



# **Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology, Haripur**

**KHYBER PAKHTUNKHWA**

## **REQUEST FOR PROPOSAL (RFP) FOR “SUPPLY AND INSTALLATION/ DEPLOYMENT OF IT EQUIPMENT, APPLIANCES & SMART CLASSROOM SOLUTION”**

**Submission of Bids: Tuesday the December 03, 2019 @ 11:00 am**

**Opening of Bids: Tuesday the December 03, 2019 @ 11:30 am**

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## Section 1. Letter of Invitation

The Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology (PAF- IAST), Hairpur invites sealed bids from interested firms for the “Supply and Installation/ Deployment of IT Equipment, Appliances & Smart Classroom Solution” under the following Lots.

LOTS	Description	Quantity
LOT #1	COMPUTERS: Laptops & Desktops with UPS	50 & 50
LOT #2	PRINTERS: Color & Monochrome	2 & 40
LOT #3	DISPLAY DEVICES: Multimedia Projectors & Smart LED Television	5 & 45
LOT #4	PHOTOCOPIER: Heavy Duty	04
LOT #5	DIESEL GENERATORS: 275 KVA & 50 KVA	02 and 04
LOT #6	APPLIANCES: ACs, Refrigerators, Water Dispenser, Water Cooler, Cooking Range & Shredder	30, 44, 10, 5, 2, 2
LOT #7	SMART SOLUTIONS: Smart Auditorium & Interactive Smart Classrooms	8 & 12

The bidder must be registered and duly recognized in Pakistan, and be registered with FBR and KPRA for Tax purpose; possess Manufacturer’s status or Distributor/ Dealer status with authorization from Manufacturer/ Principal specific for this tender, with sufficient financial, technical and human resources to take up the task assigned and complete the same within prescribed time limit on the finalization of contract with PAF- IAST.

Tender document containing instructions to bidders covering definitions, introduction/ background of the Project, scope of work, general terms and conditions, and special terms, procedure for submission of bids, opening of bid, evaluation criteria, and other related information, can be obtained against a written request on company’s letterhead, from Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology, Haripur – Pakistan. Cost of the document is Rs. 2,000/-. Tender document can also be downloaded from <http://www.paf-iast.edu.pk/> free of cost, however, interested bidders will be required to have registered copy purchased from PAF-IAST, in order to participate in tender process.

Bidder(s) interested in participating in the tender process are advised to submit their Bid Proposal(s), along with the Earnest Money amounting 2% of their Bid Value in the shape of Bank Draft or Pay Order, in accordance with the instructions in this tender document. Bid Proposal(s) must reach PAF-IAST, Haripur on Tuesday the December 03, 2019 at 1100 hrs and any late Bid(s) shall not be accepted and returned unopened. Accepted Bids will be opened on the same day at 1130 hrs, in presence of bidders who chose to attend. In case of sudden holiday on bid opening day, bids will be opened on next working day. Pre-bid meeting will be held on the date and venue as referred in Bid Data Sheet. The Tender shall be executed in accordance with KPPRA Rule 6 (2)(b).

This advertisement is also available on PAF: IAST and PPRA websites <http://www.paf-iast.edu.pk/> & <http://www.kppra.org.pk>.

**Project Director**

**Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology (PAF-IAST)**

**Hairpur – Khyber Pakhtunkhwa**

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## Section 2. Instruction to Bidders (ITB)

<b>A. GENERAL TERMS</b>	
1. Introduction	<p>1.1 Bidders shall adhere to all the requirements of this ITB, including any amendments made in writing by PAF-IAST. This ITB will be governed under Clause 6 (2)(b) of Khyber Pakhtunkhwa Public Procurement Rules, 2014, as amended from time to time and instructions of the Government of Khyber Pakhtunkhwa received during the completion of the project.</p> <p>1.2 Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Bid by PAF- IAST. The Institute is under no obligation to award a contract to any Bidder as a result of this ITB.</p> <p>1.3 PAF-IAST reserves the right to cancel the procurement process at any stage without any liability of any kind for PAF-IAST, upon notice to the bidders or publication of cancellation notice on PAF- IAST website.</p>
2. Fraud & Corruption, Gifts and Hospitality	<p>2.1 PAF-IAST strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of PAF-IAST vendors and requires all bidders/ vendors observe the highest standard of ethics during the procurement process and contract implementation.</p> <p>2.2 Bidders/ vendors shall not offer gifts or hospitality of any kind to PAF-IAST staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches or dinners.</p> <p>2.3 In pursuance of this policy, PAF-IAST:</p> <p style="margin-left: 40px;">(a) Shall reject a bid if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question; (b) Shall declare a vendor ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a PAF-IAST contract; or counseling or canvassing staff or elected representatives; or engaging in collusion with other bidders.</p>
3. Eligibility	<p>3.1 A Bidder should not be suspended, debarred, or otherwise identified as ineligible by any Government/ Semi-government/ or any other international Organization. Bidders are therefore required to disclose to PAF-IAST whether they are subject to any sanction or temporary suspension imposed by these organizations.</p> <p>3.2 It is the Bidder's responsibility to ensure that its employees, sub-contractors, service providers, suppliers and/ or their employees meet the eligibility requirements as established by PAF-IAST.</p>
4. General Terms	<p>4.1 The Bidder should be registered with Sales Tax and Income Tax Department as well as with the Khyber Pakhtunkhwa Revenue Authority.</p> <p>4.2 An affidavit on legal stamp paper worth Rs.100/- to the effect that the Bidder has not been blacklisted by any Government/ semi Government organization.</p> <p>4.3 An affidavit that there is no litigation against the firm.</p>

## B. PREPARATION OF BIDS

5. General Considerations	5.1 In preparing the Bid, the Bidder is expected to examine the ITB in detail. Material deficiencies in providing the information requested in the ITB may result in rejection of the Bid.  5.2 The Bidder will not be permitted to take advantage of any errors or omissions in the ITB. Should such errors or omissions be discovered, the Bidder must notify the Project Director, PAF-IAST accordingly.
6. Cost of Preparation of Bid	6.1 The Bidder shall bear all costs related to the preparation and/ or submission of the Bid, regardless of whether its Bid is selected or not. PAF-IAST shall not be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process.
7. Language	7.1 The Bid, as well as any, and all related correspondence exchanged by the Bidder and PAF- IAST, shall be written in the language(s) specified in the BDS.
8. Documents Comprising the Bid	8.1 The Bid shall comprise of the following documents and related forms of which details are provided in the BDS. All pages of the Bid shall be signed, stamped and properly paginated. a) Returnable Forms as referred in Section 6 shall be properly filled in Ink or Typed. Forms filled in using a pencil shall not be considered and substantiate the annulment of the Bid Proposal. b) Documents Establishing the Eligibility and Qualifications of the Bidder; c) Technical Proposal covering Technical Specifications and Solution Details; d) Financial Proposal covering Price Schedule; e) Bid Security, if required by BDS; f) Any attachments and/ or appendices to the Bid.
9. Documents Establishing the Eligibility and Qualifications	9.1 The Bidder shall furnish documentary evidence of its status as an eligible and qualified supplier, using the Forms provided under Section 6 and providing documents required in those forms. In order to award a contract to a Bidder, its qualifications must be documented to PAF-IAST's satisfaction.
10. Technical Bid Format and Content	10.1 The Bidder is required to submit a Technical Bid using the Standard Forms and templates provided in Section 6 of the ITB.  10.2 Samples of items, when required as per Section 5, shall be provided within the time specified and unless otherwise specified by the Purchaser, at no expense to the Institute . If not destroyed by testing, samples will be returned at Bidder's request and expense, unless otherwise specified.  10.3 When applicable and required as per Section 5, the Bidder shall describe the necessary training program available for the maintenance and operation of the equipment offered as well as the cost to the Institute. Unless otherwise specified, such training as well as training materials shall be provided in the language of the Bid as specified in the BDS.  10.4 When applicable and required as per Section 5, the Bidder shall certify the availability of spare parts for a period of at least five (5) years from date of delivery, or as otherwise specified in this ITB.
11. Price Schedule	11.1 The Price Schedule shall be prepared using the Forms provided in Section 6 of the ITB and taking into consideration the requirements in the ITB.  11.2 Any requirement described in this ITB but not priced in the Price Schedule, shall be assumed to have been included in the prices of other activities or items, as well as in the final total price.

12. Bid Security	<p>12.1 A Bid Security shall be provided in the amount and form indicated in the BDS. The Bid Security shall be valid for the duration as referred in BDS.</p> <p>12.2 The Bid Security shall be included along with the Bid. If Bid Security not found in the Bid, the Bid shall be rejected.</p> <p>12.3 If the Bid Security amount or its validity period is found to be less than what is required, PAF-IAST shall reject the Bid.</p>
	<p>12.4 In the event an electronic submission is allowed in the BDS, Bidders shall include a copy of the Bid Security in their bid and the original of the Bid Security must be sent via courier or hand delivery as per the instructions in BDS.</p> <p>12.5 The Bid Security will be forfeited by PAF-IAST, and the Bid rejected, in the event of any, or combination, of the following conditions:</p> <ul style="list-style-type: none"> <li>a) If the Bidder withdraws its offer during the period of the Bid Validity specified in</li> <li>b) the BDS, or;</li> <li>c) In the event the successful Bidder fails: <ul style="list-style-type: none"> <li>i. to sign the Contract after PAF-IAST has issued an award; or</li> <li>ii. to furnish the Performance Security, insurances, or other documents that PAF-IAST may require as a condition precedent to the effectivity of the contract that may be awarded to the Bidder.</li> </ul> </li> </ul>
13. Currencies	<p>13.1 All prices shall be quoted in the currency indicated in the BDS. Where prices are quoted in different currencies, for the purposes of comparison:</p> <ul style="list-style-type: none"> <li>a) PAF-IAST will convert the currency quoted into the currency indicated in BDS, in accordance with the prevailing Inter Bank rate of exchange on the last day of submission of Bids; and</li> <li>b) In the event that PAF-IAST selects a Bid for award that is quoted in a currency different from the preferred currency in the BDS, PAF-IAST shall reserve the right to award the contract in the currency of PAF-IAST's preference, using the conversion method specified above.</li> </ul>
14. Joint Venture, Consortium or Association	<p>14.1 If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by an intent letter or an Agreement among the legal entities duly notarized, and submitted with the Bid; and (ii) if they are awarded the contract, the contract shall be entered into, by and between PAF-IAST and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.</p> <p>14.2 After the Deadline for Submission of Bid, the lead entity identified to represent the JV, Consortium or Association Or any change in the constitution of the JV, Consortium or Association shall not be altered without the prior written consent of PAF-IAST/ Procurement Committee.</p> <p>14.3 The lead entity and the member entities of the JV, Consortium or Association shall abide by the provisions of Clause 15 herein in respect of submitting only one Bid.</p> <p>14.4 The description of the organization of the JV, Consortium or Association must clearly define the expected role of each of the entities in the joint venture in delivering the requirements of the ITB, both in the Bid and the JV, Consortium</p>

	<p>or Association Agreement or Intent Letter. All entities that comprise the JV, Consortium or Association shall be cumulatively subject to the eligibility and technical qualification assessment by PAF-IAST as defined in Section 4: Evaluation Criteria.</p> <p>14.5 A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:</p> <ul style="list-style-type: none"> <li>a) Those that were undertaken together by the JV, Consortium or Association; and</li> <li>b) Those that were undertaken by the individual entities of the JV, Consortium or Association.</li> </ul> <p>14.6 Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the JV, Consortium or Association or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.</p>
<p>15. Only One Bid</p>	<p>15.1 The Bidder (including the individual members of any Joint Venture) shall submit only one Bid, either in its own name or as part of a Joint Venture.</p> <p>15.2 Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:</p> <ul style="list-style-type: none"> <li>a) they have at least one controlling partner, director or shareholder in common; or</li> <li>b) any one of them receive or have received any direct or indirect subsidy from the other/s; or</li> <li>c) they have the same legal representative for purposes of this ITB; or</li> <li>d) they are subcontractors to each other's Bid, or a subcontractor to one Bid also submits another Bid under its name as lead Bidder; or some key personnel proposed to be in the team of one Bidder participates in more than one Bid received for this ITB process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Bid.</li> </ul>
<p>16. Bid Validity Period</p>	<p>16.1 Bids shall remain valid for the period specified in the BDS, commencing on the Deadline for Submission of Bids. A Bid valid for a shorter period may be rejected by PAF-IAST and rendered non-responsive.</p> <p>16.2 During the Bid validity period, the Bidder shall maintain its original Bid without any change, including the availability of the Key Personnel.</p>
<p>17. Extension of Bid Validity Period</p>	<p>17.1 In exceptional circumstances, prior to the expiration of the Bid validity period, PAF-IAST may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing and shall be considered integral to the Bid.</p> <p>17.2 If the Bidder agrees to extend the validity of its Bid, it shall be done without any change to the original Bid.</p> <p>17.3 The Bidder has the right to refuse to extend the validity of its Bid, in which case, the Bid shall not be further evaluated.</p>

<p>18. Clarification on ITB (from the Bidders)</p>	<p>18.1 Bidders may request clarifications on any of the ITB documents no later than the date indicated in the BDS. Any request for clarification must be sent in writing in the manner indicated in the BDS. If inquiries are sent other than specified channel, even if they are sent to a PAF-IAST staff member, PAF-IAST shall have no obligation to respond or confirm that the query was officially received.</p> <p>18.2 PAF-IAST will provide the responses to clarifications through the method specified in the BDS.</p> <p>18.3 PAF-IAST shall endeavor to provide responses to clarifications in an expeditious manner, but any delay in such response shall not cause an obligation on the part of PAF-IAST to extend the submission date of the Bids, unless PAF-IAST deems that such an extension is justified and necessary.</p>
<p>19. Amendment in ITB</p>	<p>19.1 At any time prior to the deadline of Bid submission, PAF-IAST may for any reason, such as in response to a clarification requested by a Bidder, modify the ITB in the form of an amendment to the ITB. Amendments will be made available to all prospective bidders.</p> <p>19.2 If the amendment is substantial, PAF-IAST may extend the Deadline for submission of Bid to give the Bidders reasonable time to incorporate the amendment into their Bids.</p>
<p>20. Alternative Bids</p>	<p>20.1 Unless otherwise specified in the BDS, alternative Bids shall not be considered. If submission of alternative Bid is allowed by BDS, a Bidder may submit an alternative Bid, but only if it also submits a Bid conforming to the ITB requirements. Where the conditions for its acceptance are met, or justifications are clearly established, PAF-IAST reserves the right to award a contract based on an alternative Bid.</p> <p>20.2 If multiple/ alternative bids are being submitted, they must be clearly marked as "Main Bid" and "Alternative Bid"</p>
<p>21. Pre-Bid Conference</p>	<p>21.1 When appropriate, a pre-bid conference may be conducted at the date, time and location specified in the BDS. All Bidders are encouraged to attend. Nonattendance, however, shall not result in disqualification of an interested Bidder. Minutes of the Bidder's conference will be disseminated on the procurement website and shared by email as specified in the BDS. No verbal statement made during the conference shall modify the terms and conditions of the ITB, unless specifically incorporated in the Minutes of the Bidder's Conference or issued/ posted as an amendment to ITB.</p>

### C. SUBMISSION AND OPENING OF BIDS

<p>22. Bid Proposal Submission</p>	<p>22.1 The Bidder shall submit a duly signed and numbered all pages of the complete Bid in an Envelope sealed and marked as per ITB 22.6, and in accordance with <b>KPPRA Rule 6 (2)(b)</b>.</p> <p>22.2 The Outer Envelope should contain Two (02) separate sealed envelopes, one of which comprising the <b>Forms (A – F) and supporting documents</b> in accordance with requirements in the BDS, shall be marked as "<b>Technical Proposal</b>". Whereas, the other envelope containing the <b>Form G: Price Schedule Form</b> shall be marked as "<b>Financial Proposal</b>".</p> <p>22.3 The Bid Security as referred in BDS must be placed in the "<b>Technical Proposal</b>" but in a duly sealed envelope and marked as "<b>Bid Security</b>". Bid security envelop will be opened with financial proposal.</p> <p>22.4 Bid can be delivered either personally, or by courier as specified in the BDS.</p> <p>22.5 The Bid shall be signed by the Bidder or person(s) duly authorized to commit</p>
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	<p>the Bidder. The authorization shall be communicated through a document evidencing such authorization issued by the legal representative of the bidding entity, or a Power of Attorney, accompanying the Bid. There should not be errors and/ or over-writings. Corrections (if any) should be made clearly and initialed with dates.</p> <p>22.6 Bidders must be aware that the mere act of submission of a Bid, in and of itself, implies that the Bidder fully accepts the General Contract Terms and Conditions.</p> <p>22.7 Hard copy submission by courier or hand delivery allowed or specified in the BDS shall be governed as follows:</p> <p>a) The signed Bid shall be marked "Original", and its copies marked "Copy" as appropriate. The number of copies is indicated in the BDS. All copies shall be made from the signed original only. If there are discrepancies between the original and the copies, the original shall prevail.</p> <p>(b) The Bid Proposals must be sealed and submitted in an envelope, which shall:</p> <ul style="list-style-type: none"> <li>i. Bear the name of the Bidder;</li> <li>ii. Be addressed to PAF - IAST as specified in the BDS; and</li> <li>iii. Bear a warning not to open before the time and date for Bid opening as specified in the BDS.</li> </ul> <p>If the envelope with the Bid is not sealed and marked as required, PAF-IAST shall assume no responsibility for the misplacement, loss, or premature opening of the Bid.</p>
<p>23. Deadline for Submission of Bids and Late Bids</p>	<p>23.1 Complete Bids must be received by PAF-IAST in the manner, and no later than the date and time, specified in the BDS. PAF-IAST shall only recognize the actual date and time that the bid was received by PAF-IAST.</p> <p>23.2 PAF-IAST shall not consider any Bid that is received after the deadline for the submission of Bids.</p>
<p>24. Withdrawal, Substitution, and Modification of Bids</p>	<p>24.1 A Bidder may withdraw, substitute or modify its Bid after it has been submitted at any time prior to the deadline for submission.</p> <p>24.2 A bidder may withdraw, substitute or modify its Bid by sending a written notice to PAF- IAST, duly signed by an authorized representative, including a Power of Attorney. The corresponding substitution or modification of the Bid, must accompany the respective written notice. All notices must be submitted in the same manner as specified for submission of Bids, by clearly marking them as "WITHDRAWAL" "SUBSTITUTION," or "MODIFICATION"</p> <p>24.3 Bids requested to be withdrawn shall be returned unopened to the Bidders, except if the bid is withdrawn after the bid has been opened.</p>
<p>25. Bid Opening</p>	<p>25.1 The Procurement Committee of PAF- IAST will open the Bid in the presence of Bidders' representative(s) who choose to attend.</p> <p>25.2 The Bidders' names, modifications, withdrawals, the condition of the envelope labels/ seals, the number of folders/ files and all other such other details as PAF-IAST may consider appropriate, will be announced at the opening. No Bid shall be rejected at the opening stage, except for late submissions, in which case, the Bid shall be returned unopened to the Bidders.</p> <p>25.3 In case of public holiday on bid opening day, bids will be opened on next working day.</p>

## D. EVALUATION OF BIDS

26. Confidentiality	26.1 Information relating to the examination, evaluation, and comparison of Bids, and the recommendation of contract award, shall not be disclosed to Bidders, even after publication of the contract award.  26.2 Any effort by a Bidder to influence PAF-IAST in the examination, evaluation and comparison of the Bids or contract award decisions may, at PAF-IAST's decision, result in the rejection of its Bid and may subsequently be subject to consequences.
27. Preliminary Examination	27.1 PAF-IAST shall examine the Bids to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, and whether the Bids are generally in order, among other indicators that may be used at this stage. PAF-IAST reserves the right to reject any Bid at this stage.
28. Evaluation of Eligibility and Technical Qualification	28.1 Eligibility and Technical Qualification of the Bidder will be evaluated against the Minimum Eligibility/ Qualification requirements specified in the Section 4: Evaluation Criteria.  28.2 In general terms, Bidders that meet the following criteria may be considered qualified: a) They are not included in the list of blacklisted or barred companies published on KPPRA website, any federal or provincial government department; b) They have a good financial standing and have access to adequate financial resources to perform the contract and all existing commercial commitments, c) They have the necessary experience, technical expertise, production capacity, quality certifications, quality assurance procedures and other resources applicable to the supply of goods and/ or services required; d) They are able to comply fully with the General Terms and Conditions of Contract; e) They do not have a consistent history of court/ arbitral award decisions against the Bidder; and f) They have a record of timely and satisfactory performance with their clients.
29. Evaluation of Bid Proposals	29.1 The evaluation team shall review and evaluate the Bids on the basis of their responsiveness to the Schedule of Requirements and Technical Specifications and other documentation provided, applying the procedure indicated in the BDS and other ITB documents. When necessary, and if stated in the BDS, PAF-IAST may invite technically responsive bidders for a presentation related to their Bids. The conditions for the presentation shall be provided in the bid document where required.
30. Due diligence	30.1 PAF- IAST reserves the right to undertake a due diligence exercise, aimed at determining to its satisfaction, the validity of the information provided by the Bidder. Such exercise shall be fully documented and may include, but need not be limited to, all or any combination of the following:  a) Verification of accuracy, correctness and authenticity of information provided by the Bidder;  b) Validation of extent of compliance to the ITB requirements and evaluation criteria based on what has so far been found by the evaluation team;  c) Inquiry and reference checking with Government entities with jurisdiction on the Bidder, or with previous clients, or any other entity that may have done business with the Bidder;  d) Inquiry and reference checking with previous clients on the performance on on-going or completed contracts, including physical inspections of

	<p>previous works, as deemed necessary;</p> <p>e) Physical inspection of the Bidder's offices, branches or other places where business transpires, with or without notice to the Bidder;</p> <p>f) Other means that PAF-IAST may deem appropriate, at any stage within the selection process, prior to declaring the Bidder as Qualified.</p>
31. Clarification of Bids	<p>31.1 To assist in the examination, evaluation and comparison of Bids, PAF- IAST may, at its discretion, request any Bidder for a clarification of its Bid.</p> <p>31.2 PAF- IAST's request for clarification and the response shall be in writing and no change in the prices or substance of the Bid shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by PAF-IAST in the evaluation of the Bids in accordance with the ITB.</p> <p>31.3 Any unsolicited clarification submitted by a Bidder in respect to its Bid, which is not a response to a request by PAF-IAST, may not be considered during the review and evaluation of the Bids.</p>
32. Responsiveness of Bid	<p>32.1 PAF-IAST's determination of a Bid's responsiveness will be based on the contents of the bid itself. A substantially responsive Bid is one that conforms to all the terms, conditions, specifications and other requirements of the ITB without material deviation, reservation, or omission.</p> <p>32.2 If a bid is not substantially responsive, it shall be rejected by PAF-IAST and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.</p>
33. Right to Accept, Reject, Any or All Bids	<p>33.1 PAF-IAST reserves the right to accept or reject any proposal in response to the ITB, to render any or all of the proposals as non-responsive, and to reject all Proposals in response to the ITB at any time prior to award of contract, while assigning the reason(s) thereof.</p> <p>33.2 PAF- IAST shall not be obliged to award the contract to the lowest priced offer.</p>
34. Nonconformities, Repairable Errors and Omissions	<p>34.1 Provided that a Bid is substantially responsive, PAF-IAST may waive any nonconformities or omissions in the Bid that, in the opinion of PAF-IAST, do not constitute a material deviation.</p> <p>34.2 PAF-IAST may request the Bidder to submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price. Failure of the Bidder to comply with the request may result in the rejection of its Bid.</p> <p>34.3 For the Price Schedule that are submitted, PAF-IAST shall check and correct arithmetical errors as follows:</p> <p>a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of PAF-IAST there is an obvious misplacement of the decimal point in the unit price; in which case, the line item total as quoted shall govern and the unit price shall be corrected;</p> <p>b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and</p> <p>c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an</p>

	<p>arithmetic error, in which case the amount in figures shall prevail.</p> <p>34.4 If the Bidder does not accept the correction of errors made by PAF- IAST, its Bid shall be rejected.</p>
35. Bidder Grievance	35.1 PAF- IAST's grievance readdress procedure provides an opportunity for appeal to those persons or firms not awarded a contract through a competitive procurement process. In the event that a Bidder believes that it was not treated fairly, the Bidder may lodge a complaint to the PAF-IAST's Grievance Readdress Committee.
<b>E. AWARD OF CONTRACT</b>	
36. Evaluation	<p>36.1 PAF-IAST will conduct the evaluation solely on the basis of response to this tender received from the firms.</p> <p>36.2 Evaluation shall be undertaken in the following steps:</p> <ul style="list-style-type: none"> <li>a) Preliminary Examination including Technical Specifications and other compliances</li> <li>b) Arithmetical check and ranking of bidders who passed preliminary examination by price.</li> <li>c) Evaluation of prices</li> </ul> <p>36.3 Price comparison shall be based on the landed price, including transportation, insurance and the total cost of ownership (including spare parts, consumption, installation, commissioning, training, special packaging, etc., where applicable)</p>
37. Integrity Pact	37.1 Bidders will also be required to submit a signed Integrity Pact on a stamp paper of appropriate value as part of their response. The text of Integrity Pact is available at Annex – I.
38. Award Criteria	<p>38.1 Prior to expiration of the period of Proposal validity, PAF-IAST shall award the contract to the Bidder that is found to be responsive to the requirements of the Technical Specifications and has offered the lowest price.</p> <p>38.2 PAF-IAST shall not be obliged to award the contract to the lowest priced offer, if the response is found deficient to the Technical Specifications and other compliances.</p> <p>38.3 In case of tie in Financial Bid Value, the Contract will be awarded to the bidder having secured higher Score in Technical Evaluation.</p>
39. Contract Signing	<p>39.1 After the approval of any Work Award, a Contract Agreement on the stamp paper of appropriate value, shall be executed by PAF-IAST with Selected Bidder (i.e. Contractor) within 15 days from the date of issuance of Lol (Letter of Intent)/ Work Order.</p> <p>39.2 Failure to signing of Contract Agreement by the selected Bidder Firm with PAF: IAST within the stipulated time may constitute sufficient grounds for the annulment of the award, and forfeiture of the Bid Security, if any, and on which event, PAF- IAST may award the Contract to the Second highest rated or call for new Proposals.</p>
40. Right to Vary quantity at the Time of Award	40.1 At the time of award of Contract, PAF-IAST reserves the right to vary the quantity of goods and/ or services, without any change in the unit price or other terms and conditions.
41. Sample draft Contract	41.1 A sample draft Contract to be signed, containing applicable General Terms and Conditions can be found at Annex – II.

42. Performance Security	42.1 A performance security, if required in the BDS, shall be provided in the amount specified in BDS, well prior to the Contract signing by both parties. Where a performance security is required, the receipt of the performance security by PAF-IAST shall be a condition for rendering the contract effective.
43. Bank Guarantee for Advanced Payment	43.1 No Payment will be released in advance.
44. Liquidated Damages	<p>44.1 PAF-IAST shall apply Liquidated Damages for the damages and/ or risks caused to PAF-IAST resulting from the Contractor's delays or breach of its obligations as per Contract.</p> <p>a) In case of delay the Procurement Committee, PAF-IAST reserves the right to impose a penalty not exceeding 10% of the total amount of the Contract Value at the rate as referred in the Sample Contract at Annexure – II.</p> <p>b) If the Contractor fails to complete work as per PAF-IAST requirement, the Rector, PAF-IAST reserves the right to reject it altogether or impose a penalty not exceeding 50% of the total amount of the Contract.</p> <p>c) If the Contractor fails to provide supplies/ services as per PAF-IAST requirements, PAF-IAST may forfeit his earnest money as well as Performance Security, and the work will be done at the risk and cost of Bidder.</p> <p>d) In case of any dispute, matter will be referred to Rector, PAF-IAST whose decision will be binding on both the parties.</p>
45. Force Majeure	45.1 "Force Majeure" means an event which is beyond the reasonable control of a party and which makes a party's performance of its obligations under the Purchase Order/ Work Order/ Contract impossible or so impractical as to be considered impossible under the circumstances, and includes, but is not limited to, War, Riots, Storm, Flood or other industrial actions (except where such strikes, lockouts or other industrial issues are within the power of the party invoking Force Majeure), confiscation or any other action by Government agencies. In all disputes between the parties as to matters arising pursuant to this Purchase Order/ Work Order/ Contract, the dispute will be referred to Project Director, PAF-IAST whose decision will be final.
46. Delivery of Goods	46.1 Contractor will be required to deliver the goods as per the Delivery Schedule referred in BDS without claiming any additional cost to the PAF-IAST at the designated site(s) and in quantities as referred in the Contract.
47. Payment Provisions	<p>47.1 Payment will be made only upon PAF- IAST's acceptance of the goods and/ or services performed. The terms of payment shall be within thirty (30) days, after receipt of invoice, and certification of acceptance of goods and/ or services issued by the proper authority in PAF: IAST. Payment will be affected by bank transfer in the currency of the contract.</p> <p>47.2 The Contractor shall provide all necessary supporting documents along with GST invoice, delivery challan and any other relevant documents as required by the PAF- IAST.</p>

## Section 3. Bid Data Sheet

The following data for the goods and/ or services to be procured shall complement, supplement, or amend the provisions in the Invitation to Bid. In the case of a conflict between the Instructions to Bidders, the Bid Data Sheet, and other annexes or references attached to the Bid Data Sheet, the provisions in the Bid Data Sheet shall prevail.

BDS No.	Ref. to Section.2	Data	Specific Instructions / Requirements
1.		Background of the Project	<p>Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology (PAF: IAST) is novel in its content and holistic in approach. The project concept is based on the slogan of “Skilling Pakistan” to create a high-quality technical education infrastructure. This unique educational institution in Pakistan will closely collaborate with several institutions in Austria and China and award multiple foreign degrees. This is a historic and visionary initiative as it is probably the first time that an institution will be established in Pakistan with many foreign universities giving degrees to students who study in it.</p>
2.		Objective	<p>The main objective of this Tender is to equip Offices and academic facilities of PAF-IAST with the necessary IT Equipment and advanced technological solution, providing enabling environment to the staff, administrators, and faculty to perform their work in a conducive and productive environment and deliver beyond the expectations.</p>
3.		Scope of Work	<p><b>Supply and Installation/ Deployment of IT Equipment, Appliances &amp; Smart Classroom Solution</b>                      The required items in various Lots as referred in Section – 5 have been sought by PAF-IAST from a reputed Firms/ Companies. The supplier is expected to supply high quality products meeting the specification as stipulated in this ITB, which conforms to the international quality standards. The time specified for delivery, Installation and Commissioning in the tender form shall be deemed to be the essence of the contract and the Successful Bidder shall arrange within the specified period.</p> <p><b>Post-Commissioning Warranty and Support Services</b>                      It is required that Manufacturer’s Warranty and Post-commissioning Bidder’s Support Services for at least One (01) year from the date of commissioning to PAF-IAST be provided by the Supplier within the quoted cost of items.</p> <p>Moreover, additional Warranty and Support Services for next Three (03) years should be quoted separately by the Bidder on annual payment basis. However, it will be at sole discretion of PAF-IAST to avail additional Warranty and Support Services in subsequent year(s) or otherwise.</p>
4.	7	Language of the Bid	English
5.	22, 23, 27	Submitting Bids for Parts or subparts of the Schedule of Requirements (partial bids)	<p>The Purchase Committee shall consider the Bids Lot-wise (i.e. package against each of the Lots) as referred in Section – 5. Any item not quoted in the respective Lot shall have reasonable grounds to reject the Bid for that Lot.</p>

6.	20	Alternative Bids	<b>Not Allowed.</b>
7.	21	Pre-Bid conference	Will be held on Friday the November 15, 2019 at 10:30 hrs at PAF- IAST, Haripur Road, Mang, Haripur – Khyber Pakhtunkhwa <b>(For Lot No. 05 &amp; 07 only)</b>
8.	16	Bid Validity Period	<b>120 days</b>
9.	13	Bid Security/ Earnest Money (Refundable)	<b>Required in the amount of: 2% of the Bid Value of each Lot (separately) against which the Bidder is participating.</b> In case of options, earnest money shall be based on the maximum quoted price of the same items in the Lot.  <u>Acceptable Forms of Bid Security:</u> Denominated in Pak Rupees duly issued by a Pakistani Bank or branch of a Foreign Bank, in the form of <b>Demand Draft/ Pay Order</b> in favor of the <b>Project Director, PAF-IAST</b>
10.	42	Liquidated Damages	Will be imposed as follows:  <b>Percentage of contract price per day of delay: as referred in Draft Contract Sample in Annexure – II.</b>
11.	40	Performance Security	Within one week of issuance of Lol/ Purchase Order and well prior to the signing of Contract, as <b>10% of the Contract value</b> for the duration of Warranty period referred in RFP.
12.	12	Currency of Bid	Pakistani Rupees (PKR)
13.	31	Deadline for submitting requests for clarifications/ questions	<b>5 days</b> before the submission deadline
14.	31	Contact Details for submitting clarifications/ questions	Focal Person in PAF: IAST: <b>Mr. Shoukat Hussain</b> <a href="mailto:shoukathiraj@gmail.com">shoukathiraj@gmail.com/0995-645113</a>
15.	18, 19, and 21	Manner of Disseminating Supplemental Information to the ITB and responses/ clarifications to queries	Direct communication to prospective Bidders by email and/ or Posting on the PAF: IAST website:  <a href="http://www.paf-iaast.edu.pk/">http://www.paf-iaast.edu.pk/</a>
16.	23	Deadline for Submission	<b>Tuesday the December 03, 2019 on or before 11:00 AM (PST)</b>
17.	22	Number of Set(s) of Bid	<b>Technical Proposal(s)</b> - One (01) Original - Four (04) Copies - Soft copy of Technical Proposal in a USB Flash Drive <b>Financial Proposal(s)</b> - One (01) Original  <b>Note: Bidders are required to prepare and submit the Proposal(s) against the Lot(s) separately in which they intend to participate.</b>

18.	22	Allowable Manner of Submitting Bids	<input checked="" type="checkbox"/> Courier/ Hand Delivery												
19.	22	Bid Submission Address	<input checked="" type="checkbox"/> <b>By Courier / Hand Delivery:</b> Convener Procurement Committee, PAF- IAST, Mang, Haripur Tel. No. 0995-645118												
20.	22	Electronic submission (email) requirements	Not Allowed												
21.	25	Date, time and venue for the opening of bid	Date and Time: <b>Tuesday the December 03, 2019 at 11:30 AM</b> Venue: <b>Conference Room, PAF-IAST, Mang, Haripur</b>												
22.	27, 36	Evaluation Method	Eligible and qualified bids meeting the PAF- IAST requirements and technical responsive as stipulated in this ITB												
23.		Evaluation Method for the Award of Contract	Lowest priced technically responsive.												
24.		Expected date for commencement of Contract	<b>January 2020</b>												
25.		Maximum expected duration of Contract	<b>48 months</b>												
26.	35	PAF: IAST will award the contract to:	<b>One Bidder Only against each Lot</b>												
27.	39	Type and Contract Terms and Conditions that will apply	PAF-IAST General Terms and Conditions for Contracts for Goods and/ or Services as per Sample at Annex – II.												
28.	46	Delivery, Installation and Commissioning	<table border="1"> <thead> <tr> <th></th> <th>Delivery</th> <th>Installation</th> <th>Commissioning</th> </tr> </thead> <tbody> <tr> <td>LOT #1, 2, 3, 4 &amp; 6</td> <td>6 – 8 weeks</td> <td>2 weeks</td> <td>1 week</td> </tr> <tr> <td>LOT #5 &amp; 7</td> <td>8 – 10 weeks</td> <td>4 weeks</td> <td>2 weeks</td> </tr> </tbody> </table>		Delivery	Installation	Commissioning	LOT #1, 2, 3, 4 & 6	6 – 8 weeks	2 weeks	1 week	LOT #5 & 7	8 – 10 weeks	4 weeks	2 weeks
	Delivery	Installation	Commissioning												
LOT #1, 2, 3, 4 & 6	6 – 8 weeks	2 weeks	1 week												
LOT #5 & 7	8 – 10 weeks	4 weeks	2 weeks												



## Section 4. Evaluation Criteria

### Preliminary Examination Criteria

Bids will be examined to determine whether they are complete and submitted in accordance with ITB requirements as per below criteria on a Yes/ No basis:

- Appropriate signatures
- Power of Attorney
- Minimum Bid documents provided
- Bid Validity
- Bid Security submitted as per ITB requirements with compliant validity period

### Minimum Eligibility and Technical Qualification Criteria

Eligibility will be evaluated on a Pass/ Fail basis. If the Bid is submitted as a Joint Venture, there should be no more than two (02) companies in the Joint Venture and each company should meet the minimum criteria, unless otherwise specified.

Technical qualification will be evaluated on Score basis. Bidder will require to secure at least **70 percent** to qualify. Scores against each of the parameters in Section I, II & III will be according to documents provided by the Bidder, whereas scores in Section IV will be awarded by Technical Committee in response to Bidder's presentation.

ELIGIBILITY			
S. #	Subject	Criteria	Reference Returnable Form(s)
1.	<b>Bidder's Status</b>	Participating as <input type="checkbox"/> Individual Company <input type="checkbox"/> JV/ Consortium	Form B: Joint Venture/ Consortium/ Association Information Form
2.	<b>Legal Status</b>	Bidder is a legally registered entity in Pakistan. Bidder is/ are also registered with FBR for Income Tax and Sales Tax	Form C: Bidder Information Form
3.	<b>Location of Offices</b>	Bidder (Lead Bidder) has declared office(s) in Islamabad/ Rawalpindi/ Peshawar and in Haripur	Form C: Bidder Information Form
4.	<b>Principal's Authorization</b>	Bidder or at least one member of JV/ Consortium/ Association must be Authorized Partner/ Reseller/ Dealer for the supply and services of quoted goods/ services.	Form C: Bidder Information Form
5.	<b>Company in Operation</b>	Bidder (Lead Bidder) is in operation for at least Five (05) years.	Form C: Bidder Information Form
6.	<b>Financial Strength</b>	Average annual turnover over last 3 years LOT # 1, 2, 3, 4, & 6 → Rs. 10 million LOT # 5 → Rs. 50 million LOT # 7 → Rs. 100 million <i>(For JV/ Consortium/ Association, all Parties cumulatively should meet requirement).</i>	Form C: Bidder Information Form
7.	<b>Relevant Experience</b>	Minimum No. of Projects of similar nature, value, and complexity in last 3 years LOT # 1, 2, 3, & 4 → Three (03) projects LOT # 5 & 6 → Two (02) projects LOT # 7 → One (01) project <i>(For JV/Consortium/Association, all Parties cumulatively should</i>	Form C: Bidder Information Form

		<i>meet requirement).</i>	
8.	<b>Eligibility</b>	Bidder(s) is not suspended, nor debarred, nor otherwise identified as ineligible by any Government/ Semi-government/ Autonomous organization in Pakistan, in accordance with ITB clause 3. Non-Blacklisting certificate will be required.	Form A: Bid Submission Form
9.	<b>Bankruptcy</b>	Bidder(s) has not declared bankruptcy, is not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against the vendor that could impair its operations in the foreseeable future.	Form A: Bid Submission Form
10.	<b>Certificates and Licenses</b>	<b>Bidder(s) related:</b> i Certificate of Registration of the business ii A proofing document confirms the offered Warranty & Post-commissioning Support and Services for at least One (01) year within the quoted Unit Price(s). iii Supporting photos, data sheets, documents depicting usage scenarios of the proposed items.	Form C: Bidder Information Form

QUALIFICATION					
S. #	Attribute	Description	Max. Score	Criteria	Returnable Form(s)
<b>Section – I: General Corporate Profile</b>			<b>30</b>		
11.	<b>Market Presence</b>	Company in Operation since Registration	10	5 points for 5 years experience; and 1 point for every two additional years.	Form C: Bidder Information Form
12.	<b>Bidder’s Footprints</b>	Number of offices/ services centers across the country	5	4+ offices/ service centers	Form C: Bidder Information Form
			3	2 – 4 offices/ service centers	
			2	< 2 offices/ service centers	
13.	<b>Human Resource Strength</b>	Number of full-time employees	8	15+ employees with at least 20% Technical staff	Form C: Bidder Information Form
			6	11 – 15 employees with at least 20% Technical staff	
			4	5 – 10 employees with at least 20% Technical staff	
14.	<b>Financial Standing</b>	Annual Turnover averaged over last 3 years for Respective LOT(s)	7	2+ x Financial Strength	Form D: Qualification Form
			4	1.5 x Financial Strength	
			2	1 x Financial Strength	
<b>Section – II: Business Profile</b>			<b>20</b>		
15.	<b>Relevant Experience</b>	Project(s) of similar nature, value and complexity completed in last three (03) years for Respective LOT(s)	5	Min. No. of Projects + 3	Form D: Qualification Form
			3	Min. No. of Projects + 2	
			2	Min. No. of Projects + 1	
16.	<b>Public Sector Experience</b>	Project(s) delivered to government organizations over last three (03) years	5	3+ Projects	Form D: Qualification Form
			3	3 Projects	
			2	2 Projects	
17.	<b>Education Sector Experience</b>	Project(s) completed at education institutions over	5	2+ Projects	Form D: Qualification
			3	2 Projects	

		last three (03) years	2	1 Project	Form
18.	<b>History of Non-Performing Contracts</b>	Non-performance of contracts (if any) during last 3 years.	5	No such contracts	Form D: Qualification Form
			0	At least 1 non-performance contract	Form
<b>Section – III: Manufacturer’s/ Product’s Strengths</b>			<b>15</b>		
19.	<b>Manufacturer’s Global Presence</b>	Countries having supplied the same Quoted item for Respective LOT(s)	8	No. of countries identified by Bid in consideration/ Max. No. of countries identified in all Bids * 10	Form E: Project Proposal Form
20.	<b>Manufacturer’s Products Portfolio</b>	Various Products produced by the manufacturer for respective LOT(s)	7	No. of relevant Products mentioned by Bid in consideration/ Max. No. of Products referred in all Bids * 10	Form E: Project Proposal Form
<b>Section – IV: Registration &amp; Certifications</b>			<b>15</b>		
21.	<b>Pakistan Engineering Council Registration</b>	At least PEC C2 level issued in favor of bidder or any of the JV Partners	7	Copy of Valid Certificate	Form E: Project Proposal Form
22.	<b>ISO 9001 Certified</b>	Bidder or the Lead Bidder in case of JV should be Certified	5	Copy of Valid Certificate	Form E: Project Proposal Form
23.	<b>ISO 27000</b>	Bidder or any of the JV Partners should possess any of them	3	Copy of Valid Certificate	Form E: Project Proposal Form
<b>Section – IV: Presentation on Project Proposal (Only Applicable for LOT #7)</b>			<b>20</b>		
24.	<b>Project Management Approach</b>	Overall approach towards planning and implementing the project.	8	To be assigned by the Technical Committee	Form E: Project Proposal Form
25.	<b>Post-Commissioning Services</b>	Overall approach towards after-sale support and services.	7	To be assigned by the Technical Committee	Form E: Project Proposal Form
26.	<b>Distinguishing Features</b>	Distinguishing features of the quoted Product and/ or overall project proposed.	5	To be assigned by the Technical Committee	Form E: Project Proposal Form
<b>Grand Total</b>			<b>100</b>		
	<b>Technical Evaluation</b>	Bids shall be evaluated on both Eligibility and Technical Qualification Criteria. Bidders meeting the Eligibility Criteria and able to secure <b>70 percent</b> in Technical qualification shall be declared as Technically Qualified Bidders for the next step, i.e. Opening of Financial Bid.			
	<b>Financial Evaluation</b>	Detailed analysis of the price schedule based on requirements listed in Section 5 and quoted for by the bidders in Form F. Price comparison shall be based on the landed price, including transportation, insurance and the total cost of ownership (including spare parts, consumption, installation, commissioning, training, special packaging, etc., where applicable) Comparison with budget/ internal estimates. Tender will be awarded on <b>least-cost basis</b> .			

## Section 5a: Technical Specifications of the Required Goods

LOT #1: COMPUTERS			
Desktop Computers/ All-in-One	Specification #1 Qty: 10	Specification #2 Qty: 20	Specification #3 Qty: 20
<b>Processor</b>	Intel® Core™ i7 9 <sup>th</sup> Gen (2.0 GHz base frequency, 12 MB cache, 8 cores) or higher	Intel® Core™ i5 9 <sup>th</sup> Gen (2.0 GHz base frequency, 9 MB cache, 6 cores) or higher	Intel® Core™ i3 9 <sup>th</sup> Gen (3.0 GHz base frequency, 6 MB cache, 4 cores) or higher
<b>RAM</b>	16 GB DDR4 or higher	8 GB DDR4 or higher	4 GB DDR4 or higher
<b>Hard Drive</b>	1 TB HDD 7200 rpm or higher	1 TB HDD 7200 rpm or higher	500 GB HDD 7200 rpm or higher
<b>Form factor</b>	Tower with all in one stand or better	Tower with all in one stand or better	Tower with all in one stand or better
<b>Display Screen (LED)</b>	Same Brand ~21.5" FHD (1920 x 1080) or bigger	Same Brand ~21.5" FHD (1920 x 1080) or bigger	Same Brand ~21.5" FHD (1920 x 1080) or bigger
<b>Graphics</b>	Intel® UHD/ NVIDIA	Intel® UHD/ NVIDIA	Intel® UHD/ NVIDIA
<b>Network interface</b>	Integrated GbE	Integrated GbE	Integrated GbE
<b>Power Supply</b>	500W or lower	500W or lower	500W or lower
<b>External I/O Ports</b>	1xaudio-in; 1xaudio-out; 1xDisplayPort™ 1.2; 1xpower connector; 1xRJ-45; 1xVGA; 2xUSB 3.0/1; 2xUSB 2.0	1xaudio-in; 1xaudio-out; 1xDisplayPort™ 1.2; 1xpower connector; 1xRJ-45; 1xVGA; 2xUSB 3.0/1; 2xUSB 2.0	1xaudio-in; 1xaudio-out; 1xDisplayPort™ 1.2; 1xpower connector; 1xRJ-45; 1xVGA; 2xUSB 3.0/1; 2xUSB 2.0
<b>Speakers</b>	2W or better	2W or better	2W or better
<b>Operating System</b>	Windows 10 Pro 64 bit	Windows 10 Pro 64 bit	Windows 10 Pro 64 bit
<b>UPS Backup Unit</b>	Pure sinewave 600VA or as per Desktop computer requirement, min. 10 min backup time, Power Factor 0.8 or higher, maintenance-free batteries		
Laptop Computers	Specification #1 Qty: 10	Specification #2 Qty: 20	Specification #3 Qty: 20
<b>Processor</b>	Intel® Core™ i7 9 <sup>th</sup> Gen (2.0 GHz base frequency, 12 MB cache, 6 cores) or higher	Intel® Core™ i5 9 <sup>th</sup> Gen (2.0 GHz base frequency, 8 MB cache, 4 cores) or higher	Intel® Core™ i3 8 <sup>th</sup> Gen (2.0 GHz base frequency, 4 MB cache, 2 cores) or higher
<b>RAM</b>	16 GB DDR4 or higher	8 GB DDR4 or higher	4 GB DDR4 or higher
<b>Hard Drive</b>	1TB SSD or higher	512 GB SSD or higher	256 GB SSD or higher
<b>Operating System</b>	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro
<b>Wireless</b>	WiFi 802.11ac (2x2) dual band and Bluetooth v4.1 or higher	WiFi 802.11ac dual band and Bluetooth v4.1 or higher	WiFi 802.11ac and Bluetooth v4.1 or higher
<b>Display Screen</b>	14" +/- 1" FHD IPS antiglare (1920 x 1080) or better	14" +/- 1" FHD IPS antiglare (1920 x 1080) or better	14" +/- 1" FHD IPS antiglare (1920 x 1080) or better
<b>Keyboard</b>	Backlit keyboard	Backlit keyboard	Non Backlit keyboard
<b>Graphics</b>	Intel UHD Graphics or higher	Intel UHD Graphics or higher	Intel UHD Graphics or higher
<b>Battery backup</b>	Up to 8 hours or more	Up to 6 hours or more	Up to 6 hours or more
<b>Power Adaptor</b>	50W or lower	50W or lower	50W or lower
<b>Ports / Slots</b>	2xUSB3.1 Gen 1, 1xUSB3.1 Type-C Gen 1, 1xUSB2.0, 1xHDMI1.4, Headphone/ Mic combo	2xUSB3.1 Gen 1, 1xUSB3.1 Type-C Gen 1, 1xUSB2.0, 1xHDMI1.4, Headphone/ Mic combo	2xUSB3.1 Gen 1, 1xUSB3.1 Type-C Gen 1, 1xUSB2.0, 1xHDMI1.4, Headphone/ Mic combo

<b>LOT #2: PRINTER</b>			
<b>Monochrome Printer</b>	<b>Specification #1 Qty: 30</b>	<b>Specification #2 Qty: 5</b>	<b>Specification #3 Qty: 5</b>
<b>Standard Features</b>	Print	Print, Copy, Scan, Fax, Email	Print, Copy, Scan
<b>Print Speed</b>	23 pages per minute (ppm) or higher	40 pages per minute (ppm) or higher	55 pages per minute (ppm) or higher
<b>Print Technology</b>	Laser	Laser	Laser
<b>Print Resolution</b>	600 x 600dpi or higher	1200 x 1200dpi or higher	1200 x 1200dpi or higher
<b>Copy Resolution</b>	N/A	1200 x 1200dpi or higher	1200 x 1200dpi or higher
<b>Scan Optical Resolution</b>	N/A	1200 x 1200 dpi	1200 x 1200dpi or higher
<b>Fax. Transmission Speed</b>	N/A	33.6 kbps or higher	N/A
<b>Speed Dialing</b>	N/A	250 numbers or more	N/A
<b>Monthly Duty Cycle</b>	10,000 pages per month or higher	80,000 pages per month or higher	300,000 pages per month or higher
<b>First Print Out Time</b>	7.3 sec or less	6.1 sec or less	5.3 sec or less
<b>Paper Trays</b>	1 or more	2 or more	Min. 2 and extendable
<b>Automatic Document Feeder</b>	35 sheets or more	100 sheets or more	150 sheets or more
<b>Memory</b>	N/A	512MB	2.5 GB
<b>Hard Disk</b>	N/A	500 GB (Optional)	320 GB Secure Hard Disk
<b>Connectivity</b>	1xUSB 2.0 HiSpeed, 2xUSB ports, Gigabit Ethernet LAN, Wi-Fi 802.11b/g/n dual band	1xUSB 2.0 HiSpeed, 2xUSB ports, Gigabit Ethernet LAN, Wi-Fi 802.11b/g/n dual band	1xHi-Speed Device USB 2.0; 2xHost USB; 1xGigabit Ethernet 10/100/1000T network; Print Server; Wi-Fi 802.11b/g/n dual band; NFC
<b>Print Management</b>	Printer Assistant, Device Toolbox	Printer Assistant, Web Admin Software, Managed Print Administrator	Printer Assistant, Web Admin Software, Managed Print Administrator
<b>Security Management</b>	N/A	Should offer secure printing/ copying to maintain the confidentiality, and only allow access to retrieve prints using personalized passwords/ PIN codes, LDAP authentication, RFID and Smartcards. Should maintain logs, counts and statistics against each individual user printing/ copying and reports are available/ accessible through software.	Should offer secure printing/ copying to maintain the confidentiality, and only allow access to retrieve prints using personalized passwords/ PIN codes, LDAP authentication, RFID and Smartcards. Should maintain logs, counts and statistics against each individual user printing/ copying and reports are available/ accessible through software.
<b>Color Printer</b>	<b>Specification #1 Qty: 1</b>	<b>Specification #2 Qty: 1</b>	
<b>Standard Features</b>	Print, Copy, Scan	Print (Automatic Duplex)	
<b>Print Speed</b>	28 pages per minute (ppm) or higher	50 pages per minute (ppm) or higher	
<b>Print Technology</b>	Laser	Laser	
<b>Print Resolution</b>	600 x 600dpi or higher	1200 x 1200dpi or higher	
<b>Copying Speed</b>	28 cpm or higher	N/A	
<b>Copy Resolution</b>	600 x 400dpi or higher	N/A	
<b>Scan Speed</b>	11 ipm or higher	N/A	
<b>Scan Optical Resolution</b>	600 x 600 dpi	N/A	
<b>Monthly Duty Cycle</b>	50,000 pages per month or higher	100,000 pages per month or higher	

<b>First Print Out Time (color)</b>	11.5 sec or less	6.4 sec or less
<b>Paper Trays</b>	2 or more	2 or more
<b>Automatic Document Feeder</b>	50 sheets or more	N/A
<b>Memory</b>	512 MB or higher	1 GB or higher
<b>Hard Disk</b>	N/A	N/A
<b>Connectivity</b>	N/A	N/A
<b>Print Management</b>	Printer Assistant, Device Toolbox	Printer Assistant, Web Admin Software, Managed Print Administrator
<b>Security Management</b>	N/A	N/A

<b>LOT #3: DISPLAY DEVICES</b>			
<b>Multimedia Projector</b>	<b>Specifications #1 Qty: 2</b>	<b>Specification #2 Qty: 2</b>	<b>Specification #3 Qty: 1</b>
<b>Projector Type</b>	Standard	Standard	Short Throw
<b>Resolution</b>	1920 x 1080 FHD or better	800 x 600 or better	XGA (1024x768) or better
<b>Brightness</b>	4,000 Lumens or higher	2,800 lumens or higher	3,500 lumens or higher
<b>Contrast</b>	12000:1 or better	22,000:1 or better	22,000:1 or better
<b>Light Source Life</b>	4,000 hours (normal) or higher	5,000 hours (normal) or higher	5,000 hours (normal) or higher
<b>Throw Ratio</b>	1.5 +/- 0.1	2.0 +/- 0.1	0.5 +/- 0.1
<b>Power consumption (operating/ standby)</b>	400W/ 1W or lower	275W/ 1W or lower	275W/ 1W or lower
<b>Keystone Adjustment</b>	Vertical & Horizontal +/- 30 degrees or better	Vertical/ Horizontal +/- 40 degrees or better	Vertical & Horizontal +/- 30 degrees
<b>Type of lamp</b>	DLP lamp	DLP lamp	DLP lamp
<b>Display Size</b>	300" or bigger	300" or bigger	300" or bigger
<b>Network connection</b>	10/ 100/ 1000 Mbps Ethernet	10/ 100/ 1000 Mbps Ethernet (optional)	10/ 100/ 1000 Mbps Ethernet (optional)
<b>Wireless Network</b>	802.11 b/g/n or ac	802.11 b/g/n or ac	802.11 b/g/n or ac
<b>Ports / Slots</b>	1xUSB2.0 (Type-A), 1xAudio In, 1xAudio Out, 1xRS-232, 1xHDMI 1.4, 1xHDMI (with HDCP 1.4) 1xVGA in, 1xVGA Out, 1xComposite RCA In	1xminiUSB (Type-B), 1xAudio In, 1xAudio Out, 1xRS-232, 1xHDMI 1.4, 1xVGA in, 1xVGA Out, 1xComposite RCA In	1xUSB2.0 (Type-A), 1xAudio In, 1xAudio Out, 1xRS-232, 1xHDMI 1.4, 1xVGA in, 1xVGA Out, 1xComposite RCA In
<b>Internal Speaker</b>	10W or higher	2W or higher	10W or higher
<b>Color Depth</b>	1B color (R/G/B 10 bit) or higher	1B color (R/G/B 10 bit) or higher	1B color (R/G/B 10 bit) or higher
<b>Aspect ratio</b>	16:9	4:3	16:10
<b>Television</b>	<b>Specification #1 Qty: 15</b>	<b>Specification #2 Qty: 15</b>	<b>Specification #3 Qty: 15</b>
<b>SmartTV</b>	43" ±2" Smart LED TV	55" ±2", 4K UHD, Smart LED TV	65" ±2",4K UHD, Smart LED TV
<b>TV Type</b>	LED	DLED	DLED
<b>Aspect Ratio</b>	16:09	16:09	16:09
<b>Resolution</b>	1920x1080	3840x2160	3840x2160
<b>Contrast</b>	4000:01:00	6000:01:00	6000:01:00
<b>Picture Mode</b>	Standard/Dynamic/Mild/User	Standard (Vivid, Mild, User, Eco)	Standard (Vivid, Mild, User, Eco)
<b>Audio Mode</b>	(Standard, Music, Movie, Sports, User)	(Standard, Music, Movie, Sports, User)	(Standard, Music, Movie, Sports, User)
<b>processor</b>	4 Core CPU + 4 Core GPU	Cortex A9 x 2 Mali 400MP2 or better	Cortex A9 x 2 Mali 400MP2 or better
<b>RAM:</b>	1GB DDR3	1.5GB DDR3	1.5GB DDR3
<b>Flash Memory</b>	8GB eMMC	8GB or higher	8GB or higher
<b>Network</b>	Ethernet, WIFI (802.11 b/g/n), WIFI hot spot	Ethernet, WIFI (802.11 b/g/n), WIFI hot spot	Ethernet, WIFI (802.11 b/g/n), WIFI hot spot
<b>Refresh Rate</b>	60Hz	60Hz	60Hz
<b>Audio Output Power</b>	2x8W	2x10W	2x10W
<b>Connectivity</b>	3xHDMI, 2xUSB2.0, 1x headphone, 1xEtherLAN	3xHDMI, 2xUSB2.0, 1x headphone, 1xEtherLAN	3xHDMI, 2xUSB2.0, 1x headphone, 1xEtherLAN
<b>Operate System</b>	Android 7.0 or higher	Android 6.0 or higher	Android 6.0 or higher

<b>LOT #4: PHOTOCOPIER</b>	
<b>Multi-Functional Photocopier</b>	<b>Specification #1 Qty: 4</b>
<b>Standard Features</b>	Print, Copy, Scan, Fax
<b>Finishing Features</b>	Staple, Booklet, Hole Punch, Automatic Document Feeder, Auto Duplexing, Mobile Printing
<b>Speed</b>	65 pages per minute (ppm) or higher
<b>Technology</b>	Laser
<b>Display</b>	Color /Monochrome Touch Screen
<b>Copy Size</b>	A4, Letter, Legal, Ledger
<b>Printing Resolution</b>	1200dpi × 1200dpi
<b>Monthly Duty Cycle</b>	150,000/day
<b>Paper Capacity</b>	4000 sheets or more
<b>First Page Out Time</b>	3.2 sec or less
<b>Processor</b>	Intel 1.75 GHz or higher
<b>Memory</b>	2GB or higher
<b>Hard Disk</b>	320 GB or Higher
<b>Interfaces</b>	10Base-T/100Base-TX/1000Base-T Ethernet, SD Card Slot (1 Slot/Support SDHC Memory Card), USB Host (Type A: 1Port/Support USB Flash Memory)
<b>Fax. Transmission Speed</b>	33.6 kbps or higher
<b>Fax Memory</b>	4 MB or higher
<b>Fax Features</b>	Internet Fax by e-mail (T.37), IP Fax (T.38), LAN Fax, Fax Forward to E-mail/Folder, LDAP support
<b>Scan to Email, USB,HDD,PC</b>	Standard
<b>Online Remote Access Control</b>	Standard
<b>Security Features</b>	Should offer secure printing/ copying to maintain the confidentiality, and only allow access to retrieve prints using personalized passwords/ PIN codes, LDAP authentication, RFID and Smartcards. Should maintain logs, counts and statistics against each individual user printing/ copying and reports are available/ accessible through software.



<b>LOT #5: DIESEL GENERATOR</b>		
	<b>Specification #1 Qty: 4</b>	<b>Specification #2 Qty: 2</b>
<b>Capacity Prime Rating</b>	50 ±5% KVA	275 ±5% KVA
<b>Make &amp; Model</b>	Volvo / Perkin/John Deer/ Caterpillar/ Cummins or equivalent duly foreign Assembled/ coupling from the same origin)	Volvo / Perkin/John Deer/ Caterpillar/ Cummins or equivalent duly foreign Assembled/ coupling from the same origin)
<b>Country of Origin</b>	UK, USA, Japan, France, Germany, Turkey	UK, USA, Japan, France, Germany
<b>Generator Frame</b>	<ul style="list-style-type: none"> <li>- Heavy duty fabricated steel skid type based frame with anti-vibration mounting / Isolators</li> <li>- Skid mounted radiator engine driven blower type fan &amp; protecting guards</li> <li>- Built-in damper for anti-vibration.</li> </ul>	<ul style="list-style-type: none"> <li>- Heavy duty fabricated steel skid type based frame with anti-vibration mounting / Isolators</li> <li>- Engine and alternator shall be mounted on a same frame steel skid.</li> <li>- Built-in damper for anti-vibration.</li> </ul>
<b>Engine Type</b>	<ul style="list-style-type: none"> <li>- Prime Power 40 KW</li> <li>- 4 Stroke Diesel Engine</li> <li>- Water Cooled</li> <li>- Direct coupled with Alternator</li> <li>- Self-Ventilated/Regulated</li> </ul>	<ul style="list-style-type: none"> <li>- 4 stroke Diesel Engine</li> <li>- Direct Coupled with Alternator</li> <li>- Compression ratio 18:1 or better</li> <li>- Max. and min. oil pressure range</li> <li>- Oil consumption at 100% load</li> <li>- Oil Sump Capacity (L)</li> <li>- Fuel tank for minimum 8 hours of continuous running at 110 % load.</li> <li>- Max. fuel pump flow (L/H)</li> </ul>
<b>Engine Build</b>	In Line	In Line
<b>Number Of Cylinders</b>	3	6
<b>Bore</b>	105 mm or better	116.6 mm or better
<b>Stroke</b>	127 mm or better	135.9 mm or better
<b>Displacement</b>	3.3 L or better	8.7 L or better
<b>Compression Ratio</b>	17.26:1 or better	16.9:1 or better
<b>Aspiration</b>	Turbocharged	Turbocharged
<b>Ambient Air Temperature</b>	45 degree Centigrade or better	50 degree Centigrade or better
<b>Fuel Tank</b>	Built in fuel tank for at least 8 hours operation @ full load	Built in fuel tank for at least 10 hours operation @ full load
<b>Cooling</b>	Radiator Cooled	Air to Air
<b>RPM</b>	At least 1500	At least 1500
<b>Cooling System</b>	<ul style="list-style-type: none"> <li>- Water Cooled</li> <li>- Tropical Radiator with water level switch/ indicator</li> </ul>	<ul style="list-style-type: none"> <li>- Water Cooled</li> <li>- Tropical Radiator with water level switch/ indicator</li> </ul>
<b>Exhaust System</b>	<ul style="list-style-type: none"> <li>- Heavy duty Residential Grade Silencer with Flexible Exhaust Pipe</li> <li>- Exhaust Tempt Max 500 Centigrade</li> </ul>	<ul style="list-style-type: none"> <li>- Heavy duty Residential Grade Silencer with Flexible Exhaust Pipe</li> <li>- Exhaust Tempt Max 500 Centigrade</li> </ul>
<b>Thermal Balance</b>	<ul style="list-style-type: none"> <li>- Heat rejection to exhaust (kW)</li> <li>- Radiated heat to ambient (kW)</li> <li>- Heat rejection to coolant (kW)</li> </ul>	<ul style="list-style-type: none"> <li>- Heat rejection to exhaust (kW)</li> <li>- Radiated heat to ambient (kW)</li> <li>- Heat rejection to coolant (kW)</li> </ul>
<b>Governor</b>	- Mechanical	- Electronic
<b>Alternator</b>	<ul style="list-style-type: none"> <li>- Prime Power Rating in 50 ±5% kVA</li> <li>- Standby Power = 60 kVA</li> <li>- Power factor = 0.8</li> <li>- Brushless</li> <li>- PMG Excited</li> <li>- Automatic Voltage Regulator with Three Phase Sensing</li> <li>- Automatic Frequency Regulated 230/400 Volt 3-Phase, 4 Wire, 50 Hz (Nominal Frequency)</li> </ul>	<ul style="list-style-type: none"> <li>- Prime Power Rating in 275 ±5% kVA</li> <li>- Standby power = 300 kVA</li> <li>- Power factor = 0.8</li> <li>- Brushless Self / Ventilated/ Regulated Self excited Direct coupling with one bearing</li> <li>- Automatic Voltage Regulator with IP Protection</li> <li>- Automatic Frequency Regulated 230/400 Volt 3 Phase, 4 Wire 50 Hz Nominal frequency</li> <li>- F/H type Insulated</li> <li>- Voltage regulation from 0-100% with accuracy +- </li> </ul>

	<ul style="list-style-type: none"> <li>- F/H Type Insulated</li> <li>- Voltage regulation from 0-100% with accuracy +/-0.5%</li> </ul>	0.5%
<b>Protections</b>	<ul style="list-style-type: none"> <li>- Overload shutdown</li> <li>- Short circuit shutdown</li> <li>- Low oil pressure shutdown</li> <li>- Under speed shutdown</li> <li>- Under voltage shutdown</li> <li>- Over winding temperature shutdown</li> <li>- Over voltage monitoring and tripping</li> <li>- Low voltage monitoring and tripping</li> <li>- Phase sequence monitoring and tripping</li> <li>- Phase failure monitoring and tripping</li> </ul>	<ul style="list-style-type: none"> <li>- Overload shutdown</li> <li>- Short circuit shutdown</li> <li>- Low oil pressure shutdown</li> <li>- Under speed shutdown</li> <li>- Under voltage shutdown</li> <li>- Over winding temperature shutdown</li> <li>- Over voltage monitoring and tripping</li> <li>- Low voltage monitoring and tripping</li> <li>- Phase sequence monitoring and tripping</li> <li>- Phase failure monitoring and tripping</li> </ul>
<b>Control Module</b>	<ul style="list-style-type: none"> <li>- Automatic transfer switch (European based)</li> <li>- Deep sea or equivalent UK, USA Japan (European based)</li> </ul>	<ul style="list-style-type: none"> <li>- Automatic transfer switch (European based)</li> <li>- Deep sea or equivalent UK, USA Japan (European based)</li> </ul>
<b>Metering</b>	<ul style="list-style-type: none"> <li>- Voltmeter</li> <li>- Frequency meter</li> <li>- Ampere meter</li> <li>- Hour meter</li> <li>- Alarms and faults</li> <li>- Oil pressure gauge</li> <li>- Water temperature gauge</li> <li>- Battery voltage</li> <li>- Fuel level</li> <li>- Remote monitoring and control</li> </ul>	<ul style="list-style-type: none"> <li>- Voltmeter</li> <li>- Frequency meter</li> <li>- Ampere meter</li> <li>- Hour meter</li> <li>- Alarms and faults</li> <li>- Oil pressure gauge</li> <li>- Water temperature gauge</li> <li>- Battery voltage</li> <li>- Fuel level</li> <li>- Remote monitoring and control</li> </ul>
<b>Batteries</b>	<ul style="list-style-type: none"> <li>- Maintenance free with Batteries rack and table</li> </ul>	<ul style="list-style-type: none"> <li>- Maintenance free with Batteries rack and table</li> </ul>
<b>Installation</b>	<ul style="list-style-type: none"> <li>- Foundation one feet excess to generator size on each side and of recommended thickness for achieving zero vibration.</li> <li>- Earthing (boring up to water level, Rod size of ¾" dia. and 5' long)</li> <li>- Earthing &amp; Neutral connections up to first water level Separately</li> <li>- Laying of cables in all aspect (As approved by the engineer Incharge)</li> </ul>	<ul style="list-style-type: none"> <li>- Foundation one feet excess to generator size on each side and of recommended thickness for achieving zero vibration.</li> <li>- Earthing (boring up to water level, Rod size of ¾" dia. and 5' long)</li> <li>- Earthing &amp; Neutral connections up to first water level Separately</li> <li>- Laying of cables in all aspect (As approved by the engineer Incharge)</li> </ul>
<b>Cables</b>	<ul style="list-style-type: none"> <li>- Power Cable: 4 Core, Copper 70 mm, (Pakistan cables, Newage /equivalent approved)</li> <li>- Earth Cable:1 Core, 70 mm</li> <li>- Control Cable: 4 Core, 2.5 mm</li> <li>- As approved by the Engineer Incharge</li> </ul>	<ul style="list-style-type: none"> <li>- Power Cable: 4 Core, Copper 185 mm, (Pakistan cables, Newage /equivalent approved)</li> <li>- Earth Cable:1 Core, 70 mm</li> <li>- Control Cable: 4 Core, 2.5 mm</li> <li>- As approved by the Engineer Incharge</li> </ul>
<b>Canopy</b>	<ul style="list-style-type: none"> <li>- 78 dBA at 3 m. distance.</li> <li>- Protecting stationary and mobile generator against the bad weather, theft and enables the reduction of noise Enclosures are of 12 gauge steel.</li> <li>- Steel sheet must be electro Zinc coated before painting (inside and outside) with a polyester powder rust inhibiting coat.</li> <li>- High corrosion resistance: stainless covered with zinc and made in dichromate, bolts and rivets, anodized aluminum alloy hinges flexible seals between body sections.</li> <li>- Large doors allowing easy access to the generator set for service and monitoring purposes.</li> <li>- Window in "secure" glass mounted on enclosure door for control viewing.</li> <li>- Emergency stop button accessible from outside enclosure</li> </ul>	<ul style="list-style-type: none"> <li>- 78 dBA at 3 m. distance.</li> <li>- Protecting stationary and mobile generator against the bad weather, theft and enables the reduction of noise Enclosures are of 12 gauge steel.</li> <li>- Steel sheet must be electro Zinc coated before painting (inside and outside) with a polyester powder rust inhibiting coat.</li> <li>- High corrosion resistance: stainless covered with zinc and made in dichromate, bolts and rivets, anodized aluminum alloy hinges flexible seals between body sections.</li> <li>- Large doors allowing easy access to the generator set for service and monitoring purposes.</li> <li>- Window in "secure" glass mounted on enclosure door for control viewing.</li> <li>- Emergency stop button accessible from outside enclosure</li> </ul>

<b>LOT #6: APPLIANCES</b>			
<b>DC Inverter Air Conditioners</b>	<b>Specifications #1 Qty: 25</b>	<b>Specification #2 Qty: 03</b>	<b>Specification #3 Qty: 02</b>
<b>Capacity</b>	1.5 Tons	2 Tons	3 Tons
<b>Type</b>	DC Inverter	DC Inverter	DC Inverter
<b>Color</b>	White or Silver	White or Silver	White or Silver
<b>Installation Type</b>	Wall Mount	Cabinet/ Pedestal	Cabinet/ Pedestal
<b>Cooling Capacity (BTU)</b>	18000	24000	36000
<b>Heating Capacity (BTU)</b>	18000	24000	36000
<b>Air Circulation (m3/h)</b>	~900	~1200	~1500
<b>Power Input Cooling &amp; Heating</b>	350 W – 1800 W	2.5 kW – 7 kW	3.5 kW – 10 kW
<b>Power Supply (Ph/ V/ Hz)</b>	Single, 220 volts, 50 Hz	Single, 220 volts, 50 Hz	Single, 220 volts, 50 Hz
<b>UPS Enabled</b>	Enabled with UPS Devices	N/A	N/A
<b>Refrigerators &amp; Deep Freezers</b>	<b>Specification #1 Qty: 40</b>	<b>Specification #2 Qty: 02</b>	<b>Specification #3 Qty: 02</b>
<b>Capacity (Gross)</b>	10 cft	18 cft	~20 cft
<b>Type</b>	Pedestal	Pedestal	Chest Freezer
<b>Color</b>	Black/ Silver/ Brown	Black/ Silver/ Brown	White
<b>Capacity (Ref.)</b>	~190 ltr	~300 ltr	N/A
<b>Capacity (Freezer)</b>	~100 ltr	~150 ltr	~ 550 ltr
<b>Cooling Method</b>	Direct Cool	Direct Cool	
<b>Climate Class</b>	T	T	T
<b>Compressor</b>	Regular	Inverter	Inverter
<b>Refrigerant</b>	R 134A	R 600A	R 600A
<b>Temperature (Ref.)</b>	+ 5°	+ 5°	N/A
<b>Temperature (Freezer)</b>	- 25°	- 25°	- 28°
<b>Power Supply (Ph/ V range/ Hz)</b>	Single, 125 – 260 volts, 50 Hz	Single, 125 – 260 volts, 50 Hz	Single, 105 – 260 volts, 50 Hz
<b>Cooking Range</b>	<b>Specification #1 Qty: 02</b>		
<b>Type</b>	Gas operated		
<b>No. of Burners</b>	Five		
<b>Type of Burners</b>	Dye casted		
<b>Ignitor</b>	Electric Auto		
<b>Thermostat</b>	High Density Double Way		
<b>Type of Body</b>	Non-magnetic Stainless Steel		
<b>Burner Bed</b>	Stainless Steel		
<b>Front Doors</b>	Two – Tampered Glass		
<b>Water Dispenser</b>	<b>Specification #1 Qty: 10</b>		
<b>Capacity (Cold)</b>	3.5 ltr or more		
<b>Capacity (Hot)</b>	1 l8tr or more		

<b>Power Cooling</b>	~ 400W	
<b>Power Heating</b>	~ 100W	
<b>Hot Water Temp.</b>	90	
<b>No. of Taps</b>	Three (Cold, Hot, Normal)	
<b>Refrigerant</b>	R 134A	
<b>Heater</b>	Inner	
<b>Electric Water Cooler with Filter</b>	<b>Specification #1</b>	
	<b>Qty: 05</b>	
<b>Capacity</b>	200 gallons or more	
<b>Type</b>	Cabinet	
<b>No. of Taps</b>	Four	
<b>Body Material</b>	Stainless Steel	
<b>Refrigerant</b>	R 134A	
<b>Water System</b>	All copper, brass, stainless steel water system	
<b>Insulation</b>	Moisture proof and highly effective polystyrene insulation.	
<b>Thermostat</b>	Water temperature controller adjustable 9 to 15	
<b>Water Filter</b>	3-stage Water purifying system	
<b>Shredder</b>	<b>Specification #1</b>	<b>Specification #2</b>
	<b>Qty: 01</b>	<b>Qty: 01</b>
<b>Capacity (70gm)</b>	7 sheets	20 sheets
<b>Type</b>	General	Heavy Duty
<b>Bin Volume</b>	12 ltr or more	30 ltr or more
<b>Shredding Material</b>	Paper, Films	Paper, Films, Pins, Clips, CDs, Plastic Cards
<b>Shred Speed</b>	~ 3 m/s	~ 4 m/s
<b>Duty Cycle</b>	10 min or more	30 min or more
<b>Motor Power</b>	150 W	250 W
<b>Noise Level</b>	~ 60db	~ 60db

**LOT #7: SMART CLASSROOM SOLUTION**

Smart Auditorium	Specification Qty: 08	
<b>Interactive Digital Recording Host with H.323 capability</b>	<b>IP Video Input</b>	
	IP Camera Input	4 channel
	Compression	H.265 / H.264
	Resolution	1080p
	Frame Rate	30fps
	<b>Recording</b>	
	Compression	H.265 / H.264
	Resolution	1080p
	Frame Rate	30fps
	Bitrate	128 ~ 8192Kbps
	Streaming	Flash/ HTML5
	Continuous Presence	Cinema mode, PiP, VIP1+2, VIP1+3, 4
	<b>Audio</b>	
	Compression	G.711a / G.711u / ADPCM / G.722 / AAC-LC
	Bitrate	32 ~ 128kbps
	Functions	AEC, AGC, ANS, AFC
	<b>Interfaces</b>	
	Video Input	2 x DVI-I or more
	Video Output	2 x DVI-I or more
	Audio Input	6 x Mic in or more
		2 x Line in, Stereo or more
	Audio Output	2 x Line out, Stereo or more
		S/ PDIF
	Ethernet	1 x Gigabit network port, RJ45 interface
		2 x 10/ 100M, RJ45 interface
		4 x 10/ 100M, RJ45 interface (PoE)
	Internal HDDs	2 x SATA (1 x 1TB 2.5" HDD) or more
	Control	2 x RS485, 8 x RS232
<b>Protocols</b>		
<b>Video Conferencing</b>	H.323, H.239, H.460	
<b>Environmental</b>		
Power	100 ~ 240V AC, 50 ~ 60Hz	
<b>Support Required</b>		
Recording	Image Composition Auto Directing	
<b>Media Streaming Server Appliance</b>	<b>Capacity</b>	
	Incoming Bandwidth	600Mbps or more
	Output Bandwidth	600Mbps or more
	Stack	1 master, 100+ slaves
	<b>Streaming Type</b>	
	RTSP	160 channels or more
	RTMP	160 channels or more
	<b>RTSP Streaming</b>	
	Streaming Transform	Transform video and audio streaming protocol into RTSP

	<b>RTSP Video</b>	
	Compression Format	H.264 / H.265
	Image Resolution	2592 x 1520, 2560 x 1440, 1080P, SXGA, 720P, XGA, SVGA, D1, 960P (1280×960), XGA (1024×768), SVGA (800×600), UXGA (1600×1200), QXGA (2048×1536)
	Frame Rate	1 ~ 60fps
	Bitrate	64kbps ~ 16Mbps
	<b>RTSP Audio</b>	
	Compression Format	G.711a / G.711u / ADPCM / G.722 / AAC-LC / G.722.1c / G.726
	Bitrate	32kbps ~ 64kbps
	<b>RTMP Streaming</b>	
	Streaming Transform	Transform video and audio streaming protocol into RTMP
	<b>RTMP Video</b>	
	Compression Format	H.264 / H.265
	Image Resolution	2592 x 1520, 2560 x 1440, 1080P, SXGA, 720P, XGA, SVGA, D1, 960P (1280×960), XGA (1024×768), SVGA (800×600), UXGA (1600×1200), QXGA (2048×1536)
	Frame Rate	1 ~ 60fps
	Bitrate	64kbps ~ 16Mbps
	<b>RTMP Audio</b>	
	Input	G.711a / G.711u / ADPCM / G.722 / AAC-LC / G.722.1c / G.726
	Output	AAC-LC
	Bitrate	32kbps ~ 64kbps
	<b>System</b>	
	Operation System	Embedded (Linux or Windows)
	<b>Network</b>	
	Network Protocol	TCP/IP, UDP, HTTP, RTP/RTCP, RTSP, RTMP, VSIP
	Management Software	Client management software
	<b>Interfaces</b>	
	Ethernet	3 x Gigabit network port, RJ45 interface or more
	<b>Electrical</b>	
	Power	100 ~ 240V AC, 50 ~ 60Hz
<b>Terminals Management Server</b>	<b>Capacity</b>	
	Access	1000 Channel
	Stack	32 devices per level, 3000 Channel or more
	Cascade	8-level, 20000 Channel or more
	Incoming Bandwidth	600 Mbps or more
	Output Bandwidth	600 Mbps or more
	<b>Live Viewing</b>	
	Multi Screen Display	64 multi-window or more
	E-Map	Live Viewing in E-Map
	Function	E-PTZ / Scheme / Polling / TV-Wall
	<b>Recording</b>	
	Mode	Manual / Continuous / Schedule / Event (Pre / Post)

Event Trigger	Alarm input / Video lost / Motion Detection
Search & Playback	
Search Mode	Date and time (Calendar) / Event
Playback Mode	Single Playback / Multi Playback / Synchronize Playback
Function	Slow forward / Fast forward / Loop / Single Frame / E-PTZ
Storage	
External	IP SAN (iSCSI), 30 x IP SAN or more
Video	
Compression	H.265 / H.264 / MPEG4
Image Resolution	QXGA, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF
Frame Rate	1 ~ 30fps
Bitrate	64kbps ~ 8Mbps
Audio	
Compression	G.711a / G.711u / ADPCM / G.722 / G.722.1c / AAC-LC
Bitrate	32kbps ~ 64kbps
Alarm	
Alarm Triggers	Alarm input / Video lost / Motion Detection / Disk alarm
Alarm Events	Snapshot / Recording / PTZ preset / Alarm out / Buzzer / Link to Client / Alarm caption
System	
Operating System	Embedded (Linux or Windows)
User Management	Super admin / Admin / User
Log Management	User login / User operation / Device / Alarm / Backup
Network	
Network Protocols	SIP, TCP/IP, UDP, HTTP, DHCP, DNS/DDNS, RTP/RTCP, RTSP, FTP, SNTP, VSIP
Viewer Software	CU Client
User Access	300 Users or more
Protocols	ONVIF, GB/T 28181-2011
Application Programming	CU SDK
Function	NAT / Socks5 / Multiple network access / Packet loss recovery
Hot Backup	N+1
Interfaces	
Ethernet	2 x Gigabit network port, RJ45 interface
USB	4 x USB2.0
Control	1 x RS485
Video Out	1 x VGA
Electrical	
Power	100 ~ 240V AC, 50 ~ 60Hz

<b>Storage Array</b>	<b>General</b>	
	Disk Interface	Support SATA: 1TB, 2TB, 3TB, 4TB, 6TB
	RAID	RAID 0,1,5,6,10, RAID X
	Internal HDDs	Capacity: 16 x 3.5" HDD or more
		Loaded: 12TB (i.e. 2 x 6TB)
	<b>Storage Management</b>	
	Recording rate	500Mbps or more
	Disk management	S.M.A.R.T. (Self-Monitoring, Analysis and Reporting)
	<b>Device Management</b>	
	Management	Web-based GUI, Multiple units management
	Alarm	Sound, LED, Email, GUI Warning
	<b>Network</b>	
	Network Protocols	TCP/IP, UDP, HTTP, FTP, IPv4, iSCSI, NAS, NRU
	<b>Interfaces</b>	
	Ethernet	3 x Gigabit network port, RJ45 interface
	Output	VGA output for debugging
	USB	2 x USB3.0, for keyboard or user data backup
	<b>Electrical</b>	
	Power	100 ~ 240V AC, 50 ~ 60Hz (Redundant Power Supply)
	<b>MCU (Multi-point Conferencing Unit)</b>	System standard
Video Standard		H.265, H.264HP, H.264BP
Audio Standard		G.711, G.719, G.722, G.722.1 Annex C/Polycom® Siren14TM, G.728, G.729, Opus, MPEG-4 AAC (LC/LD stereo), MPEG-4 AAC (LC/LD)
Network Protocol		TCP/ IP, TELNET, SSH, FTP/ FTPS, HTTP, RTP/ RTCP/ RTS
Conference Bitrate		64Kbps-8Mbps
Call Capacity		Network Throughput: 128 Mbps Call Capacity: 64 HD Terminals (64 x 2M or 32 x 4M) Proxy Capacity: 64 HD Terminals (64 x 2M or 32 x 4M)
Conference Group		Continuous Presence Conference: 2 Speech Mode:12 Audio Mixing: 2 Dual Call Rate: 1 Resolution Adaptive: 1 Pre-adaptor before CP: access up to 9 sites third party terminal @ 720p30
Network Interface		3 x 10/100/1000Mbps interfaces
Video Resolution		Video: 1080i/p (1920 x 1080); 720p (1280 x 720); 4CIF (704 x 576); CIF (352 x 288) Content: UXGA (1600×1200), SXGA (1280×1024), WSXGA (1280×854), WXGA (1280×800), XGA (1024×768), SVGA (800×600), and VGA (640×480)
Continuous Presence		4/9/16/25/N+1 etc. Two modes for video source: dynamic following and manual specifying The speaker and chairman be distinguishable by window frame colors.
Audio		Customized or intelligent audio mixing mute and dumb Voice Active Detection
Dual Stream		H.239 supported Configurable video format and resolution Controllable dual streams



	Embedded GateKeeper	Endpoint registration Address resolution Call control Bandwidth control Regional management
	Conference Initiating	Logging in to the web page, start a conference or schedule a conference Call using remote control or Web mode at the MT side
	Conference Functions	Virtual conference room, independent conference call, conference appointment, email notification, SMS notification, conference schedule push, cloud address book, content integration, venue pre-supervision, conference recording and broadcasting control, conference subtitles, VIP continuous presence, voice control switching, conference roll call, conference polling, virtual tv-wall, instant messaging, permanent meeting
	Recording and Playback	Conference recordings and recording playbacks can be controlled.
	Network	Embedded proxy to realize NAT/ firewall transversal IPLR (Intelligent Packet Loss Recovery) Dynamic bitrate adjustment QoS (DiffServ, IP Precedence) MT stream uploading and smooth sending control Automatic recall due to disconnection Multi-network-segment access
	Security Features	Embedded OS H.235 conference encryption AES encryption Conference password authentication, uninterrupted meeting, hidden meeting, User authentication and authorization Built-in firewall Settings
	Reliability	Dual Network Port Backup Dual Power Backup 1+1, N+1 Backup
	Management	Unified portal access, unified user management, unified conference management, unified equipment management, unified resource management, unified report management
	Electricity	Power supply: Dual Power Supply, AC (100V-240V/ 50~60Hz)
	<b>Support Required</b>	
	Video Wall	External Video Wall Server
	Cascade Conference	Simply cascaded and combined cascaded conferences Main and secondary MCUs are interconnected and can control each other. Cascading management
<b>EPTZ Camera</b>	<b>Camera</b>	
	Image Sensor	1/1.8" progressive scan CMOS
	Pixels	6.0 Megapixel or higher
	Focal Length	6 ~ 138mm, 23x optical or higher
	Aperture Ratio	F1.5 (W) ~ F3.4 (T), DC drive
	Pan / Tilt Range	Pan: ±5° , Tilt: ±15° , manual
	Illumination	Color: 0.002lux @ (F1.5, AGC ON) B/W: 0.0002lux @ (F1.5, AGC ON)
	Shutter Speed	1 ~ 1/30,000s or better
	S/N Ratio	≥ 52dB or better
	Digital Noise Reduction	2D, 3D noise reduction
	<b>Video</b>	

	Compression	H.265/ H.264
	Image Resolution	1080p or higher
	Frame Rate	1 ~ 30fps or better
	Bitrate	32kbps ~ 16mbps
	Multi-stream	Main stream 1: 1080p Main stream 2: 1080p Secondary stream: D1
	Image Adjustment	Brightness, Contrast, Saturation, Sharpness
	Image Flip	Flip / Mirror / Rotation at 90°, 180°, 270°
	PTZ	ePTZ, Auto tracking
	<b>Audio</b>	
	Compression	G.711a / G.711u / ADPCM / G.722 / G.722.1c/ G.726/ AAC-LC
	Bitrate	32 ~ 64kbps
	Audio Function	Bi-directional audio/ AEC/ Mixed audio recording/ Dumb/ Mute
	<b>Network</b>	
	Network Protocols	TCP/ IP, UDP, HTTP, DHCP, DNS/DDNS, RTSP, PPPoE, NAT, QoS, UPnP, SMTP
	<b>System</b>	
	User Authentication	Multilevel, Password
	<b>Interfaces</b>	
	Ethernet	1 x Gigabit network port, RJ45 interface
	Audio In / Out	1 x Line in / 1 x Line out
	Control	1 x RS485
	Memory Slot	Micro SD card slot, supports 256GB or more
	<b>Environmental</b>	
	Power	12V DC ± 10% / PoE (IEEE802.3at)
	<b>Support Required</b>	
	Camera	White Balance Gain Control Electronic Defog Backlight Compensation
	Video	Privacy Masking Auto Directing HLC Motion Detection
	System	Recovery Heartbeat Detection Automatic Network Replenishment (AN)
<b>Control Pad (For Speaker)</b>	<b>Interface</b>	
	Port	RS232/ RS485
	Baud Rate	9600bps
	Display	OLED
	Control Pad	Button or Touch
	Power Supply	DC12V (±25%)

<b>Audience Camera</b>	
<b>Camera</b>	
Image Sensor	1/3" progressive scan CMOS
Pixels	4.0 Megapixel or higher
Illumination	Color: 0.05 lux @ (F1.4, AGC ON) B/W: 0 lux with IR
Shutter Speed	1 ~ 1/ 30,000s or better
S/N Ratio	>50dB or better
<b>Lens</b>	
Mount Type	Φ14
Auto Iris	DC drive
Focal Length	-Z2812: 2.8~12mm @ F1.4 motorized varifocal lens
Focus Control	Manual / Semi-Automatic / Auto
Angle of View	-Z2812: 106° ~ 33°
Adjustment Range	Pan: 0° ~ 355° Tilt: 0° ~ 75° / Rotation: 0° ~ 355°
<b>Infrared</b>	
IR Distance	20 ~ 40m or more
IR Intensity	Smart IR
<b>Video</b>	
Compression	H.265 / H.264 / MJPEG
Image Resolution	Main stream: 2592×1520
	Secondary stream: D1
Frame Rate	Main stream: 2592×1520@30fps
	Secondary stream: D1@30fps
Bitrate	32kbps ~ 16Mbps
Privacy Masking	At least 4 zones
Motion Detection	At least 4 zones
Digital Noise Reduction	3D noise reduction
Image Flip	Flip/ Mirror/ Rotation at 90°, 180°, 270°
<b>Audio</b>	
Compression	G.711a / G.711u / ADPCM / G.722 / AAC-LC / G.722.1c / G.726
Bitrate	32kbps ~ 64kbps
Audio Function	Bi-directional audio/ AEC/ Mixed audio recording/ Dumb/ Mute
<b>Network</b>	
Network Protocols	TCP/IP, UDP, HTTP, DHCP, DNS/DDNS, RTP/RTCP, RTSP, PPPoE, FTP, VSIP, UPnP, 802.1x, NAT, QoS, SMTP, IPv4, IPv6 (optional)
User Interface	IPC Control (IE, Firefox, Chrome)
User Access	10 Users or more
Application Programming	ONVIF (Profile S, Profile G), GB/T 28181-2011, API,CGI
<b>Alarm</b>	
Alarm Triggers	Alarm input/ Network disconnect/ Disk full/ Disk error
Intelligent	Motion detection/ Tampering/ Guard line/ Defocus/ Scene change/ Enter guard area/ Exit guard area/ Object left/ Object removal/ Gathering/ Audio surge
Alarm Events	Alarm report/ Recording/ Text overlay/ Snapshot/ External output/ Email notice/ Acoustic alarm
<b>Interfaces</b>	
Ethernet	10/ 100M, RJ45 interface
Audio In / Out	2 x Line in / 1 x Line out

	Control	1 x RS485
	Alarm In / Out	1 x Input / 1 x Output
	Video Out	1 x BNC, 1.0V [p-p] / 75Ω
	Memory Slot	Micro SD card slot, supports up to 128GB
	Power Output	1 x DC12V / 0.1A Output
	<b>Electrical</b>	
	Power	AC24V±10% / DC12V ± 10% / PoE (IEEE802.3af)
	<b>Support Required</b>	
	Camera	White Balance Gain Control Backlight Compensation (Off / BLC / WDR / HLC)
	Video	Multi-stream Video Freeze ROI Digital Defog
	System	Automatic Network Replenishment (AN)
<b>Interactive Digital Board 86" ±6" (with extra writing boards 40" diagonal on each side)</b>	<b>Appearance</b>	
	Frame	Aluminum-magnesium alloy
	Surface	photoelectric glass
	<b>LCD</b>	
	Display Screen Size	1898~x1069~
	Luminance	480cd/m <sup>2</sup> or better
	Visible angle	178°/178° or more
	Contrast	4000:1 or higher
	Resolution	3840*2160 or higher
	Lifetime	50,000h or more
	<b>Touch Sensitivity</b>	
	Technology	Capacitive Touch
	Touch Points	10 or more
	<b>Built-in-Computer (OPS)</b>	
	CPU	Intel Core i5 or higher
	Memory	8G DDR4 or higher
	Hard Disk	256G SSD or higher
	Audio	2*15W or better
	Wireless	Build-in Wi-Fi, IEEE 802.11b/g/n, ac
	LAN	Build-in network card, 10M/ 100M/ 1000M
	<b>Interfaces</b>	
	Input Interface	1*HDMI, 1*TOUCH USB, 1*VGA, 3*USB2.0, 1*USB3.0,1*RS232,1*Audio in
	LAN Port	1*RJ45
	<b>Power</b>	
	Voltage	AC100V~240V 50/ 60Hz
	<b>Support Required</b>	
	Writing Tools	Regular Chalk, Dust-free Chalk, Liquid Chalk
Display ON/ OFF Switch	One-button switch, Gesture Recognition support for screen lock	
Screen Mode Switch	Switchable between full and half screen	
Surface Glass	Explosion-proof, Water-resistant, Dust-proof	
Installation Mode	Both Stand & Wall Mounting Kits	

	Teaching Application	<p>English Language, featuring:</p> <ul style="list-style-type: none"> <li>- Interactive whiteboard functions, e.g., writing, painting, remark, save, highlight, zoom, etc.</li> <li>- Intelligently identify &amp; convert hand-writing characters/ formula/ shape into printing format</li> <li>- Screen recording and save into '.avi' file</li> <li>- Downloading courseware via QR code scanning</li> <li>- Screen pages adding and previewing.</li> <li>- Previewed pages illustrated on the two-split screen, four-split screen, horizontal and vertical screen for comparison teaching</li> <li>- Upload documents (picture, PowerPoint, etc.)</li> <li>- Annotating while playing video</li> </ul>																																								
<b>LED TV</b>	<table border="1"> <tr><td>SmartTV</td><td>55 inch Smart LED TV</td></tr> <tr><td>TV Type</td><td>LED</td></tr> <tr><td>Aspect Ratio</td><td>16:9</td></tr> <tr><td>Resolution/ Contrast</td><td>1920*1080/ 4000:01</td></tr> <tr><td>Processor</td><td>4 Core CPU + 4 Core GPU</td></tr> <tr><td>RAM</td><td>1GB DDR3 or higher</td></tr> <tr><td>Flash Memory</td><td>8GB eMMC or higher</td></tr> <tr><td>Network</td><td>Ethernet, WIFI(802.11 b/g/n), WIFI Hotspot</td></tr> <tr><td>Audio Output Power</td><td>2*8W</td></tr> <tr><td>Connectivity</td><td>3*HDMI, 2*(2.0) USB, 1* headphone, 1* EtherLAN</td></tr> <tr><td>Operate System</td><td>Android 7.0 or higher</td></tr> </table>	SmartTV	55 inch Smart LED TV	TV Type	LED	Aspect Ratio	16:9	Resolution/ Contrast	1920*1080/ 4000:01	Processor	4 Core CPU + 4 Core GPU	RAM	1GB DDR3 or higher	Flash Memory	8GB eMMC or higher	Network	Ethernet, WIFI(802.11 b/g/n), WIFI Hotspot	Audio Output Power	2*8W	Connectivity	3*HDMI, 2*(2.0) USB, 1* headphone, 1* EtherLAN	Operate System	Android 7.0 or higher																			
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<b>Teacher/ Speaker Wireless Mic along with Ceiling Bracket/ J-Rod (8 ft or more adjustable)</b>	<table border="1"> <tr><td colspan="2"><b>Receiver</b></td></tr> <tr><td>Frequency range</td><td>740-820MHz</td></tr> <tr><td>Oscillation modes</td><td>PLL</td></tr> <tr><td>Adjustment method</td><td>FM</td></tr> <tr><td>Maximum Deviation</td><td>±50KHz</td></tr> <tr><td>Sensitivity</td><td>18dBuV</td></tr> <tr><td>SNR</td><td>≥89dB or better</td></tr> <tr><td>Frequency response</td><td>60Hz-15KHz (+/- 3dB)</td></tr> <tr><td>Operating voltage</td><td>DC 12V</td></tr> <tr><td>Balanced output</td><td>0-300mV/600Ω</td></tr> <tr><td>Dynamic range</td><td>≥105dB</td></tr> <tr><td colspan="2"><b>Transmitter</b></td></tr> <tr><td>Frequency range</td><td>740-820MHz</td></tr> <tr><td>Oscillation modes</td><td>PLL</td></tr> <tr><td>Adjustment method</td><td>FM</td></tr> <tr><td>Maximum Deviation</td><td>±50KHz</td></tr> <tr><td>Transmit Power</td><td>10mW or better</td></tr> <tr><td>Frequency stability</td><td>≤±0.005%</td></tr> <tr><td>Power supply</td><td>AA battery *2</td></tr> <tr><td>Frequency selection</td><td>Infrared</td></tr> </table>	<b>Receiver</b>		Frequency range	740-820MHz	Oscillation modes	PLL	Adjustment method	FM	Maximum Deviation	±50KHz	Sensitivity	18dBuV	SNR	≥89dB or better	Frequency response	60Hz-15KHz (+/- 3dB)	Operating voltage	DC 12V	Balanced output	0-300mV/600Ω	Dynamic range	≥105dB	<b>Transmitter</b>		Frequency range	740-820MHz	Oscillation modes	PLL	Adjustment method	FM	Maximum Deviation	±50KHz	Transmit Power	10mW or better	Frequency stability	≤±0.005%	Power supply	AA battery *2	Frequency selection	Infrared	
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<b>Student/ Audience Wireless Mic along with Ceiling Bracket/ J-Rod (8 ft or more adjustable)</b>	Frequency response	100Hz ~ 18KHz
	Sensitivity	-38dB
	Directional property	hypercardiod $\leq 135^\circ$
	Impedance output	200 $\Omega$ $\pm$ 30%
	Output amplitude	300mV or more
	Max. Sound Pressure	132dB, 1kHz at 1% T.H.D
	Dynamic range	Typical 115dB, 1kHz at max sound pressure
	SNR	$\geq 70$ dB
	Phantom Power	DC 48V
	Output connector	XLR-3-12C
	Others	Ceiling Mount Bracket, Length 1200mm or more
<b>Functional Requirements</b>	<ol style="list-style-type: none"> <li>1. Interactive recording and live transmission of lectures to multiple sites simultaneously.</li> <li>2. Automatic switching between the streams capturing instructor, interactive digital board/ white board, and laptop/ computer screen with adjustable layouts to be displayed locally as well as at the remote sites.</li> <li>3. Automatic tracking of the instructor to record the body language and writing on the interactive digital board or a white board.</li> <li>4. The writing on the board should be clearly read by the camera by auto-zooming and focusing functionality, and switched automatically in main screen while instructor is writing on board.</li> <li>5. Audio recording using wireless microphone integrated with the audio mixer. The microphone audio is recorded and streamed in synchronization with the video stream for the delivery of lectures locally as well as at the remote sites.</li> <li>6. Lecture capturing comprising of multiple voice/ video streams into a single stream for transmission over the network.</li> <li>7. Recording of the Lecture stream on a server at the local site as well as on the storage as Live Archiving for later use.</li> <li>8. Live streaming of Lecture stream over the network and internet using the commonly available streaming client applications for various platforms.</li> <li>9. Interoperability of proposed solution with other commonly available client software, in cases where hardware or appliance-based video conferencing system is not available, and the lecture is to be delivered from a site having only laptop/ computer with external/ built-in camera and microphone.</li> <li>10. Downloading, editing and publishing of Lecture streams to a LMS (Learning Management System), whereas on LMS a link for the published lecture is to be integrated in LMS corresponding course.</li> <li>11. Social media integration (PAF-IAST activities promotion through social media network such as Facebook, twitter, YouTube, etc.)</li> <li>12. Automatic development of MOOCs (Massive Online Open Courseware) to appear as PAF-IAST MOOCs Website</li> <li>13. Intelligent scheduling of lectures recording and visibility of the Calendar of scheduled lectures to public and/ or registered users.</li> <li>14. Online registration for the interested participants at the Learning Management System (LMS).</li> <li>15. Online accreditation (online examination, assessment, monitoring and evaluation).</li> </ol>	
<b>Installation, Configuration &amp; Commissioning</b>	Complete installation of all equipment/ components pertaining to Smart Auditorium setup as per manufacturer's guidelines, and reinstate the site/ auditorium in all civil aspects. Configuration of all equipment/ components for an optimum and efficient output of the facility meeting the objectives and requirements. Testing and commissioning of the complete setup as per the requirements and satisfaction of PAF-IAST.	

Interactive Smart Classroom	Specifications Qty: 12	
Interactive Digital Board 75" ± 5" (with extra writing boards 40" diagonal on each side)	<b>Appearance</b>	
	Frame	Aluminum-magnesium alloy
	Surface	photoelectric glass
	<b>LCD</b>	
	Display Screen Size	1898~x1069~
	Luminance	480cd/m <sup>2</sup> or better
	Visible angle	178°/178° or more
	Contrast	4000:1 or higher
	Resolution	3840*2160 or higher
	Lifetime	50,000h or more
	<b>Touch Sensitivity</b>	
	Technology	Capacitive Touch
	Touch Points	10 or more
	<b>Built-in-Computer (OPS)</b>	
	CPU	Intel Core i5 or higher
	Memory	8G DDR4 or higher
	Hard Disk	256G SSD or higher
	Audio	2*15W or better
	Wireless	Build-in Wi-Fi, IEEE 802.11b/g/n, ac
	LAN	Build-in network card, 10M/ 100M/ 1000M
	<b>Interfaces</b>	
	Input Interface	1*HDMI, 1*TOUCH USB, 1*VGA, 3*USB2.0, 1*USB3.0,1*RS232,1*Audio in
	LAN Port	1*RJ45
	<b>Power</b>	
	Voltage	AC100V~240V 50/ 60Hz
	<b>Support Required</b>	
	Writing Tools	Regular Chalk, Dust-free Chalk, Liquid Chalk
	Display ON/ OFF Switch	One-button switch, Gesture Recognition support for screen lock
Screen Mode Switch	Switchable between full and half screen	
Surface Glass	Explosion-proof, Water-resistant, Dust-proof	
Installation Mode	Both Stand & Wall Mounting Kits	
Teaching Application	English Language, featuring: <ul style="list-style-type: none"> <li>- Interactive whiteboard functions, e.g., writing, painting, remark, save, highlight, zoom, etc.</li> <li>- Intelligently identify &amp; convert hand-writing characters/ formula/ shape into printing format automatically</li> <li>- Screen recording and save into '.avi' file</li> <li>- Downloading courseware via QR code scanning</li> <li>- Screen pages adding and previewing.</li> <li>- Previewed pages illustrated on the two-split screen, four-split screen, horizontal and vertical screen for comparison teaching</li> <li>- Upload documents (picture, PowerPoint, etc.) and annotate</li> <li>- Annotating while playing video</li> </ul>	

<b>Smart Classroom Software (Server + Client End 40 Licenses with Response Clicker/ App)</b>	Interactive Teaching	Screen Broadcast Student Demonstration Net Movie Camera Broadcast Interactive Whiteboard Student Sign-in
	Group Teaching	Group Management Group/ Topic Chat
	Assessment	Response & Competition Survey & Quiz by Answer Sheet
	File Sharing	File Distribution File Collection
	Management	Monitor & Control Remote Command & Setting Message/ Event Silent On/Off Thumbnail View Automatic Connection Web/ Application Policy USB/ CD/ Printer Control
	Response Clicker/ App	Button/ Touch Clicker or Mobile App
<b>Wireless Cloud Access Point</b>	Antenna Type	3X3 MIMO, Built-in high gain antenna
	Network Standards	IEEE 802.11 a/b/g/n/ac
	Band Frequency	Dual Band (2.4 GHz & 5 GHz)
	Working Channel	2.4 GHz (1 ~ 13)
	Data Transfer Rate	11g 54Mbps; 11n 450Mbps; 11ac 1.3Gbps
	Ports/ Interfaces	10/100/1000Mbps Ethernet RJ45 data interfaces
	Power Supply	Local Power Supply: 12V/3A DC
		POE Port Power Supply (802.3at Standard)
	Installation method	Desktop Placement, Wall-mounted, Ceiling Mounted
	Protection Grade	IP41
	Storage	1TB HDD, SATA 3.0 (Support for 8TB Expansion)
	Reality Test	60+ clients simultaneous Access to a Single Cloud Box
	Data Encryption	Support Open System, WPA/WAP2, TKIP, AES
Network Management	WEB Management	
<b>Installation, Configuration &amp; Commissioning</b>	Complete installation of all equipment/ components pertaining to Smart Classroom setup as per manufacturer's guidelines, and reinstate the site/ classroom in all civil aspects. Configuration of all equipment/ components for an optimum and efficient output of the facility meeting the objectives and requirements. Testing and commissioning of the complete setup as per the requirements and satisfaction of PAF-IAST.	

**Note:**

1. PAF-IAST may re-adjust the quantities within the total quantities specified against the specifications of same genre in any of the Lots.
2. The Bidder shall indicate in their offer,
  - a. detailed specifications of their offered product(s),
  - b. standard accessories,
  - c. make and origin, as part of confirming Compliance as per the format given in Form – D.
3. The Unit Price, Total Bid Price, and Additional Warranty Price of the quoted items shall be indicated as per the given format in Form – G.



## Section 5b: Special Terms and Conditions

### Standard

- The goods supplied must be capable of functioning properly under the climatic conditions of Haripur.
- There shall be no deviation from specification and country of make as provided with each item. In case of any ambiguity in specification/ accessories needed for the full functioning of the equipment, the firm must clear it with the Procurement Committee. However, the decision of the Procurement Committee will be final.
- The goods with standard accessories supplied under this tender shall confirm to the standard maintenance in the technical specification.

### Training

- The firm supplying the item/ equipment(s) will demonstrate the operation/ working of the supplied goods to the satisfaction of PAF- IAST and provide training. Suppliers are advised to provide details on formal training for the LOT(s) covering aspects as mentioned below, but not limited to, as required in Form – E (Section 3).

LOT(s)				
Level	1 & 3	2 & 4	5 & 6	7
Basic	Demonstrate the operations/ working to end users; Identify the do's and don'ts; and aspects deem necessary for long-life functioning of supplied goods.			
Hands-on		Demonstrate technical features; Elaborate technical configuration(s) performed for integration with the overall setup; Documented guidelines for generating reports using software and/ or systems' interface		
Advanced			Provide trainings to Operators for troubleshooting and smooth operations using system manuals	
Formal				Classroom based training with pre-defined modules and curriculum of 1 week/ 40 hours at least for Certification as per Principal's guidelines

### Calibration of item/equipment

- The supplier will install the good(s) in the presence and satisfaction of the Procurement Committee, if need be. In case of any defect in the supplied good(s) or if it is not in accordance with the desired specification(s), the goods will be changed at the cost of the supplier.

### Warranty/ Guarantee

- The Supplier will give comprehensive onsite warranty/ guarantee that the goods/ stores/ articles would continue to conform to the description and quality as specified for a period of at least One (01) year from the date of delivery, installation and commissioning of the said goods/ stores/ articles to be purchased and that notwithstanding the fact that the purchaser may have inspected and/ or approved the said goods/ stores/ article, if during the aforesaid period, the said goods/ stores/ articles, be discovered not to conform to the description and quality aforesaid or have determined (and the decision of the Procurement Committee in that context will be final and conclusive), the PAF: IAST will be entitled to reject the said goods/ stores/ articles or such portion thereof as may be discovered not to conform to the said description and quality, on such rejection the goods/ articles/ stores will be at the supplier's risk and all the provisions relating to rejection of

goods etc. shall apply.

- The Supplier shall, if so called upon to do, replace the goods etc., or such portion thereof as is rejected by Procurement Committee, otherwise the supplier shall pay such damage as may arise by the reason of the breach of the condition herein contained. Nothing herein contained shall prejudice any other right of the Procurement Committee in that behalf under this contract or otherwise.
- The Supplier shall also replace equipment, in case it is found defective which cannot be put to operation due to manufacturing defect, etc. In case of equipment specified by the Procurement Committee, the supplier shall be responsible from carrying out annual maintenance and repairs on the terms and conditions as may be agreed. The supplier shall also be responsible to ensure adequate regular supply of spare parts needed for a specific type of equipment whether under their annual maintenance and repairs contract or otherwise. In case of change of model, supplier will give sufficient notice to the Procurement Committee who may like to purchase spare parts from them to maintain the equipment in perfect condition.

## Section 6: Returnable Bidding Forms / Checklist

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This section serves as a checklist for preparation of your Bid. Please complete the Returnable Bidding Forms in accordance with the instructions in the forms and return them as part of your Bid submission. No alteration to format of forms shall be permitted and no substitution shall be accepted.

Before submitting your Bid, please ensure compliance with the Bid Submission instructions of the BDS 22.

### Technical Bid:

<b>Have you duly completed all the Returnable Bidding Forms?</b>	
✦ Form A: Bid Submission Form	<input type="checkbox"/>
✦ Form B: Joint Venture/Consortium/ Association Information Form	<input type="checkbox"/>
✦ Form C: Bidder Information Form	<input type="checkbox"/>
✦ Form D: Qualification Form	<input type="checkbox"/>
✦ Form E: Technical Bid Proposal Form	<input type="checkbox"/>
✦ Form F: Specifications Compliance Form	
<b>Have you provided the required documents to establish compliance with the evaluation criteria in Section 4?</b>	<input type="checkbox"/>

### Financial Bid:

✦ Form G: Price Schedule Form	
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## Form A: Bid Submission Form

(To be Submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF: IAST-ITEA&S-ITB-101-19		

We, the undersigned, submit our Bid for the award of contract to supply the goods and related services required for [Insert Title of goods and services] in accordance with your Invitation to Bid No. [Insert ITB Reference Number]. We hereby submit our Bid, which includes this Bid proposal.

We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/ Consortium/ Association members or subcontractors or suppliers for any part of the contract:

- a) is not under procurement prohibition by any of the Government/ Semi-government/ Autonomous organization;
- b) have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any Organization in Pakistan;
- c) have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against us that could impair our operations in the foreseeable future;
- d) undertake not to engage in proscribed practices, including but not limited to corruption, fraud, coercion, collusion, obstruction, or any other unethical practice, with the PAF: IAST, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the PAF: IAST.

We declare that all the information and statements made in this Bid are true and we accept that any misinterpretation or misrepresentation contained in this Bid may lead to our disqualification and/ or sanctioning by the PAF-IAST.

We offer to supply the goods and related services in conformity with the Bidding documents, including the PAF-IAST General Conditions of Contract and in accordance with the Schedule of Requirements and Specifications.

Our Bid shall be valid and remain binding upon us for the period specified in the Bid Data Sheet.

We understand and recognize that you are not bound to accept any Bid you receive.

I, the undersigned, certify that I am duly authorized by [Insert Name of Bidder] to sign this Bid and bind it should PAF- IAST accept this Bid.

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

*[Stamp with official stamp of the Bidder]*

## Form B: Joint Venture/ Consortium/ Association Information Form

(To be Submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF-IAS-ITEA&S-ITB-101-19		

To be completed and returned with your Bid if the Bid is submitted as a Joint Venture/Consortium/Association.

No	Name of Partner and contact information <i>(address, telephone numbers, fax numbers, e-mail address)</i>	Proposed proportion of responsibilities (in %) and type of goods and/or services to be performed
1	[Complete]	[Complete]
2	[Complete]	[Complete]
3	[Complete]	[Complete]

<b>Name of leading partner</b> (with authority to bind the JV, Consortium, Association during the ITB process and, in the event a Contract is awarded, during contract execution)	[Complete]
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We have attached a copy of the below referenced document signed by every partner, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture:

Letter of intent to form a joint venture      **OR**     JV/Consortium/Association agreement

We hereby confirm that if the contract is awarded, all parties of the Joint Venture/Consortium/Association shall be jointly and severally liable to PAF: IAST for the fulfillment of the provisions of the Contract.

Name of partner: \_\_\_\_\_

Name of partner: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Name of partner: \_\_\_\_\_

Name of partner: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## Form C: Bidder Information Form

(To be Submitted in an envelope duly sealed and marked as Technical Proposal)

<b>Legal name of Bidder</b>	[Complete]
<b>Legal address &amp; Branch Offices</b>	[Complete]
<b>Year of registration</b>	[Complete]
<b>Bidder's Authorized Representative Information</b>	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]
<b>Are you a PAF: IAST registered vendor?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No    If yes, [insert PAF- IAST vendor number]
<b>Countries of operation</b>	[Complete]
<b>No. of full-time employees</b>	[Complete]
<b>No. of Technical Staff</b>	[Complete]
<b>Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate):</b>	[Complete]
<b>Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? (If yes, provide a Copy of the valid Certificate):</b>	[Complete]
<b>Does your Company have a written Statement of its Environmental Policy? (If yes, provide a Copy)</b>	[Complete]
<b>Does your organization demonstrates significant commitment to sustainability through some other means, for example internal company policy documents on women empowerment, renewable energies, education, vocational trainings, social responsibility towards people with Special needs, or membership of trade institutions promoting such issues</b>	[Complete]
<b>Contact person that PAF: IAST may contact for requests for clarifications during Bid evaluation (Only Lead Bidder)</b>	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]

**Please attach the following documents:**

1. Company Profile, which should not exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods and/ or services being procured.
2. Proposed timetable for delivery, installation and commissioning plan for the required and quoted items to PAF: IAST after the award of Contract.
3. Certificate of Registration of the business.
4. Principal's Authorization Letter in favor of Bidder to participate in this Tender.
5. A proofing document confirms the offered warranty for at least One (01) year, supported by the manufacturer's certificates, if applicable.
6. A proofing document confirming supply of same or similar items of this magnitude to various clients/ customers in Pakistan.
7. Proven records of no less than the required Projects of similar nature/ value/ complexity in which delivery and services were extended to education institute(s).
8. Full detailed description of the specifications of the proposed items in addition to catalogues clearly showing the proposed specifications responding to the requirements.
9. Supporting photos of the proposed items.
10. Quality certifications: ISO 9001:2015 (if applicable)
11. Latest Audited Financial Statements (Income Statement and Balance Sheet) including Auditor's Report for the past (3 years).

**Note: To be filled in by each partner in case Bid is submitted as a JV/ Consortium/ Association**

## Form D: Qualification Form

(To be submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF-IAST-ITEA&S-ITB-101-19		

If JV/ Consortium/ Association, to be completed by each partner.

### Previous Relevant Experience

Please list all Projects successfully completed in the last 3 years, covering following aspects;

- Scope of the projects/ assignments.
- Activities performed for the successful completion of the project.
- Support Services Contracts in hand with SLA for the supplied goods.

List only those assignments for which the Bidder was legally contracted or sub-contracted by the Client as a company or was one of the Consortium/ JV partners. Assignments completed by the Bidder's individual experts working privately or through other firms cannot be claimed as the relevant experience of the Bidder, or that of the Bidder's partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The Bidder should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by PAF- IAST.

Project name & Country of Assignment	Client & Reference Contact Details	Contract Value	Period of activity and status	Types of activities undertaken

Bidders may also attach their own Project Data Sheets with more details for assignments above.

### History of Non-Performing Contracts

<input type="checkbox"/> Non-performing contracts did not occur during the last 3 years			
<input type="checkbox"/> Contract(s) not performed in the last 3 years			
Year	Non- performed portion of contract	Contract Identification	Total Contract Amount (current value in US\$)
		Name of Client: Address of Client: Reason(s) for non-performance:	

### Financial Standing

Annual Turnover for the last 3 years	Year	PKR
	Year	PKR
	Year	PKR



**Latest Credit Rating (if any), indicate the source**

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Financial information (in PKR equivalent)	Historic information for the last 3 years		
	Year 1	Year 2	Year 3
	<i>Information from Balance Sheet</i>		
Total Assets (TA)			
Total Liabilities (TL)			
Current Assets (CA)			
Current Liabilities (CL)			
	<i>Information from Income Statement</i>		
Total / Gross Revenue (TR)			
Profits Before Taxes (PBT)			
Net Profit			
Current Ratio			

Attached are copies of the audited financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following condition:

- a) Must reflect the financial situation of the Bidder or party to a JV, and not sister or parent companies;
- b) Historic financial statements must be audited by a certified public accountant;
- c) Historic financial statements must correspond to accounting periods already completed and audited. No statements for partial periods shall be accepted.

## Form E: Technical Bid Proposal Form

(To be submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF-IAS-ITEA&S-ITB-101-19		

The Bidder's Bid should be organized to follow this format of the Technical Bid Proposal. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same may be viewed as non-responsive.

### SECTION 1: Qualification, capacity and expertise

- 1.1 Bidder's general organizational capability: management structure, financial stability and project financing capacity, project management controls, extent of work to be subcontracted (if so, provide details).
- 1.2 Bidder's relevance of specialized knowledge and experience on similar engagements done in the region/ country. Bidder should submit a detailed description of the projects executed (quantities, value, beneficiary)
- 1.3 Manufacturer's strengths covering the regional/ global market presence, hi-tech products portfolio, manufacturing capacity, R&D activities resulting in national and international patents, quality control and assurance practices, and international certifications in relevant areas.

### SECTION 2: Management Structure and Key Personnel

- 2.1 Describe the overall management approach toward planning and implementing the project. Include an organization chart for the management of project describing relationship of key positions and designations.
- 2.2 Provide CVs for key personnel that will be provided to support the implementation of this project using the format below. CVs should demonstrate qualifications in areas relevant to scope of goods and/or services.

#### Format for CV of Proposed Key Personnel

<b>Name of Personnel</b>	[Insert]
<b>Position</b>	[Insert]
<b>Nationality</b>	[Insert]
<b>Language proficiency</b>	[Insert]
<b>Education/ Qualifications</b>	<i>[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]</i> [Insert]
<b>Professional certifications</b>	<i>[Provide details of professional certifications relevant to the scope of goods and/or services]</i> ✦ Name of institution: [Insert] ✦ Date of certification: [Insert]
<b>Employment Record/ Experience</b>	<i>[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position and location of employment.]</i> [Insert]

I, the undersigned, certify that to the best of my knowledge and belief, the data provided above correctly describes my qualifications, my experiences, and other relevant information about myself.

**SECTION 3: Scope of Supply, Technical Specifications and Training(s)**

This section should demonstrate the Bidder's responsiveness to the specification by identifying the specific components proposed, addressing the requirements, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; and demonstrating how the proposed bid meets or exceeds the requirements/specifications. All important aspects should be addressed in sufficient detail.

- 3.1 A detailed description of how the Bidder will deliver the required goods and services, keeping in mind the appropriateness to local conditions and project environment. Details how the different service elements shall be organized, controlled and delivered.
- 3.2 Explain whether any work would be subcontracted, to whom, how much percentage of the requirements, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
- 3.3 Implementation plan including a Gantt Chart or Project Schedule indicating the detailed sequence of activities that will be undertaken and their corresponding timing.
- 3.4 Details on post-deployment trainings on-site hands-on training for LOT # 1, 2, 3 & 4; and formal training at manufacturer's certified training center for LOT # 5, 6 & 7.

**SECTION 4: Registration & Certifications**

This section should demonstrate the Bidder's responsiveness towards its registration with the relevant national body and international organizations Certifying the bidder's qualifications with respect to Quality and Project Management.

- 4.1 Provide a copy of valid registration with the Pakistan Engineering Council.
- 4.2 Provide a copy of valid Certificate issued by International Organization for Standardization certifying the bidder's compliance and practices towards quality management principles and standards in their offered products/ solutions and services.
- 4.3 Provide a copy of valid Certificate issued by International Organization for Standardization certifying the bidder's compliance and practices towards information security management principles and standards in their offered products/ solutions and services.

**SECTION 5: Warranty and Support Services**

This section should demonstrate the Bidder's responsiveness to the post-commissioning warranty and support services of the goods supplied, addressing the requirements, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; and demonstrating how the proposed bid meets or exceeds the requirements. All important aspects should be addressed in sufficient detail.

- 5.1 A detailed description of how the Bidder will provide the Warranty claims to the users, keeping in mind the span and complexity of the project in context of local conditions and project environment.
- 5.2 Explain whether any services or work would be subcontracted, to whom, how much percentage of the requirements, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
- 5.3 Details how the post-delivery/ deployment Support Services will be provided to the users keeping in consideration the criticality of IT systems, and dependency of university administration and operations on such systems.

## Form F: Specifications Compliance Form

(To be submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF-IAST-ITEA&S-ITB-101-19		

The Bidder's Bid should be organized to follow this format of the Technical Bid Proposal. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same may be viewed as non-responsive.

Goods and services to be Supplied <i>(based on the <b>Technical Specifications</b> provided in Section 5a &amp; Section 5b)</i>		Your response Compliance with specifications		
		Comply (Yes/ No) <i>(If No, indicate discrepancies)</i>	Quoted Specifications	Type/ Model no. & Country of Origin
Required Items		Offered Items		
<b>LOT #1: COMPUTERS</b>				
1	Desktop Computers		<b>(Bidders are required to attach Compliance Comparison Sheet supported by Product Data Sheet against the Specifications provided in Section – 5)</b>	
	Specification #1			
	Specification #2			
Specification #3				
2	Laptop Computers			
	Specification #1			
	Specification #2			
Specification #3				
<b>LOT #2: PRINTERS</b>				
1	Monochrome Printer		<b>(Bidders are required to attach Compliance Comparison Sheet supported by Product Data Sheet against the Specifications provided in Section – 5)</b>	
	Specification #1			
	Specification #2			
Specification #3				
2	Color Printer			
	Specification #1			
	Specification #2			
<b>LOT #3: DISPLAY DEVICES</b>				
1	Multimedia Projector		<b>(Bidders are required to attach Compliance Comparison Sheet supported by Product Data Sheet against the Specifications provided in Section – 5)</b>	
	Specification #1			
	Specification #2			
Specification #3				
2	Smart Television			
	Specification #1			
	Specification #2			
Specification #3				
<b>LOT #4: PHOTOCOPIER</b>				
1	Multi-Functional Photocopier		<b>(Bidders are required to attach</b>	

			<b>Compliance Comparison Sheet supported by Product Data Sheet against the Specifications provided in Section – 5)</b>		
<b>LOT #5: DIESEL GENERATORS</b>					
<b>1</b>	Generator		<b>(Bidders are required to attach Compliance Comparison Sheet supported by Product Data Sheet against the Specifications provided in Section – 5)</b>		
	Specification #1				
	Specification #2				
<b>LOT #6: APPLIANCES</b>					
<b>1</b>	DC Inverter Air Conditioners		<b>(Bidders are required to attach Compliance Comparison Sheet supported by Product Data Sheet against the Specifications provided in Section – 5)</b>		
	Specification #1				
	Specification #2				
	Specification #3				
<b>2</b>	Refrigerators & Deep Freezers				
	Specification #1				
	Specification #2				
	Specification #3				
<b>3</b>	Cooking Range				
	Specification #1				
<b>4</b>	Water Dispenser				
	Specification #1				
<b>5</b>	Electric Water Cooler with Filter				
	Specification #1				
<b>6</b>	UPS (1.5 KVA)				
	Specification #1				
<b>7</b>	Shredder				
	Specification #1				
	Specification #2				
<b>LOT #7: SMART CLASSROOM SOLUTION</b>					
<b>1</b>	Smart Auditorium		<b>(Bidders are required to attach Compliance Comparison Sheet supported by Product Data Sheet against the Specifications provided in Section – 5)</b>		
a.	Interactive Digital Recording Host with H.323 capability				
b.	Media Streaming Server Appliance				
c.	Terminal Management Server Appliance				
d.	Storage Array				
e.	Cloud Multipoint Conferencing Unit (MCU)				
f.	EPTZ Camera				
g.	Control Pad (For Speaker)				
h.	Audience Camera				
i.	Interactive Digital Board 86" +- 6" (with extra writing boards 40" diagonal on each side)				
j.	LED TV				
k.	Teacher/ Speaker Wireless Mic				
l.	Student/ Audience Wireless Mic				
<b>2</b>	Interactive Smart Classroom				

a.	Interactive Digital Board 75"+- 5" (with extra writing boards 40" diagonal on each side)			
b.	Smart Classroom Software (Server + Client End Licenses with Response Clicker)			
c.	Wireless Cloud Access Point			

## Form G: Price Schedule Form

(To be Submitted in a separate and sealed envelope duly marked as Financial Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF-IAST-ITEA&S-ITB-101-19		

[The Bidder is required to prepare the Price Schedule following the below format. The Price Schedule must include a detailed cost breakdown of all goods and related services to be provided.]

We, the <<Name of Bidder>>, hereby submit our Financial Bid for the Supply of Items as below. We assure you of our full compliance to the required specifications, delivery schedule and other terms without any deviation and/ or reservations. We reiterate our acceptance to the terms and conditions of the RFP. Our Financial proposal as below is submitted for your kind consideration;

Quoted Items in compliance to the Technical Specifications as referred in Section – 5a and Section – 5b		Quantity (a)	Unit Price [in Rs.] (b)	GST [in Rs.] (c)	Total Price [in Rs.] $d=a*[b+c]$
<b>LOT #1: COMPUTERS</b>					
1	Desktop Computers				
	Specification #1	10			
	Specification #2	20			
	Specification #3	20			
2	Laptop Computers				
	Specification #1	10			
	Specification #2	20			
	Specification #3	20			
<b>LOT #2: PRINTERS</b>					
1	Monochrome Printer				
	Specification #1	30			
	Specification #2	5			
	Specification #3	5			
2	Color Printer				
	Specification #1	1			
	Specification #2	1			
<b>LOT #3: DISPLAY DEVICES</b>					
1	Multimedia Projector				
	Specification #1	2			
	Specification #2	2			
	Specification #3	1			
2	Smart Television				
	Specification #1	15			
	Specification #2	15			
	Specification #3	15			
<b>LOT #4: PHOTOCOPIER</b>					
1	Multi-Functional Photocopier	4			
<b>LOT #5: DIESEL GENERATOR</b>					
1	Generator				
	Specification #1	4			
	Specification #2	2			
<b>LOT #6: APPLIANCES</b>					
1	DC Inverter Air Conditioners				
	Specification #1	25			
	Specification #2	3			
	Specification #3	2			

2	Refrigerators & Deep Freezers				
	Specification #1	40			
	Specification #2	2			
	Specification #3	2			
3	Cooking Range				
	Specification #1	2			
4	Water Dispenser				
	Specification #1	10			
5	Electric Water Cooler with Filter				
	Specification #1	5			
6	Shredder				
	Specification #1	1			
	Specification #2	1			
<b>LOT #7: SMART CLASSROOM SOLUTION</b>					
1	Smart Auditorium				
a.	Interactive Digital Recording Host with H.323 capability	8			
b.	Media Streaming Server Appliance	1			
c.	Terminal Management Server Appliance	1			
d.	Storage Array	1			
e.	Cloud Multipoint Conferencing Unit (MCU)	1			
f.	EPTZ Camera	8			
g.	Control Pad (For Speaker)	8			
h.	Audience Camera	8			
i.	Interactive Digital Board 86" +- 6" (with extra writing boards 40" diagonal on each side)	8			
j.	LED TV	8			
k.	Teacher/ Speaker Wireless Mic	8			
l.	Student/ Audience Wireless Mic	8			
2	Interactive Smart Classroom				
a.	Interactive Digital Board 75" +-5" (with extra writing boards 40" diagonal on each side)	12			
b.	Smart Classroom Software (Server + Client End Licenses with Response Clicker)	480			
c.	Wireless Cloud Access Point	12			



### Extended Warranty Price (at discretion of PAF-IAST)

Annual Warranty & Support Services beyond Standard Warranty of the Quoted Items		2 <sup>nd</sup> Year (in PKR)	3 <sup>rd</sup> Year (in PKR)	4 <sup>th</sup> Year (in PKR)
<b>LOT #1: COMPUTERS</b>				
1	Desktop Computers			
	Specification #1			
	Specification #2			
	Specification #3			
2	Laptop Computers			
	Specification #1			
	Specification #2			
	Specification #3			
<b>LOT #2: PRINTERS</b>				
1	Monochrome Printer			
	Specification #1			
	Specification #2			
	Specification #3			
2	Color Printer			
	Specification #1			
	Specification #2			
<b>LOT #3: DISPLAY DEVICES</b>				
1	Multimedia Projector			
	Specification #1			
	Specification #2			
	Specification #3			
2	Smart Television			
	Specification #1			
	Specification #2			
	Specification #3			
<b>LOT #4: PHOTOCOPIER</b>				
1	Multi-Functional Photocopier			
<b>LOT #5: DIESEL GENERATOR</b>				
1	Generator			
	Specification #1			
	Specification #2			
<b>LOT #6: APPLIANCES</b>				
1	DC Inverter Air Conditioners			
	Specification #1			
	Specification #2			
	Specification #3			
2	Refrigerators & Deep Freezers			
	Specification #1			
	Specification #2			
	Specification #3			
3	Cooking Range			
	Specification #1			
4	Water Dispenser			
	Specification #1			
5	Electric Water Cooler with Filter			
	Specification #1			
6	Shredder			
	Specification #1			
	Specification #2			

LOT #7: SMART CLASSROOM SOLUTION				
1	Smart Auditorium			
a.	Interactive Digital Recording Host with H.323 capability			
b.	Media Streaming Server Appliance			
c.	Terminal Management Server Appliance			
d.	Storage Array			
e.	Cloud Multipoint Conferencing Unit (MCU)			
f.	EPTZ Camera			
g.	Control Pad (For Speaker)			
h.	Audience Camera			
i.	Interactive Digital Board 86" +- 6" (with extra writing boards 40" diagonal on each side)			
j.	LED TV			
k.	Teacher/ Speaker Wireless Mic			
l.	Student/ Audience Wireless Mic			
2	Interactive Smart Classroom			
a.	Interactive Digital Board 75" +-5" (with extra writing boards 40" diagonal on each side)			
b.	Smart Classroom Software (Server + Client End Licenses with Response Clicker)			
c.	Wireless Cloud Access Point			

Total Bid Value in Figures (including Extended Warranty Price):

\_\_\_\_\_

Total Bid Value in words (including Extended Warranty Price): \_\_\_\_\_

\_\_\_\_\_

Name & Designation of Authorized Person: \_\_\_\_\_

Signature: \_\_\_\_\_ (Please affix company stamp here)

**Note: Quoted price must be inclusive of all taxes and duties.**

## Annex – I: Integrity Pact

The Bidders will be required to submit the below text on stamp paper after filling in the details and duly signed as well as stamped, as part of their Technical Proposal.

**DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC**  
**PAYABLE BY THE SUPPLIER OF GOODS, SERVICES & WORK IN CONTRACTS WORTH**  
**RS. 10.0 MILLION OR MORE**

(To be filled by the bidder as a part of technical proposal)

Contract Number: \_\_\_\_\_ Dated: \_\_\_\_\_

Contract Value: \_\_\_\_\_

Contract Title: \_\_\_\_\_

\_\_\_\_\_ hereby declare that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoP) through any corrupt business partner.

Without limiting the generality of the forgoing, \_\_\_\_\_ represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any nature or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultant fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatever from GoP, except that which has been expressly declared pursuant hereto.

\_\_\_\_\_ certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

\_\_\_\_\_ accept full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, \_\_\_\_\_ agrees to identify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by \_\_\_\_\_ as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever from GoP.

\_\_\_\_\_

[Buyer] [Seller / Supplier]

# Annex – II: Draft Contract Sample

Available at PAF: IAST website at <http://www.paf-iastr.edu.pk/downloads>