5.4 x 1.4 x 2.9 inches Batteries 1 Lithium Metal battery is required. (included) Material Plastic Battery Cell Type Lithium-Ion Measuring Range Measuring range (PM2.5): 0~999 ug/m³ Measuring range (PM10): 0~999 ug/m³ Measuring range (CO₂): 0~5000 PPM Operating environment: Temperature range: 0-50 °C / Humidity range: 0-90% RH	1
5.	Air-Velocity Meter With Infrared Thermometer	Measurement Type Air Velocity, Air Flow & Temperature Air Velocity Range 0.4 to 25.0 m/s Air Velocity Units m/s, km/h, mph, knots, ft/min Air Velocity Resolution 0.1 m/s, 0.1 km/h, 0.1 mph, 0.1 knots, 1 ft/min Air Velocity Accuracy ±(2% + 2 digits) Air Flow Units CMM (m³/min), CFM (ft³/min) Air Flow Range 0 to 999,900 CMM / CFM Air Flow Modes Instant, 2/3 Vmax, Average Temperature Range 0 to 50°C / 32 to 122°F Temperature Resolution 0.1°C / 0.1°F Temperature Accuracy ±0.8°C / ±1.5°F Temperature Sensor Thermistor Air Velocity Sensor Low-friction ball-bearing vane Vane Diameter 72 mm	1

		<p>Display Large 13 mm (0.5") LCD, dual-function display</p> <p>Sampling Time Approx. 0.8 second</p> <p>Data Hold Yes</p> <p>Maximum / Minimum Function Yes, with recall</p> <p>Auto Power Off Yes</p> <p>Low Battery Indicator Yes</p> <p>Probe Separate vane probe</p> <p>Data Interface RS-232 PC interface</p> <p>Power Supply 9V battery (006P / MN1604 / PP3 or equivalent)</p> <p>Operating Temperature 0 to 50°C</p> <p>Operating Humidity Less than 80% RH</p> <p>Housing Material Durable, lightweight ABS plastic</p> <p>Instrument Dimensions 180 × 72 × 32 mm</p> <p>Weight Approx. 381 g</p>	
6.	Multiparameter Environmental Monitoring Kit	<p>Particle Measurement</p> <p>PM2.5 Range: 0 to 999 ug/m³</p> <p>PM10 Range: 0 to 999 ug/m³</p> <p>Resolution: 1 ug/m³</p> <p>Accuracy: ±10%</p> <p>Gas Measurement</p> <p>TVOC Range: 0 to 5.00 mg/m³</p> <p>Resolution: 0.01 mg/m³</p> <p>Accuracy: ±20%</p> <p>C6H6 Range: 0 to 3.00 mg/m³</p> <p>Resolution: 0.01 mg/m³</p> <p>Accuracy: ±(10% or 0.03)</p> <p>Environmental Measurement</p> <p>Temperature: 10°C to 45°C</p> <p>Humidity: 10%RH to 90%RH</p> <p>Temperature Accuracy: ±2°C</p> <p>Humidity Accuracy: ±5%RH</p> <p>Display & Functions</p> <p>2.8-inch IPS Color Display</p> <p>Real-Time Trend Graph</p> <p>History View: Yes</p>	1

		<p>Alarm Settings: Yes Buzzer Warning: Yes Light Alarm Prompt: Yes Data Logging</p> <p>Storage Capacity: 5000 Records Data Export: Yes PC Software Analysis: Yes Recording Modes: Continuous / Timed Power Supply</p> <p>18650 Rechargeable Battery Battery Runtime: 6 Hours or More Physical Characteristics</p> <p>Dimensions: 146 × 80 × 68mm Weight: Approx. 206g Portable handheld design Applications Indoor air quality monitoring PM2.5 and PM10 dust testing VOC and benzene detection Factory environmental safety checks HVAC and ventilation analysis Schools and hospital air monitoring Laboratory testing in Pakistan Workplace pollution inspections</p>	
7.	Renewable-Energy Environmental Laboratory training system	<p>Horizontal-axis permanent magnet synchronous wind turbine: Output power:300 W Output (rectified) voltage:> +12 V Blade rotation diameter: 1.2 m Number of blades: 3 Blade material: Fiberglass Starting wind speed: 1 m/s Entry wind speed: 1.5 m/s Safe wind speed: 25 m/s Yaw: Program-controlled automatic yaw Yaw motor: Operating voltage (DC 24V), rotational speed (25 rpm) wind velocity indicator: Output voltage: 0–5 V Wind bowls: 3 propeller fan: Flow rate: 2100 m³/h Voltage: 380 V (controlled by the frequency converter) Total pressure: 215 Pa Frequency: 50 Hz Power: 0.37 kW Rotational speed: 1400 r/min Axial fan support bracket Axial fan housing Wind Direction Control Motor: Reduction ratio: 1:40 Voltage: AC220V Linkage mechanism for the driving mechanism: Ratchet wheel Wind Direction Control Motor: Reduction ratio: 1:40 Voltage: AC220V Linkage mechanism for the driving mechanism: Ratchet wheel Battery Module: Power: 20 W Error: ±5% Output voltage: 17.2 V</p>	1

		<p> Output current: 1.17 A Open-circuit voltage: 21.4 V Short-circuit current: 1.27 A Work environment temperature: 45°C ± 2°C Dimensions: 430 × 430 × 28 mm Sun-tracking sensor: Output voltage: 0–5 V Tracking accuracy: 1° Structure: 4-bridge circuit Delineascope: Armature mechanism: Turbine-worm gear structure (2 reduction boxes) Voltage: 220V Frequency: 50 Hz Current: 1.36 A Maximum power: 300 W Sun-Chasing Mechanism: Structure: Turbine-Worm Gear Mechanism (Reduction Gearbox) Drive: DC motor Number of axes: Dual-axis 2D Power Supply Control Unit Equipped with a leakage protection circuit breaker, AC220V and DC24V status indicator lights, and a power socket. Wind Power Control Power Supply Unit: Wind farm rotation direction: clockwise or counter-clockwise Unit: Axial fan control: Air supply Yaw control: Yaw, Stop Automatic control: Start, Emergency Stop PLC: S7-200 CPU224 frequency transformer: MM420-0.37Kw adjustable resistor: Range: 0–1000 Ω; continuously adjustable (with scale) Power Supply Control Unit: Equipped with a leakage protection circuit breaker, AC220V and DC24V status indicator lights, and a power socket. Photovoltaic Control Power Supply Unit: Equipped with a leakage protection circuit breaker and AC220V/DC24V status indicator lights touch screen: 7" – Color functional module: DSP Core Board 2812, Communication Control Board, Photovoltaic Power Generation Main Circuit Board DC Input Unit: Ammeter: PA1951-AK1G, DC 0–5 A Voltmeter: PZ195U-AK1G, DC 0–500 V Interface: RS485 Photovoltaic Power Supply Control Unit: Solar panel tracking direction: East, South, West, North Spotlight control: Light 1, Light 2 Spotlight movement direction: East–West, West–East, Stop Automatic control: Start, Emergency Stop PLC: S7-200 CPU226 adjustable resistor Range: 0–1000 Ω; continuously adjustable (with scale) Inverter Output Display Unit: Ammeter: AC 0–5 A Voltmeter: AC 0–500 V Interface: RS485 Inverter Control Power Supply Unit: Equipped with a leakage protection circuit breaker and AC220V/DC24V status indicator lights dc-to-ac converter: Input voltage: DC 12V Input voltage range: DC 9.5 V–15.5 V Output voltage: AC 220 V ±5% Rated output current: 1.4 A Output frequency: 50 Hz ± 0.5 Hz Rated power: 300 VA </p>	
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		<p>Output waveform: Sinusoidal wave Waveform distortion: <5% Conversion efficiency:>85% Experimental Module: Sinusoidal Wave Inverter Principle Module Switching Mode Power Supply: Input voltage: AC 220V Output voltage: DC 24V Output current: 5 A frequency transformer: MM420-0.37Kw Motor load: Power: 40 W Voltage: AC220V Rotational speed: 1350 rpm Analog stage lighting load: Light-emitting module labeled "KNT" Valve-regulated sealed lead-acid battery: Capacity: 12V,18Ah/20Hr DC motor load: DC microcontroller load IPC: 6 serial ports, including keyboard and mouse Mesh Plate Laboratory Bench: Vertical mesh panel basic structure: the bottom consists of a toolbox + 4 wheels; the top consists of the vertical mesh panel. Dimensions: 800 (length) × 600 (width) × 2000 (height) External frame composition: aluminum alloy profiles; Embedded powder-coated steel plate Steel plate dimensions: 1200 mm × 820 mm Steel plate thickness: 2 mm Steel plate hole specifications: Upper hole dimensions – 6 × 10 mm; left–right hole spacing – 6 mm; top–bottom hole spacing – 6 mm with an 8 mm offset; The mesh panel is equipped with sliding drawers, each featuring a profiled frame and a 2 mm steel plate base; The bottom of the mesh frame is equipped with pulleys. Microsoft Operating System Software: Window XP experiment guidebook: Wind-Solar Hybrid Power Generation System Practical Training Guide</p>	
8.	Noise Dosimeter	<p>Sound Measurement</p> <p>Range: 30 dB–130 dB</p> <p>Resolution: 0.1 dB</p> <p>Frequency Range: 30 Hz–8 kHz</p> <p>Sampling Rate: 2 times/sec</p> <p>Frequency Weighting: A/C</p> <p>Display Counts: 2000</p> <p>General</p> <p>Display: Backlit LCD</p> <p>Auto Ranging: Yes</p> <p>Auto Power Off: Yes</p>	1

		<p>Low Battery Indicator: Yes</p> <p>Power Supply: 4 × 1.5 V AAA batteries</p> <p>Dimensions: 193 × 60 × 29 mm</p> <p>Weight: ~222 g</p>	
9 .	Airborne Particle Counter	<p>Product Type: Handheld Particle Counter</p> <p>Particle Size Channels: 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm</p> <p>Number of Channels: 6 Channels</p> <p>Flow Rate: 0.1 CFM (2.83 L/min)</p> <p>Counting Accuracy: ±5%</p> <p>Applicable Standards: JIS B9921 and ISO 21501-4</p> <p>Maximum Measurable Concentration: 10% for 2,000,000 particles/ft³</p> <p>Counting Efficiency: 50 ±20% for PSL particles near minimum measurable size; 100 ±10% for PSL particles 1.5–2 times the minimum measurable size</p> <p>False Count: ≤1 particle / 5 minutes</p> <p>Size Resolution: ≤15% for PSL particles near 0.3 µm</p> <p>Display: 4.3-inch Color LCD</p> <p>Touch Panel: Resistive Touch Panel</p> <p>Standard Communication: USB Host and USB Device</p> <p>USB Host Functions: Printer and USB Flash Memory</p> <p>USB Device Function: PC Connection</p> <p>Optional Communication: RS485, Ethernet and Wi-Fi via optional stand/base</p> <p>Recording Media: Internal Memory</p> <p>Data Storage: Up to 10,000 records</p> <p>Data Format: CSV</p> <p>Languages: English, Japanese, Chinese and Spanish</p>	1

		<p>Internal Power Supply: Replaceable Li-ion Rechargeable Battery</p> <p>External Power Supply: AC Adapter, 100–240 V</p> <p>Continuous Operating Time: Approx. 5 hours (single measurement)</p> <p>Main Body Operating Temperature: 10 to 40°C</p> <p>Main Body Operating Humidity: 0 to 85% RH, non-condensing</p> <p>Probe Operating Temperature: 0 to 50°C</p> <p>Probe Operating Humidity: 2 to 98% RH, non-condensing</p> <p>Dimensions: W213 × H100 × D55 mm</p> <p>Weight: Approx. 650 g</p>	
10.	Analytical Balance	<p>Capacity: 300g</p> <p>Readability: 0.0001g</p> <p>Calibration: External</p> <p>Repeatability: 0.0001g</p> <p>Linearity: ± 0.0002g</p> <p>Weighing Units: gram, carat, ounce, pound, troy ounce, Newton</p> <p>Stabilization Time: ≤ 4 seconds</p> <p>Display: 4.3 inch capacitive touch screen</p> <p>Pan Size: 85mm</p> <p>Assembled Dimensions & Net Weight: 360*220*320mm, 6KG</p> <p>Shipping Dimensions & Gross Weight: 520*380*500mm, 9.5KG</p> <p>Communication: USB</p> <p>Power Supply: DC12V 1A</p>	1
11	Kater's Pendulum Apparatus	<p>Height of apparatus with pendulum: 1.25 m approx.</p> <p>Length of pendulum rod: 1.2 m</p> <p>Separation of bearing points: 800 mm</p> <p>Period of adjusted pendulum: 1794 ms with $g = 9.81 \text{ m/s}^2$</p> <p>Total weight: 6.3 kg approx.</p>	1 Set
12	Digital Oscilloscope	Digital storage oscilloscope; bandwidth: 200 MHz; 2 analog channels; maximum real-time sampling rate: 1 GS/s; record length: ≥ 20 kpoints; 7-inch WVGA color display; ≥ 32 automatic measurements; dual-window FFT with simultaneous time/frequency-domain display; advanced edge/pulse/run trigger triggering; trigger frequency counter; USB 2.0 host and device interfaces; fanless design; 5-year warranty; complete with 2×200 MHz passive probes and power cable.	1 No.
13	Magnetic Field and Air-Coil	Complete Helmholtz coil magnetic-field apparatus; digital milli-teslameter: range 0–2 mT, resolution 0.001 mT; DC current supply: 50–400 mA, stability $\leq 1\%$; matched Helmholtz coil pair: 500 turns each, outer diameter 21 cm, inner diameter 19 cm; adjustable coil separation with provision for Helmholtz configuration; Hall-effect magnetic-field probe/sensor; measurement error $\leq 5\%$; complete with connecting leads and necessary accessories.	1 Set
14	Magnetic Moment and Magnetic Field Apparatus	Complete university-level apparatus for determination of the magnetic moment of a bar magnet and investigation of magnetic-field properties. Includes sensitive deflection magnetometer/compass box with graduated 0–360° scale , circular tangent galvanometer/field coil with selectable turns ,	1 Set

		minimum two laboratory-grade bar magnets with non-magnetic holders, adjustable non-magnetic stand with leveling arrangement/spirit level, 0–12 V regulated DC power supply , variable rheostat/current-control arrangement, 0–2 A DC ammeter , commutator/current-reversing switch, measuring scale, complete insulated connecting leads and necessary accessories. Suitable for determination of magnetic moment, study of magnetic field along the axis of a current-carrying coil, verification of tangent law, investigation of the relationship between magnetic field and current/number of turns, and determination of the horizontal component of Earth's magnetic field .	
15	EMF and Internal Resistance Measurement Apparatus	Complete university-level potentiometer apparatus; 10-wire uniform potentiometer with graduated scale and piano-type jockey; regulated DC supply: 2 V/4 V, 2 A with overload and short-circuit protection; sensitive centre-zero galvanometer: 30-0-30; three-dial decade resistance box: 1–1110 Ω in 1, 10 and 100 Ω steps; Leclanché/test cell with holder; one-way and two-way keys; connecting leads. Suitable for determination and comparison of cell EMF, determination of internal resistance by potentiometer method and verification of potentiometer principle. Complete set	1 Set
16	Ultrasonic Bath Sonicator	Capacity (Liters): 10 L Frequency: 40 Hz HF-Peak Out: 407W Heat Temp:: Ambient to 80 °C Tank size inner (mm): 290 x 240 x 150 Heat temp 0C: Ambient to 900C Display: FND Timer (min.): 0 ~ 60 min Drain valve: 1/2"NPT HF-peak out (W): 200W Power: 590W Weight net (kg): 6.4 kg	1 Set
17	Ultrasonic Probe Sonicator	13. Equipped with a 7-inch TFT touchscreen displaying time, temperature, power, continuous mode, and pulse mode. 14. Real-time working parameters and countdown of the running status shall be displayed on the screen. 15. Real-time display of ultrasonic frequency on the screen interface. 16. Two operation modes shall be available: <ul style="list-style-type: none"> ○ Continuous ultrasonication mode. ○ Intermittent ultrasonication mode. 17. Ultrasonic running time shall be no less than 999 minutes. 18. In intermittent mode, an ON/OFF second timer shall be available, with the following settings: <ul style="list-style-type: none"> ○ Ultrasonic time: Adjustable from 0.1 seconds to 99.9 seconds. ○ Interval time: Adjustable from 0.1 seconds to 99.9 seconds. ○ Total time (ultrasonic time + interval time): Adjustable up to no less than 999 minutes. 19. Ultrasonic frequency: 20–25 kHz, with automatic frequency tracking and self-adaptation. 20. Rated ultrasonic power: 600 W, adjustable from 1% to 100%, with a power adjustment step of at least 1%. 21. Processing volume: <ul style="list-style-type: none"> ○ Maximum processing volume: At least 500 mL. ○ Minimum processing volume: No more than 0.1 mL. ○ Sample volume range: 0.1–500 mL. 22. Standard delivery shall include a No. 6 probe horn. 23. Probe horns with diameters of 2 mm, 3 mm, 10 mm, and 15 mm shall be available to accommodate different sample types and processing volumes.	1 Set

		<p>24. Soundproof Chamber and Workbench:</p> <ul style="list-style-type: none"> • Soundproof chamber workbench. • Power cabinet. • Soundproof chamber with soundproof cotton installed inside. • Visual window for observing reactions during operation. <p>14. Accessories and Components:</p> <ul style="list-style-type: none"> • One set of transducer (aluminum alloy or titanium alloy, optional). • One titanium alloy probe. • One special tool kit. • One temperature probe. <p>15. Lifting Platform Control:</p> <p>A separate remote controller shall be provided for operating the lifting platform inside the soundproof chamber. A remote control for ultrasonic ON/OFF operation shall also be acceptable for bid response purposes.</p> <p>17. Power Supply: 220 V, 50 Hz.</p> <p>18. Probe Specifications and Recommended Sample Volumes:</p> <ul style="list-style-type: none"> • $\Phi 2$ mm probe: 0.5–20 mL. • $\Phi 3$ mm probe: 10–50 mL. • $\Phi 6$ mm probe: 10–150 mL. • $\Phi 8$ mm probe: 20–300 mL. • $\Phi 10$ mm probe: 20–500 mL 	
18	Analytical Balance	<p>Capacity: 210g</p> <p>Readability 0.0001g</p> <p>Repeatability (S.D.): 0.0002g Linearity (+/-): 0.0003g</p> <p>Minimum Weight (USP, Typical): 0.002g</p> <p>Pan Size: 3.5" $\varnothing$ / 80mm $\varnothing$</p> <p>Weighing Units: mg, g, ct, GN, N, dr, oz, ozt, dwt, mm, tl.T, tl.H, tl.S, T, custom unit</p> <p>Stabilisation Time (sec): 2</p> <p>Interface: RS-232 / USB</p> <p>Calibration Internal automatic calibration</p> <p>Display: Backlit LCD with 0.9" / 24mm high digits</p> <p>Power Supply: 18VDC 50/60Hz 830mA adapter</p> <p>Operating Temperature: 15° to 35°C</p> <p>Housing: ABS plastic</p> <p>Draught Shield Chamber: 192x195x230mm Overall Dim: 224x374x338mm</p> <p>Net Weight: 13.7lb / 6.2kg</p>	2 Nos.
19	Magnetic Stirrer with Hot Plate	<p>Material Body: Powder Coated Aluminum</p> <p>Material Plate: Ceramic Coated Aluminum</p> <p>(Chemical/Acid Resistance, Easy to Clear)</p> <p>Stirring Capa. & Motor Rating: Max. 20Lit, 9/4 W</p> <p>Speed & Control Resolution: 80 ~ 1,500rpm, 5rpm</p> <p>Temp. Range & Accuracy: Max. 3800C, +0.30C at Set Temperature</p>	1 No.

		Temp. Resolution: 0.10C-Display, 0.50C-Control Temp. Uniformity: Specially Designed Heating Module: Temp. Difference 10%less Heating Power/Consumption: 600W Timer & Alarm: 99hr 59 min, (Continuous run) Error status & Timer-end Display: Digital LCD Display with Back-Light Function Controller: Digital Feedback Controller with Jog Shuttle Switch (Turn+Push) Stirring Bar: 3cm bar-included, Usable: up to 5cm bar Safety Circuit: Over temp. Protection. Permissible Temp. & RH%: Ambient +5~500C, 85%RH Dimension & Weight: 206 x 307 x h99mm, 3.3kg Packing Size & Gross weight: 400 x 280 x h200mm, 5kg Power supply & Cord/Plug: 1 Phase, AC 120V, 60Hz, or AC 230V, 50/60Hz, with Cord Plug Including: External Temperature Probe	
20	Bench-top pH Meter	pH Range: -2.00 to 16.00 pH, -2.000 to 16.000 pH, pH Resolution 0.01 pH, 0.001 pH pH Accuracy (@25°C/77°F): ±0.01 pH, ±0.002 pH pH Calibration: automatic, up to three points (five points†) calibration, 5 standard (7 standard†) buffers available (1.68†, 4.01 or 3.00, 6.86, 7.01, 9.18, 10.01, 12.45†) and two custom buffers† pH Temperature Compensation: automatic, -5.0 to 100.0°C (23.0 to 212.0°F) (using built-in temperature sensor) Electrode Diagnostics: standard mode: probe condition, response time and out of calibration range mV Range: ±1000.0 mV mV Resolution: 0.1 mV mV Accuracy: ±0.2 mV ORP Range: +2000mV Resolution: 0.1mV Accuracy: ±0.2 mV(+999.9mV): +1mV (+2000mV) Calibration: One-point calibration Temperature Range: -20.0 to 120.00C, -4.0 to 248.00F, Resolution: 0.10C:0.10F Accuracy: +0.50C: +0.90F Additional Specification: Probe: digital glass body pH electrode with 3.5mm (1/8”) connector and 1m (3.3’) cable Connectivity: 1 USB port for storage:1 micro USB port for charging and PC Connectivity. Environment: 0 to 500C (32 to 1220F); RH max 95% non-condensing Power supply: 5VDC adapter (included) Dimensions: 202 x 140 x 12mm (7.9” x 5.5” x 0.5”) Weight: 250 g (8.82oz.)	1
21	Fume Hood	External: 1200 x 805 x 2320 mm Dimensions W x D x H): 47.3x 31.7 x 91.3” Workspace: 1000 x 630 x 1170 mm (W x D x H): 39.4 x 24.8 x 46”	1

		<p>Front Sash Max Opening: 720 mm / 28.3"</p> <p>Production / Test Standard: EN-14175 / CE / ASHRAE 110-1995</p> <p>Air Velocity: 0.6±0.1m/s, 120 ±20FPM</p> <p>Cabinet Material: White Polypropylene</p> <p>Work Table Material: HPL/ Ceramic / Epoxy / PP</p> <p>Optional Control System: VAV system with 7" color touch screen</p> <p>Standard Options: Water tap/ gas tap / vacuum tap/ pp sink</p> <p>Power Supply Options: 220V/110V 50/60 Hz, Single/triple phase</p> <p>Illumination: >800 LUX LED lights</p>	
22	Water Bath with Thermostat	<p>CE Certified ■ PL(Product Liability) Insurance</p> <p>■ with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System</p> <p>■ Digital Fuzzy Control System Implementing Superior Temperature Accuracy</p> <p>■ Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function</p> <p>* User's Self-Compensation Function to Control Difference between Real Temperature and Indicated Temperature (±10.0°C).</p> <p>* 304 Stainless-steel Bath & Lid for Superior Durability & High Thermal Efficiency/Constant.</p> <p>* Digital Timer Function(99hr 59min) : ‘Delay Time’ and ‘Operation Time’ can be Controlled.</p> <p>* Storage Function for the Set Values of Temperature and Timer.</p> <p>* Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled).</p> <p>Capacity: 11 Lit</p> <p>Temperature Range & Accuracy: Ambient +50C~1000C, +0.10C</p> <p>Temperature Resolution: 0.10C-Display, 0.10C-Control</p> <p>Temp Uniformity & Probe: ± 1.0 0C, PT100</p> <p>Heater Power: 1K</p> <p>Timer: 99 hr 59 min (Delay & Continuous run), Error Status</p> <p>Display: Digital LCD display with Back-Light Function</p> <p>Controller: Digital fuzzy controller with jog-shuttle switch (Turn + Push)</p> <p>Safety Devices: Over temp/ -Current Protection, Sensor Error Detection</p> <p>Material internal: Stainless steel (#304)-Internal, Power Coated</p> <p>Lid: Steel-External Including stainless steel flat lid, Optional Dome Lid.</p> <p>Drain valve: None</p>	1

		<p>Dimension (w x d x h)</p> <p>Effective Space: 302 x 240 x h110mm</p> <p>Internal: 302 x 240 x h150mm</p> <p>External: 325 x 265 x h260mm</p> <p>Packing Size (mm) and Gross Weight (kg): 350 x 300 x h310mm, 10kg</p> <p>Power Supply: 1 Phase, AC120 V, 60Hz or AC 230 V, 50/60Hz.</p>	
23	Laboratory Drying Oven	<p>Circulation method: Forced air circulation</p> <p>Operating temperature range: Room temp. +10~260°C</p> <p>Temp. control accuracy: $\pm 1^{\circ}\text{C}$ (at 210°C)</p> <p>Temp. distribution accuracy: $\pm 2.5^{\circ}\text{C}$ (at 210°C)</p> <p>Max. temp. reaching time: Approx. 60min (at room temp. +10°C~210°C),</p> <p>Approx. 90min (at room temp. +10°C~260°C)</p> <p>Interior material: Stainless steel plate</p> <p>Exterior material: Cold rolled steel plate with chemical proofing coating</p> <p>Heat insulating material: Glass wool</p> <p>Heater: Stainless pipe heater 1.2kW</p> <p>Fan type / Motor: Scirocco fan / Condenser type motor 10W</p> <p>Cable port: 30 mm I.D.×1 pc. (Right side)</p> <p>Exhaust port: 30 mm I.D.×2 pcs.(The top)</p> <p>Temp. controller: PID control by microprocessor</p> <p>Temp. setting method: Operation menu key and digital setting by UP/DOWN key</p> <p>Temp display method Measured temp. display: Green 4-digit</p> <p>LED digital display</p> <p>Setting temp. display: Red 4-digit display</p> <p>Timer: 1min-99 hr 59 min</p> <p>Operation functions: Fixed temp. operation, auto stop operation.</p> <p>Additional functions: Deviation correction, parameter lock</p> <p>Sensor: Temp. controller: Pt100 thermal resistance, Overheat protection:</p> <p>Liquid-expansion temp. controller</p> <p>Safety device: Self-diagnosis (Abnormal temp. sensing, Overheat prevention of upper temp. limit), Parameter lock, Independent overheat protector,</p> <p>Overcurrent EL</p> <p>Internal dimensions (WxDxH): 450x450x450mm</p> <p>External dimensions (WxDxH): 560x601x820mm</p> <p>Internal Capacity: 90L</p> <p>Shelf Plate with standard load: 9 steps</p> <p>Shelf rest pitch: 35mm</p> <p>Power source 50/60Hz. AC220V 6.5A</p> <p>Weight: Approx. 50kg</p> <p>Shelf plate: Stainless steel</p>	1 No.

		2 pcs. Shelf bracket: 4 pcs.	
24	Binoculars	Astronomical binoculars; magnification: 15×; objective aperture: 70 mm; ED objective glass; BaK-4 Porro prisms; fully multi-coated optics with high-transmission coating; field of view: $\geq 4.4^\circ$; exit pupil: approximately 4.7 mm; generous eye relief; individual focus; tripod adaptable; waterproof/nitrogen-purged and rubber-armored body. Complete with heavy-duty astronomical tripod, tripod adapter, lens caps, carrying case and neck strap. Suitable for observation of the Moon, Jupiter and its major moons, Venus, bright star clusters, bright nebulae and other celestial objects.	1 No.
25	Trinocular Metallurgical Microscope	<p>Optical System: Infinity-corrected optical system (IOS) Observation Modes: Brightfield on transmitted light; Brightfield, simple polarized light and oblique illumination on incident light Microscope Head: Trinocular Siedentopf type, fixed 50/50 light split, 30° inclined, 360° rotatable Interpupillary Distance: 50–75 mm adjustable Dioptic Adjustment: Provided on left eyepiece tube Eyepieces: WF10×/22 mm, high eye-point, with rubber cups Nosepiece: Quintuple revolving nosepiece, ball-bearing rotation</p> <p>Objectives: Strain-free IOS W-PLAN MET objectives, no-cover-glass type, anti-fungus treated: 5× / 0.12 10× / 0.25 20× / 0.40 50× / 0.75</p> <p>Specimen Stage: Double-layer rackless mechanical stage with tempered glass plate Stage Dimensions: 233 × 147 mm X-Y Movement Range: 78 × 54 mm Vernier Scale Accuracy: 0.1 mm Specimen Holder: Provided</p> <p>Focusing Mechanism: Coaxial coarse and fine focusing Coarse Focus: Adjustable tension Fine Focus Graduation: 0.002 mm Upper Stop: Provided to prevent contact between objective and specimen</p> <p>Condenser: Swing-out condenser, N.A. 0.2/0.9, iris diaphragm, focusable and centerable</p> <p>Incident Illumination: High-efficiency X-LED[®] white LED Incident LED Power: 8 W Incident Light Color Temperature: 6,300 K Incident Illumination: Köhler system Incident Field Diaphragm: Provided, centerable Incident Aperture Diaphragm: Provided, centerable Oblique Illumination: Provided for relief contrast Polarizer: Provided Analyzer: Provided</p> <p>Transmitted Illumination: X-LED³ white LED Transmitted LED Power: 3.6 W</p>	1 No.

		<p>Transmitted Light Color Temperature: 6,300 K Transmitted Illumination: Full Köhler type Transmitted Field Diaphragm: Provided LED Brightness Control: Provided</p> <p>Power Supply: 100–240 VAC, 50–60 Hz / 6 VDC external power supply Maximum Power Requirement: 13 W</p>	
26	UV Lamp Wired	Laboratory UV lamp; dual wavelength: 254 nm (short-wave) and 365 nm (long-wave); UV output: ≥ 4 W; wavelength selection by switch; 220–240 V AC, 50 Hz; UV-resistant protective housing with integrated reflector/filter; wired power connection with ON/OFF switch; suitable stand for hands-free operation; supplied with UV-blocking safety goggles.	1 No.
27	Electric Conductivity meter	<p>EC Range: 0.00 to 29.99 $\mu\text{S/cm}$, 30.0 to 299.9 $\mu\text{S/cm}$, 300 to 2999 $\mu\text{S/cm}$, 3.00 to 29.99 mS/cm, 30.0 to 200.0 mS/cm, up to 500.0 mS/cm (absolute EC)**</p> <p>EC Resolution: 0.01 $\mu\text{S/cm}$, 0.1 $\mu\text{S/cm}$, 1 $\mu\text{S/cm}$, 0.01 mS/cm, 0.1 mS/cm</p> <p>EC Accuracy: $\pm 1\%$ of reading ($\pm 0.05 \mu\text{S/cm}$ or 1 digit, whichever is greater)</p> <p>1 point offset calibration (0.00 $\mu\text{S/cm}$ in air), 1 point slope calibration in</p> <p>EC Calibration: EC standard 84 $\mu\text{S/cm}$, 1413 $\mu\text{S/cm}$, 5.00 mS/cm, 12.88 mS/cm, 80.0 mS/cm and 111.8 mS/cm</p> <p>TDS Range: 0.00 to 14.99 ppm (mg/L), 15.0 to 149.9 ppm (mg/L), 150 to 1499 ppm (mg/L), 1.50 to 14.99 g/L, 15.0 to 100.0 g/L, up to 400.0 g/L (absolute TDS)**</p> <p>TDS Resolution: 0.01 ppm, 0.1 ppm, 1 ppm, 0.01 g/L, 0.1 g/L</p> <p>TDS Accuracy: $\pm 1\%$ of reading (± 0.03 ppm or 1 digit, whichever is greater)</p> <p>TDS Calibration: through EC calibration</p> <p>EC/TDS Temperature Compensation: Automatic -5 to 100° C (23 to 212° F); NoTC - none</p> <p>absolute conductivity.</p> <p>Temperature Correction Coefficient: 0.00 to 6.00% / °C (for EC and TDS only). Default value</p> <p>is 1.90% / °C</p> <p>EC to TDS Conversion Factor: 0.40 to 0.80 (default value is 0.50)</p> <p>Salinity (% NaCl) Range: 0.0 to 400.0% NaCl</p> <p>Salinity (% NaCl) Resolution: 0.1% NaCl</p> <p>Salinity (% NaCl) Accuracy: $\pm 1\%$ of reading</p> <p>Salinity (% NaCl) Calibration: Single point with HI 7037L Standard</p> <p>Salinity (PSU) Range: 2.00 to 42.00 PSU</p> <p>Salinity (PSU) Resolution: 0.01 PSU</p> <p>Salinity (PSU) Accuracy: $\pm 1\%$ of reading</p> <p>Salinity Range: 0.0 to 80.0 g/L*</p> <p>Salinity Resolution (ppt): 0.01 g/L</p> <p>Salinity Accuracy (ppt): $\pm 1\%$ of reading</p>	1 No.

		<p>Temperature Range: -20.0 to 120.0 °C ; -4.0 to 248.0 °F**</p> <p>Temperature Resolution : 0.1 °C; 0.1 °F</p> <p>Temperature Accuracy: ±0.5 °C; ±0.9 °F</p> <p>EC/TDS Probe: EC/temperature probe</p> <p>Logging Type : Manual Log on Demand (Max. 200 logs); Manual Log on logs); Interval Logging 100 lots,</p> <p>Logging Memory: Max. 600 logs/lot</p> <p>Connectivity: Up to 1000 records</p> <p>charging and PC connectivity, 1 micro USB port for</p> <p>GLP: 1 USB port for storage</p> <p>Battery Type/Life: yes</p> <p>battery with up to 8 hours of Built-in rechargeable continuous use</p> <p>Power Supply: 5 VDC adapter (included)</p> <p>Environment: 0 to 50°C (32 to 122°F), RH max 95% non-condensing</p> <p>Dimensions : 202 x 140 x 12.7mm (8" x 5.5" x 0.5")</p> <p>Weight: 250 g (8.82 oz)</p>	
28	Automatic Touch Screen Polarimeter	<p>Instrument Type: Automatic Digital Polarimeter</p> <p>Measurement Modes:</p> <p>Optical Rotation</p> <p>Specific Rotation</p> <p>Concentration</p> <p>International Sugar Degree</p> <p>Measurement Range:</p> <p>±89.99° (Optical Rotation)</p> <p>±259°Z</p> <p>Minimum Reading:</p> <p>0.001° (Optical Rotation)</p> <p>Accuracy:</p> <p>±0.01° (-45° ≤ Optical Rotation ≤ +45°)</p> <p>±0.02° (Optical Rotation < -45° or Optical Rotation > +45°)</p> <p>Repeatability:</p> <p>0.002° (Optical Rotation), standard deviation</p> <p>Minimum Sample Transmittance:</p> <p>1%</p> <p>Light Source:</p> <p>LED cold light source</p> <p>Operating Wavelength:</p> <p>589.3 nm (Sodium D-line)</p> <p>Temperature Control:</p> <p>Built-in Peltier temperature control</p> <p>Temperature Control Range:</p> <p>10°C–50°C</p> <p>Temperature Control Accuracy:</p> <p>±0.2°C</p> <p>Temperature Resolution:</p> <p>0.1°C</p> <p>Display:</p> <p>8-inch TFT color touchscreen</p> <p>Operating System:</p>	1

		<p>Android Sample Cell: Accommodates measuring cells up to 200 mm Data Storage: 8 GB Communication / Output: 3 × USB RS-232 Wi-Fi Data Output Anti-Tampering: Available Graphic / Atlas Function: 4 hours continuous Printer: Small dot-matrix printer and wireless laser printer supported Automatic Calibration: Available / Optional Power Supply: 220 V AC ±10%, 50 Hz Rated Power: 250 W Net Weight:26 kg</p>	
29	water bath shaker	<p> ■ Innovative Easy-to-Use Digital Fuzzy Controller ■ Patented Jog-Shuttle Control System and Digital LCD Display with Back-Light Function ■ CE Certified ■ “PL(Product Liability) Insurance” Capacity: 18 Lit. Max. Qty of Erlenmeyer Flask: 250ml x 4ea Temp. Range: Ambient +5 °C to 100 °C ±0.1°C Temp. Resolution: 0.1°C – Display, 0.1°C – Control Temp. Uniformity & Probe: ± 0.5 °C, PT100 Heater Power: 1.4 kW Shaking Speed & Resolution: 20 ~ 250rpm, 1rpm-Display/1rpm-Control. Shaking Stroke (mm): Adjustable 15,20,30 Available (20 as factory Default) Timer & Alarm: 99hr 59min (Delay & continuous run), Error status & Timer-end Display: Digital LCD display with back light function Controller: Digital fuzzy controller with jog-shuttle switch (Turn + Push) Safety Circuit: Over temp./Current protector, sensor error detector. Rack: Including Stainless Steel Spring Rack: Universal-Type Drain valve: Mounted. Material: Stainless Steel(#304)-Internal, Powder Coated Steel-External. Dimension (w x d x h) Internal (mm): 300 x 300 x h200 Dimension (w x d x h) External (mm): 563 x 353 x h340 Packing Size (mm): 620 x 420 x h450 & Gross Weight (kg): 24kg Power Supply: 1 phase AC 120V, 60 Hz or 220V, 50/60 Hz. </p>	1 No.

30	Air Sampler	Air sampler: Petri dish size 90 mm; body material aviation aluminium; built-in rechargeable lithium battery; AC/DC support; suitable for laboratory air sampling applications.	1 No.
31	Digital Homogenizer	<p>Speed Range & Resolution 2,000 ~ 27,000rpm (without load), 10 rpm-Control</p> <p>Working Range 1 ~ 2,500ml</p> <p>Motor Rating (Input / Output) Input : 300W , Output : 160 W</p> <p>Timer & Alarm 10sec ~ 15min, Timer-end</p> <p>Alarm</p> <p>Display Digital LCD with Back-Light</p> <p>Function</p> <p>Controller Digital Feedback Controller</p> <p>(Remote Type)</p> <p>Safety Device Over Load & Over Heat</p> <p>Protector</p> <p>without Dispersing Tool</p> <p>Material Aluminum Die-casting and ABS-Unit, Stainless steel (# 304)-Tool</p> <p>Permissible Temp. & Moisture Ambient +5 ~ 50°C, 85%</p> <p>Extension Arm Size $\Phi 12.7 \times L250\text{mm}$</p> <p>Dimension & Weight 60×75×h215mm, 2.5kg</p> <p>Packing Size & Gross Weight 580×340×h230mm, 6 kg</p> <p>Power Consumption 160W</p> <p>Electrical Reqs. 1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz</p>	1 No.
32	Digital melting point apparatus	<p>Visual and Automatic Determination includes a color display to observe the phase transition, equipped with a video camera and a video replay function which allows reviewing the melting point determination.</p> <p>suit for color samples, which tradition automatic melting point apparatus not available.</p> <p>Multi-user ID Classify Function</p> <p>Adopt User ID management function. Users ID are available for adding, deleting and jurisdiction setting.</p> <p>All Screen Design</p> <p>Adopt a 8 inch capacitive touch screen, with the brilliant Android system, let the operating easier.</p> <p>Amazing Data Processing & Exporting</p> <p>The methods, atlas and detailed result are available for storage. Connecting printer or all data export are both available.</p> <p>Compliant with GLP, GMP(EU,UPS&CN)</p> <p>Capillary position capacity: 4</p> <p>Capillary size: Outer $\Phi 1.4$ mm, length 110 mm</p> <p>Magnification of lens: 8</p> <p>Display: Color 8-inch Touch Screen</p> <p>Temperature range: RT–300°C</p> <p>Temperature accuracy: 0.4 at 200°C; 0.7 at 300°C</p> <p>Temperature resolution: 0.1°C</p> <p>Temperature repeatability: 0.2°C</p> <p>Temperature gradients: 0.1°C-20°C</p> <p>Video & Camera: Camera</p>	1 No.

		Automatic find melting point: No Storage capacity: 8G Methods storage: 10 Communication ports: USB×3, RS232, Wi-Fi, RJ45 Printer: Thermal printer	
33	Media Suction Pump	Power: DC12V, 1.0A ▶ Max. vacuum: 313 mbar abs. ▶ Max. liquid flow rate: 0.5 L/min ▶ Motor: 12W Brushless DC Motor ▶ Hose barb: ID6 ▶ Material contact with filtrate: SS316, FKM, Silicone, PP, PA66 ▶ Adaptor: Spin-lock Materials: ▶ Housing material – SS304 Adaptor – SS316, Valve plate – EPDM (Ethylene Propylene Diene Monomer) Diaphragm: EPDM (Ethylene Propylene Diene Monomer) Fluid Path Inlet – SS316 ▶ Fluid outlet port – SS316 ▶ Fluid path hose – Silicone tube ▶ O-ring – FKM ▶ Draining hose – silicone	1 No.
34	Poly sealer	Impulse-type poly bag sealer, 32-inch (800 mm) sealing length, suitable for sealing polyethylene/polypropylene bags, adjustable sealing time, heat-resistant sealing bar, sturdy metal body, tabletop operation, 220–240 V AC	1 No.
35	Digital Balance standard size with capacity of 500g	<ul style="list-style-type: none"> - Backlit LCD display - Colour coded keys - Level indicator with adjustable levelling feet - Removable draft shield supplied on 0.001g readabilities - Robust metal housing - Sealed keypad - Pan lifter to easily remove samples <p>Maximum capacity: 1600g Readability: 0.01g Repeatability (S.D):0.02g Linearity (+/-): 0.04g Pan size: 160mm Ø Weighing units: g,kg,ct,GN,N,lb,oz,ozt,dwt,custom unit Stabilization Time (sec):3 Interface: RS-232/USB Display: Backlit LCD with 20mm-high digits Power supply:18VDC 800mA adapter Overall Dim. 220x310x270mm (wxdxh)</p>	2 Nos.
36	Compact Digital Waving Rotators	<p>Speed range: 5~60 rpm Angle range: 0° ~ 90° Motor: 35W Program Function: 10 steps, 6 programs Timer & Alarm: 99hr 59min (with continuous run) Error status & time-end. Display: Digital LCD Display with Back-Light Function. Controller: Programmable Digital feedback controller with jog shuttle. Temp. Resistance: Lower than 65 (Dry air). Safety Circuit: Overload Protector for motor. Dimension (wXdXh)(mm): 200x250xh260 mm. Weight: 8.5kg. Others: CE Certified, PL(Product Liability) Insurance Storage function (RPM, Timer) Locking mode (Jog-Shuttle input disabled)</p>	1 No.

		<p>end) Packing Size (wXdXh) (mm): 370 x 240 x h430mm & Gross Weight: 6kg Power Consumption: 40W Power Supply & Cord Plug: 1 Phase, AC 120V, 60Hz or AC 230VAC, 50/60Hz with cord/Plug.</p>	<p>User self compensation function Alarm (Error Status and Timer</p>	
37	Large Capacity Orbital Shaker	<p>Shaking Platform Size: 255×255 mm Shaking Motion: Orbital Motion Reciprocating Motion Speed Range & Max. Load: 10 ~ 300 rpm, 10kg Amplitude of Rotation (mm): 10 mm Motor: Brushless DC Motor Permissible Temp. & Moisture: Ambient +5 ~ 50°C, 80% Timer & Alarm: 99hr 59min (with Continuous run.), Error status & Timer-end Display: Large Size Digital LCD with Back-Light Function Controller: Digital Fuzzy Controller with Touch Button, Jog-dial Program Function: 10 Steps, 6 Programs Packing Dimension & Weight 345×420×h205 mm, 13.5kg Safety Circuit Overload Protector for Motor Power Consumption 45 W</p>		1 No.
38	Dissecting Tray	<p>Stainless steel dissecting tray, corrosion-resistant, with removable wax/cork lining, suitable for biological dissection and specimen handling; approximate size 30 × 20 × 5 cm, with smooth edges and easy-to-clean surface.</p>		5 No.
39	Heating Mantles	<p>with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System</p> <ul style="list-style-type: none"> ☐ Lower Profile for Space-saving Convenience ☐ Highly-processed Aluminum Case Offers Robust Standing, ☐ Ideal for Repetitive Extraction (Kjeldahl, Soxhlet and other Extraction Easy Handling Procedure), Reflux and Distillation Laboratory Applications ☐ Nickel Chrome Heating Element - Coil Type ☐ Analog Controller Built-in System : Acid-Resistant, Long Life Time ☐ CE Certified ☐ Ideal for DURAN / Kimax / Pyrex & Iwaki-brand Round Flasks with Glassware Supporting Rod & Clamp <p>Flask Capacity (ml): 500/1000ML Flask Dia (mm): 83~86 Bottom: Round Watts(W): 840 Inside Depth (mm): 50 Dimension W x D x H (mm): 800 x 240 x 110 Power 230V.</p>		2 No.

40	Sieve Shaker	Digital sieve shaker for accurate particle-size separation; capacity for up to 7 standard test sieves; variable shaking intensity/time control; suitable for 200 mm diameter sieves; robust laboratory-grade construction; uniform and reproducible sieving action; supplied with sieve holding clamps, cover and receiving pan; 220–240 V AC	1 No.
41	Compound Microscope	<p>Observation mode: Brightfield, phase contrast. Head: Trinocular (2-position 100/0, 50/50), 45° inclined. Interpupillary distance: Adjustable between 50 and 75 mm. Dioptric adjustment: On the left eyepiece tube. Eyepieces: WF10x/22 mm, high eye-point and with rubber cups. Nosepiece: Quintuple revolving nosepiece, rotation on ball bearings. Objectives: IOS LWD W-PLAN PH 10x/0.25 IOS LWD W-PLAN PH 20x/0.40 IOS LWD W-PLAN PH 40x/0.65 All with anti-fungus treatment. Specimen stage: Fixed stage, 250×160 mm, with glass and metal stage inserts. Focusing: Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Condenser: LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Transmitted illumination: X-LED8 with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multiplug 100-240Vac/6Vdc external power supply a) Camera Professional ultra-high definition yet very easy to use 4K camera with 2160p, 8 MP resolution, large SONY CMOS sensor and HDMI connection to clearly reveal the sample's finest details on-screen and perform measurements. No software installation is required with image and video capturing on SD card when in HDMI mode. At any time, it can be connected to PC and used via the downloadable, free of charge software (Windows), which is always available to enable the latest updates. The compact and elegantly designed housing conceals the very latest in camera technology. Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them. Ideal to be connected to all the trinocular tube of different brands using the focusable CMount adapter (to be purchased separately). Wireless mouse, SD card and built-in software included. » Simple operation, built-in software » Universal connection to any microscope brand » Ultra HD 4K 2160p images and videos » Dual output mode (HDMI/USB)</p>	1

		<p>» High frame rate</p> <p>» Reliable color fidelity</p> <p>» C-mount connection (via dedicated adapter, on any microscope)</p> <p>» HDMI cable, mouse and SD card included</p> <p>» Downloadable, free of charge software</p> <p>» ProView software for Windows</p> <p>c) Fluorescence Attachment</p> <p>Android & Smart LED 36"</p> <p>CPU: ARM Advanced Multi-Core Cortex CA55</p> <p>Graphics: ARM Advanced Multi-Core Mali G31</p> <p>RAM: 1.5 GB DDR3</p> <p>ROM: 8 GB Flash</p> <p>System: Google TV</p> <p>Voltage Range: 100-240V 50/60Hz</p> <p>Net Dimension(Without Stand): 715.7*79.3*421.9mm</p> <p>Net Dimension(With Stand): 715.7*180.8*464.1mm</p> <p>Packaging Dimension: 800x118x495 mm</p> <p>Gross Weight: 5.1kg</p>	
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NOTE: Supplier will have to deliver the items at Baba Guru Nanak University, Nankana Sahib

Section-VIII: Sample Forms

Notes on the Sample Forms

The Bidder shall complete and submit with its Bid the **Bid Form** and **Price Schedules** pursuant to ITB Clause 2.2.3 & 2.3.4 and in accordance with the requirements included in the Bidding documents.

When requested in the Bid Data Sheet, the Bidder should provide the **Bid Security**, either in the form included hereafter or in another form acceptable to the Procuring Agency, pursuant to ITB Clause 2.3.8

The **Contract Form**, when it is finalized at the time of contract award, should incorporate any corrections or modifications to the accepted Bid resulting from price corrections pursuant to ITB Clause 2.5.6 and GCC Clause 17, acceptable deviations e.g., payment schedule pursuant to GCC 16, spare parts pursuant to ITB Clause 2.3.6 & 2.3.7, or quantity variations pursuant to ITB Clause 2.6.5. The Price Schedule and Schedule of Requirements, deemed to form part of the contract, should be modified accordingly.

The **Manufacturer's Authorization** form should be completed by the Manufacturer, as appropriate, pursuant to ITB Clause 2.3.6(iii).

8.1 Bid Form

[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with the Bid, in case of Single Stage One Envelope Procedure and with the Financial Bid, in case of Single Stage Two Envelope Procedure]

Date: _____

**To: Secretary Purchase Committee
Baba Guru Nanak University, Nankana Sahib.**

Gentleman:

Having examined the Bidding documents including Addenda Nos. *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver *[description of goods and services]* in conformity with the said Bidding documents for the sum of *[total Bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to 5 percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Procuring Agency.

We agree to a Bid by this Bid for a period of 120 days from the date fixed to Bid opening under Clause 2.3.9 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this _____ day of _____ 20_____.

[signature]

[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____

8.4. Bidder Profile Form

[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]

Sr.#	Particulars
1.	Name of the company:
2.	Registered Office:
Address:	
Office Telephone Number:	
Fax Number:	
3.	Contact Person:
Name:	
Personal Telephone Number:	
Email Address:	
4.	Local office if any:
Address:	
Office Telephone Number:	
Fax Number:	
5.	Registration Details:

a) Audited Financial Statement Attachment/Income Tax Returns (Last ____ years)

Yes	No
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b) Details of Experience (Last 03 Years)

(i)	Similar Project (Agency/Department)	Item Name
(ii)	Value of total Projects/Tenders/POs	Amount

8.5. General Information Form

[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]

	Particulars			
Company Name				
Abbreviated Name				
National Tax No.			Sales Tax Registration No	
PRA Tax No.				
No. of Employees			Company's Date of	
			Formation	

*Please attach copies of NTN, GST Registration & Professional Tax Certificate

Registered Office Address		State/Province	
City/Town		Postal Code	
Phone		Fax	
Email Address		Website Address	

8.6. Affidavit

[To be printed on PKR 100 Stamp Paper, duly attested by oath commissioner. To be attached with Technical Bid]

Name: _____

(Applicant)

I, the undersigned, do hereby certify that all the statements made in the Bidding document and in the supporting documents are true, correct and valid to the best of my knowledge and belief and may be verified by employer if the Employer, at any time, deems it necessary. The undersigned hereby authorize and request the bank, person, company or corporation to furnish any additional information requested by the *[name of Procuring Agency]* of the Punjab deemed necessary to verify this statement regarding my (our) competence and general reputation.

The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the *[name of Procuring Agency]*. The undersigned further affirms on behalf of the firm that:

- (i) The firm is not currently blacklisted by the Procuring Agency.
- (ii) The documents/photocopies provided with Bid are authentic. In case, any fake/bogus document was found at any stage, the firm shall be blacklisted as per Law/ Rules.
- (iii) Affidavit for correctness of information.

[Name of the Contractor/ Bidder/ Supplier] undertakes to treat all information provided as confidential.

Signed by an authorized Officer of the company

Title of Officer: _____

Name of Company: _____

Date: _____

8.7. Performance Guarantee Form

[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]

To,

Baba Guru Nanak University, Nankana Sahib

WHEREAS (Name _____ of _____ the Contractor/ _____ Supplier) _____ hereinafter called "the Contractor" has undertaken, in pursuance of "INVITATION TO BID FOR THE **"PROVISION OF _____"** procurement of the following:

1. **[Please insert details]**.

(Here in after called "the Contract").

AND WHEREAS it has been stipulated by you in the Contract that the Contractor shall furnish you with a bank guarantee by a scheduled bank for the sum specified therein as security for compliance with the Contractor's performance obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor a Guarantee;

THEREFORE WE hereby affirm that we are Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ (Amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the Contractor to be in default under the Contract, and without cavil or argument, any sum or sums as specified by you, within the limits of _____ (Amount of Guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until _____ day of _____, 20____, or _____ [insert number of days] after the rectification of the Defects, whichever is later.

[NAME OF GUARANTOR]

Signature _____

Name _____

Title _____

Address _____

Seal _____

Date _____

8.8. Technical Bid Form

[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]

[illegible]

Stamp & Signature of Bidder _____

8.9. Contract Form

[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]

THIS AGREEMENT made on the ____ day of _____ 20____ between *[name of Procuring Agency]* of *[country of Procuring Agency]* (hereinafter called "the Procuring Agency") on the one part and *[name of Supplier]* of *[city and country of Supplier]* (hereinafter called "the Supplier") on the other part:

WHEREAS the Procuring Agency invited Bids for certain goods and ancillary services, viz., *[brief description of goods and services]* and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures]* (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) the Bid Form and the Price Schedule submitted by the Bidder;
 - (b) the Schedule of Requirements;
 - (c) the Technical Specifications;
 - (d) the General Conditions of Contract;
 - (e) the Special Conditions of Contract; and
 - (f) the Procuring Agency's Notification of Award.
 - (g) Contract agreement
 - (h) Complete Bidding document
3. In consideration of the payments to be made by the Procuring Agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring Agency to provide the goods and services and to rectify defects therein in conformity with all respects in accordance with the provisions of the Contract.
4. The Procuring Agency hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the rectification of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year mentioned above.

Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Signed, sealed, delivered by _____ the _____ (for the Supplier)

8.10. Financial Bid Form/Price Schedule

[Bidders are required to provide financial bid in the following format. The document must be printed on the company's letterhead, duly signed, and stamped, and it should be included with the Financial Bid

Sr no	Item Name	Specification quoted by the bidder	Quantity	Unit Price (with GST)	Total price (with GST)
01					
Total price in figures					
Total price in words					

Total Bid value (against which a Bid shall be evaluated) in figure.

Total Bid value (against which a Bid shall be evaluated) in words.

Note:

In case of difference between unit price and total price, unit price shall prevail and total price shall be "final". *(Please refer ITB clause 2.5.6).*

In case of difference between amount in "words" and amount in "figures", amount in "words" shall be considered final.

Stamp & Signature of Bidder _____

8.11. Bid Security Form

[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Financial Bid]

Whereas *[name of the Bidder]* (hereinafter called "the Bidder") has submitted its Bid dated *[date of submission of Bid]* for the supply of *[name and/or description of the goods]* (hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE *[name of bank]* of *[name of country]*, having our registered office at *[address of bank]* (hereinafter called "the Bank"), are bound unto *[name of Procuring Agency]* (hereinafter called "the Procuring Agency") in the sum of for which payment well and truly to be made to the said Procuring Agency, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its Bid by the Procuring Agency during the period of Bid validity:
 - (a) fails or refuses to execute the Contract Form, if required; or
 - (b) fails or refuses to furnish the Performance Guarantee, in accordance with the Instructions to Bidders;

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

This guarantee will remain in force up to and including thirty (30) days after the period of Bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

[Signature of the bank]

Section IX- Check List

[To be signed and stamped and presented on Bidder's letter head pad]

The provision of this checklist is essential prerequisite along with submission of tenders (with technical proposal).

Sr. #	Detail	Responsive	Non-responsive
1	2% Bid Security of estimated cost.		
2	Active Registration with Income Tax Authorities (National Tax Number NTN) at least three years old		
3	Copy of active Registration with Sales Tax Authorities (STRN)		
4	Technical Bid Form (as per form 8.8 of Bidding documents) on letter head of the firm duly signed and stamped.		
5	Financial Bid Form (as per form 8.10 of Bidding documents) on letter head of the firm, duly signed and stamped.		
6	Bid Security Form (as per form 8.11 of Bidding documents) on letter head of the firm, duly signed and stamped.		
7	Performance Guarantee Form (as per form 8.7 of Bidding documents) on letter head of the firm, duly signed and stamped.		
8	General Information Form (as per form 8.5 of Bidding documents) on letter head of the firm duly signed and stamped.		
9	<p>Affidavit (as per form 8.6) on non-judicial Stamp Paper of Minimum Rs. 100/-</p> <ul style="list-style-type: none"> (i) The firm is not blacklisted by the procuring agency. (ii) The documents/photocopies provided with Bid are authentic. In case of any fake/bogus document look at any stage. They shall be black listed as per Rules / Laws. (iii) Affidavit for correctness of information. <p>Affidavit for correction of information Form (as per form of Bidding documents) on letter head of the firm, duly signed and stamped.</p>		
10	<ul style="list-style-type: none"> i. Work order / supply order / purchase order of previous relevant experience. ii. Company profile. Staff list along with location and address <i>[where applicable]</i>. iii. Bidders profile Form (as per form of Bidding documents) on letter head of the firm, duly signed and stamped. 		

11	<p>For Manufacturer: Documentary evidence establishing its manufacturing status and applicable quality management certification, where required.</p> <p>For Authorized Dealer/Distributor: A valid authorization certificate/letter issued by the original manufacturer or its authorized principal, covering the offered brand/equipment and confirming the bidder's authorization to supply the same.</p>		
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Stamp & Signature of Bidder _____