

## **BID DOCUMENT**

Selection of System Integrator for Entering into Rate Contract for design, supply & installation of Virtual Classroom solution

### **Part -I – TECHNICAL BID**

**NIT No- EdCIL/DES/RC VC Solution/2025/004**



**EdCIL (India) Limited**

**A Govt. of India, Mini Ratna Category-I CPSE**

**EdCIL House, Plot No. 18A, Sector 16A,**

**Noida-201301 (U.P.) India**

**Tel: 0120 – 2512001-006, FAX: 0120-2515372**

**Reg. Office: 7th Floor, Amba Deep, 14, KG Marg, New Delhi-110001**

**CIN No.: U74899DL1981GOI011882**

**Dated: 29.08.2025**

**This document is serially numbered from page number 01 to 134**

## DISCLAIMER

The information contained in this Request for Proposal document (the "RFP") or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by or on behalf of the Company or any of its employees or advisors, is provided to Bidder(s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an Agreement and is neither an offer nor invitation by the Company to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in making their financial offers (BIDs) pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Company in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the Company, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in the Bidding Documents may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP and obtain independent advice from appropriate sources.

Information provided in this RFP to the Bidder(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Company accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

The Company, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way for participation in this BID Stage.

The Company also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this RFP. The Company may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.

The issue of this RFP does not imply that the Company is bound to select a Bidder or to appoint the Selected Bidder, as the case may be, for the Project and the Company reserves the right to reject all or any of the Bidders or BIDs without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its BID including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Company, site visits, investigations, studies or any other costs incurred in connection with or relating to its BID. All such costs and expenses will remain with the Bidder and the Company shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the BID, regardless of the conduct or outcome of the Bidding Process.

## Table of Contents

|   |          |
|---|----------|
| <b>Part -I – TECHNICAL BID .....</b>  | <b>1</b> |
| Notice Inviting Tender.....   | 5        |
| CHAPTER- I.....   | 7        |
| Offline and Online Bid Submission.....  | 7        |
| CHAPTER-II.....   | 8        |
| Term of Reference & Definitions.....  | 8        |
| CHAPTER-III.....  | 9        |
| Instructions for E-Tendering.....   | 9        |
| CHAPTER-IV.....   | 12       |
| Instruction to bidders.....   | 12       |
| CHAPTER-V.....  | 18       |
| Scope of Work.....  | 18       |
| Delivery Schedule.....  | 28       |
| Upkeep of the Solution.....   | 29       |
| Minimum guaranteed uptime per month required (without penalty).....                                       | 29       |
| CHAPTER-VI.....   | 31       |
| Eligibility and Bid Evaluation.....   | 31       |
| Chapter-VII.....  | 37       |
| Delivery Timeline & Payment terms.....  | 37       |
| Chapter-VIII.....   | 39       |
| Key Contract Terms.....   | 39       |
| ANNEXURE-I.....   | 44       |
| Technical Compliance Sheet.....   | 44       |
| ANNEXURE-II.....  | 45       |
| DECLARATION SHEET.....  | 45       |
| ANNEXURE-III.....   | 46       |
| Letter of undertaking.....  | 46       |
| ANNEXURE-IV.....  | 47       |
| UNDERTAKING OF NON-BLACKLISTING.....  | 47       |
| ANNEXURE-V.....   | 48       |
| Financial Statement.....  | 48       |
| ANNEXURE-VI.....  | 49       |
| List of Orders Completed During Last 5 years for Govt. Organizations /Autonomous Institutes in India..... | 49       |
| ANNEXURE-VII.....   | 50       |
| Manufacturer’s Authorization Form (MAF).....  | 50       |
| ANNEXURE-VIII.....  | 51       |

|  |            |
|--|------------|
| Power of Attorney.....                         | 51         |
| ANNEXURE-IX.....                               | 53         |
| LETTER OF BID SUBMISSION.....                  | 53         |
| ANNEXURE – X.....                              | 55         |
| Bank Guarantee towards Bid Security (EMD)..... | 55         |
| Annexure XI.....                               | 57         |
| PERFORMANCE BANK GUARANTEE FORMAT.....         | 57         |
| ANNEXURE-XII.....                              | 60         |
| PROFORMA PRE CONTRACT INTEGRITY PACT.....      | 60         |
| Annexure XIII.....                             | 68         |
| Contract Form.....                             | 69         |
| Annexure XIV.....                              | 71         |
| DELIVERY CERTIFICATE FORMAT.....               | 71         |
| Annexure XV.....                               | 72         |
| INSTALLATION CERTIFICATE FORMAT.....           | 72         |
| ANNEXURE- XVI.....                             | 73         |
| LIST OF AUTHORISED BANKS FOR BG.....           | 73         |
| Annexure XVII.....                             | 74         |
| Equipment Specification Compliance.....        | 74         |
| Annexure XVIII.....                            | 75         |
| Annexure XIX.....                              | 76         |
| EQUIPMENT SPECIFICATION.....                   | 76         |
| Annexure XX.....                               | 122        |
| TENDER CHECKLIST.....                          | 122        |
| Annexure XXI.....                              | 123        |
| Pre-Bid Query Format.....                      | 123        |
| Annexure XXII.....                             | 124        |
| Land Border Declaration.....                   | 124        |
| Annexure XXIII.....                            | 125        |
| MAF to be submitted.....                       | 125        |
| Annexure XXIV.....                             | 126        |
| Proposed Make and Model.....                   | 126        |
| <b>PART-II: FINANCIAL BID.....</b>             | <b>128</b> |
| FINANCIAL BID SUBMISSION FORM.....             | 130        |
| SUMMARY OF FINANCIAL BID.....                  | 131        |

## Notice Inviting Tender

(e-Tendering mode)

**EdCIL (INDIA) LIMITED**  
**(A Govt. of India Mini Ratna CATEOGRY-I CPSE)**  
**SECTOR 16A, NOIDA**

**N.I.T. No.: EdCIL/DES/RC VC Solution/2025/004**

**Date: 17.07.2025**

|  |  |
|--|--|
| <b>Name of work</b>                                | Selection of System Integrator for Entering into Rate Contract for design, supply & installation of virtual classroom solution   |
| <b>The Currency in which payment shall be made</b> | Indian Rupees (INR)  |
| <b>Date of Issue/Publishing</b>                    | 29.08.2025   |
| <b>Document Download Start Date</b>                | 29.08.2025   |
| <b>Pre-Bid Submission</b>                          | 07.09.2025   |
| <b>Pre-Bid meeting</b>                             | 08.09.2025 at 1200 Hrs   |
| <b>Document Download End Date and Time</b>         | 19.09.2025   |
| <b>Last Date and Time for receipts of Bids</b>     | 19.09.2025 till 1600 Hrs In case a Holiday is declared on the day of the event, the same will be held on the next working day at the same time & venue.  |
| <b>Date and Time of Opening of Technical Bids</b>  | 19.09.2025 at 1630 Hrs   |
| <b>Earnest Money Deposit</b>                       | EMD in form of Bank Guarantee / Demand Draft. Scanned copy to be uploaded with tender documents and original BG/ DD has to be submitted. Rs. 26,50,000 (Rupees Twenty Six Lakh Fifty Thousand Only).<br><br>In case EMD is submitted in the form of BG, the BG should be valid till 180 days after the bid validity date, as per Annexure-X. The list of bank from where the EMD is acceptable is placed at annexure XV. |
| <b>No. of Covers</b>                               | 02 (Two Packets)   |
| <b>Bid Validity days</b>                           | 180 days (From last date of opening of tender)   |
| <b>Performance Bank Guarantee (PBG)</b>            | 5% of the work order (LOA) value of the successful bidder. The PBG may vary if PBG more than 5% is required by respective client from EdCIL. PBG is required to be submitted within 15 days from the date of issue of LOA.   |
| <b>Email Address</b>                               | <a href="mailto:destenders@edcil.co.in">destenders@edcil.co.in</a>   |

|                          |   |
|--------------------------|---|
| <b>Corporate Office</b>  | EdCIL House, 18-A, Sector 16A, Film City, Noida, Uttar Pradesh 201301 |
| <b>Registered Office</b> | 7th Floor, Amba Deep, 14, KG Marg, New Delhi-110001                   |

1. Tender document shall be downloaded from electronic tender portal link available at EdCIL Tender web page. Aspiring bidders who have not got registered in e-procurement should get register/enroll before participating.
2. No manual bids shall be accepted. All bids (both Technical and Financial should be submitted in the E- procurement portal).
3. Bidders are advised to visit the EdCIL Web site to keep themselves updated for information on this tender. Corrigendum and addendum (if any) may be issued on the changes required. Reply on pre-bid queries received by EdCIL shall be displayed on EdCIL website/e-tendering website. The Pre-Bid queries, Corrigendum/addendum are part of the tender document and Bidders are supposed to upload the same accordingly, duly signed as per the guidelines in the tender document.
4. In case a holiday is declared on any day, the event will be shifted to the next working day, same time.

**Chief General Manager (DES)**  
**EdCIL (India) Limited,**  
**18 A, Sector-16A, Noida-201 301**  
**Tel: 0120-4156001, 4156002, 4154003**

## CHAPTER- I

### Offline and Online Bid Submission

#### 1.1 Offline Submissions:

The bidder is requested to submit the hardcopy of the below mentioned documents in a Sealed Envelope and the hardware equipment's to the under mentioned address before the start of Public Online Tender Opening Event.

The envelope shall bear name (the project name), the tender number and the words 'DO NOT OPEN BEFORE' (due date & time).

- a) Original copy of the EMD Security in the form of Demand Draft/BG.
- b) Original Power of Attorney / Board Resolution Copy on a non-judicial stamp paper.
- c) Original copy of the Non-Blacklisting Certificate.

Note: The Bidder should also upload the scanned copies of all the above-mentioned original documents as Bid-Annexure during Online Bid-Submission.

#### 1.2 Online Submissions:

The Online bids (complete in all respect) must be uploaded online in **two** Envelope as explained below: -

| <b>Envelope – 1</b>                                     |               |   |           |
|---|---------------|---|-----------|
| (Following documents to be provided as single PDF file) |               |   |           |
| Sl. No.   | Documents     | Content   | File Type |
| 1.  | Technical Bid | Annexure-I, II, III, IV, V, VI, VII, VIII, IX,X,XI, XII,XIII,XIV,XV,XVI,XVII, XVIII, XIX, XX, XXI,XXII, XXIII, XXIV | .PDF      |
| 2.  |               | EMD in form of Bank Guarantee / Demand Draft.   |           |
| <b>Envelope-2</b>                                       |               |   |           |
| Sl. No.   | Documents     | Content   | File Type |
| 1.  | Financial Bid | Financial Bid Submission Letter   | .PDF      |
|   |               | Price bid as per Financial Bid Submission Form.   | .XLS      |

## CHAPTER-II

### Term of Reference & Definitions

| Term                  | Definition   |
|-----------------------|--|
| Supplier              | Successful/Selected bidder   |
| Authorized Signatory  | The bidder's representative (explicitly, implicitly, or through conduct) with the powers to commit the authorizing organization to a binding agreement. Also called signing officer/ authority having the Power of Attorney from the Competent authority of the respective Bidding firm. |
| Bid                   | "Bid" means the response to this document presented in Single Packet, Technical Cum Commercial Bid and Financial Bid, which are supplied with necessary documents and forms as given in Annexure, complete in all respect adhering to the instructions and spirit of this document.      |
| Tenderer/Bidder       | "Tenderer" or "Bidder" means any individual/proprietor/ partnership firm/ agency/ company/ responding to Request for Proposal and who makes a Bid.   |
| Contract              | "The Contract" means the agreement entered into between EdCIL and the selected bidder(s) in terms of clauses mentioned   |
| Day                   | "Day" means a calendar day as per rules of EdCIL.  |
| EMD                   | Earnest Money Deposit  |
| D.D                   | Demand Draft   |
| EdCIL                 | EdCIL (India) Limited, Noida (A Govt. of India Undertaking)  |
| TC                    | Tender Committee   |
| PBG                   | Performance Bank Guarantee   |
| Security Deposit (SD) | Amount of the Order Value deposited by the Bidder and retained till the successful completion of the project (as long as the bidder fulfils the contractual agreement).  |
| Services              | "Services" means the services to be delivered by the successful bidder and as required to run the project successfully as per the Contract.  |
| RFP                   | " <b>RFP</b> " means the Request For Proposal  |
| Order                 | "Order" shall mean the Letter of Award/Work order and its attachments and exhibits.  |
| Consignee             | "Consignee" shall mean EdCIL (India) Limited.  |
| OEM                   | Original Equipment Manufacturer of Interactive Digital Board   |
| Similar Project       | Installation and commissioning of Interactive Digital Board Solution.  |

## CHAPTER-III Instructions for E-Tendering

### 3.1 Instructions for Online Bid Submission:

- 1) E-tendering is new technology for conducting public procurement in a transparent and secured manner. As per Government of India's directives, EdCIL (India) Limited has adopted E-tendering.
- 2) For conducting electronic tendering, EdCIL (India) Limited has decided to use Electronic tender portal link available with detailed information on e-tendering process. This portal built using Electronic tender's software is referred to as [www.tenderwizard.com/EDCIL](http://www.tenderwizard.com/EDCIL).
- 3) The bidders are required to submit soft copies of their bids electronically on [www.tenderwizard.com/EDCIL](http://www.tenderwizard.com/EDCIL) e-tendering website, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the Tender Wizard E-Tendering Portal, prepare their bids in accordance with the requirements and submitting their bids online on the Tender Wizard E-Tendering Portal.
- 4) The scope of work to be tendered is available in the complete bid documents which can be viewed /downloaded from Tender Wizard E-Tendering Portal of [www.tenderwizard.com/EDCIL](http://www.tenderwizard.com/EDCIL). Both Technical Bid and Financial Bid will be submitted concurrently duly digitally signed in the website [www.tenderwizard.com/EDCIL](http://www.tenderwizard.com/EDCIL). No claim shall be entertained on account of disruptions of internet service being used by bidders. Bidders are advised to upload their bids well in advance to avoid last minute technical snags.
- 5) All Corrigendum/Amendment/Corrections, if any, will be published on the website [www.tenderwizard.com/EDCIL](http://www.tenderwizard.com/EDCIL) as well as on EdCIL's website.
- 6) It is mandatory for all the applicants to have class-III Digital Signature Certificate (in the name of person who will sign the bid document) from any of the licensed certifying agency (Bidders can see the list of licensed Certifying Agencies from the link [www.cca.gov.in](http://www.cca.gov.in)) to participate in e-Procurement of EdCIL.
- 7) It is mandatory for the bidders to get their Supplier registered with e-procurement portal of EdCIL, i.e. [www.tenderwizard.com/EDCIL](http://www.tenderwizard.com/EDCIL) to have user ID & password by submitting a non-refundable annual registration charges as follows:

|   |                                 |            |
|---|---------------------------------|------------|
| 1 | Registration charges for 1 year | Rs. 2000/- |
|---|---------------------------------|------------|

(exclusive of taxes, levies, etc.) which can be paid online using the e-payment gateway to KEONICS through the portal address mentioned above. The registration so obtained by the prospective bidder shall be valid for one year from the date of its issue and shall be subsequently renewed.

- (i) Participant shall safely keep their User ID and password, which will be issued by the service provider i.e. KEONICS Ltd. upon registration, and which is necessary for e-tendering.
- (ii) Bidders are advised to change the password immediately on receipt of activation mail.
- (iii) Bidders shall not disclose their User ID as well as password and other material information relating to the e-tendering to any one and safeguard its secrecy.

- 8) Submit your tender well in advance by relevant documents along with copy of EMD of tender submission deadline on **Tender Wizard E-Tendering Portal** [www.tenderwizard.com/EDCIL](http://www.tenderwizard.com/EDCIL), as there could be last minute problems due to internet timeout, breakdown, etc.
- 9) Tenders should be submitted only through Tender Wizard E-Tendering Portal and obtain the Tender Acknowledgement copy as a proof of successful submission.
- 10) Vendors are requested to contact at Tender wizard Helpdesk for any information regarding E-tendering / training.

| <b>EdCIL / Tender Wizard E-Tendering Portal Helpdesk</b>  |
|---|
| Customer Support: <a href="tel:080-49352000">080-49352000</a> (Multiple Telephone lines)<br>Emergency Mobile Numbers: <a href="tel:9686115318">9686115318</a> / <a href="tel:8800496478">8800496478</a> / <a href="tel:8800445981">8800445981</a><br>(Please contact in case of emergency during non-working hours.)  |
| <b>To Tender Wizard</b><br><a href="mailto:harishkumar.kb@etenderwizard.com">harishkumar.kb@etenderwizard.com</a><br><a href="mailto:ambasa@etenderwizard.com">ambasa@etenderwizard.com</a><br><a href="mailto:arijeet@etenderwizard.com">arijeet@etenderwizard.com</a><br><a href="mailto:twhelpdesk963@gmail.com">twhelpdesk963@gmail.com</a><br><a href="mailto:sandeep.g@etenderwizard.com">sandeep.g@etenderwizard.com</a><br>& cc to: <a href="mailto:destenders@edcil.co.in">destenders@edcil.co.in</a> & <a href="mailto:avinashkumar@edcil.co.in">avinashkumar@edcil.co.in</a> |

### 3.2 PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum/addendum published on the portal before submitting their bids.
- 2) **Please go through the tender document carefully to understand the documents required to be submitted as part of the bid.** Please note the number of covers in which the bid documents have to be submitted, the number of documents (including the names and content of each of the document) that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ schedule and generally, these can be in PDF format. Bid documents may be scanned with 100dpi with black and white option.

### 3.3 SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission and complete all formalities of registration (at least two days in advance of the closing date) so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be sole responsible for any delay in uploading of bid within the stipulated time.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to pay EMD as applicable through demand draft/BG/direct bank transfer as per tender condition in favor of “**EdCIL (India) Ltd**” payable at Noida and enter details of the instruments. Original copies of demand draft/BG for EMD are required to be submitted.
- 4) A standard Financial Bid form has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the financial bid format is found to be modified by the bidder, the bid will be rejected.

- 5) The server time will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 6) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

### 3.4 ASSISTANCE TO BIDDERS

Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority. For any other tender related queries bidders are requested to contact on below given numbers/email.

| <b>EdCIL / Tender Wizard E-Tendering Portal Helpdesk</b>  |
|---|
| Customer Support: <a href="tel:080-49352000">080-49352000</a> (Multiple Telephone lines)<br>Emergency Mobile Numbers: <a href="tel:9686115318">9686115318</a> / <a href="tel:8800496478">8800496478</a> / <a href="tel:8800445981">8800445981</a><br>(Please contact in case of emergency during non-working hours.)  |
| <b>To Tender Wizard</b><br><a href="mailto:harishkumar.kb@etenderwizard.com">harishkumar.kb@etenderwizard.com</a><br><a href="mailto:ambasa@etenderwizard.com">ambasa@etenderwizard.com</a><br><a href="mailto:arijeet@etenderwizard.com">arijeet@etenderwizard.com</a><br><a href="mailto:twhelpdesk963@gmail.com">twhelpdesk963@gmail.com</a><br><a href="mailto:sandeep.g@etenderwizard.com">sandeep.g@etenderwizard.com</a><br>& cc to: <a href="mailto:destenders@edcil.co.in">destenders@edcil.co.in</a> & <a href="mailto:kssahni@edcil.co.in">kssahni@edcil.co.in</a> |

### 3.5 Offline Submissions: (AS PER TENDER REQUIREMENT)

The bidder is requested to submit documents as mentioned in the **Clause 1.1**

### 3.6 MINIMUM REQUIREMENTS AT BIDDER'S END

- Computer System having configuration with minimum Windows 7 or above, and Broadband connectivity
- Digital Certificate(s)

## CHAPTER-IV

### Instruction to bidders

#### **4.1 Due date:**

The tender has to be submitted before the due date and time. The offers received after the due date and time will not be considered.

#### **4.2 Preparation of Bids**

The offer/ bid shall be submitted in two bid systems (i.e.) Technical Bid and Financial Bid. The technical bid shall consist of all technical details along with commercial terms and conditions. Financial bid shall indicate component wise price for all the mentioned component in the technical/financial bid in the given format.

#### **4.3 General**

- i. All information supplied by bidders shall be treated as contractually binding on the bidders on successful award of the assignment by EdCIL on the basis of this tender.
- ii. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of the EdCIL. EdCIL may cancel this RFP at any time prior to a formal written contract being executed by or on behalf of EdCIL.
- iii. This RFP does not constitute an offer by EdCIL. The bidder's participation in this process may result in EdCIL selecting the bidder to engage towards execution of the contract.
- iv. The offer/bid should be inclusive of GST as per prevailing rates. However, the percentage of GST should be clearly indicated.
- v. The prices must be quoted in the Performa given in Commercial Bid, failing which the Bid would be treated as unresponsive. Any discount or any other offers affecting the package price must be mentioned in Financial Bid only. Discount or any other offers affecting the Package price mentioned at any other place of the bid other than Financial Bid will not be considered.
- vi. Price quoted by the bidder is including all transportation and installation etc. cost (if any).

#### **4.4 Code of integrity**

No official of the procuring entity or a Bidder shall act in contravention of the codes which includes:

- i. Prohibition of
  - a) Making offer, solicitation or acceptance of bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process.
  - b) Any omission, or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained, or an obligation avoided.

- c) Any collusion bid rigging or anti-competitive behaviour that may impair the transparency, fairness and the progress of the procurement process.
  - d) Improper use of information provided by the procuring entity to the Bidder with an intent to gain unfair advantage in the procurement process or for personal gain.
  - e) Any financial or business transactions between the Bidder and any official of the procuring entity related to tender or execution process of contract; which can affect the decision of the procuring entity directly or indirectly.
  - f) Any coercion or any threat to impair or harm, directly or indirectly, any party or its property to influence the procurement process.
  - g) Obstruction of any investigation or auditing of a procurement process.
  - h) Making false declaration or providing false information for participation in a tender process or to secure a contract;
- ii. Disclosure of conflict of interest.
- iii. Disclosure by the Bidder of any previous transgressions made in respect of the provisions of sub-clause (a) with any entity in any country during the last three years or of being debarred by any other procuring entity.

In case of any reported violations, the procuring entity, after giving a reasonable opportunity of being heard, concludes that a Bidder or prospective Bidder, as the case maybe, has contravened the code of integrity, may take appropriate measures.

#### **4.5 Preparation to Bids:**

- i. The Bidder is expected & deemed to have carefully examined all the instructions, guidelines, forms, requirements, appendices and other information along with all terms and condition and other formats of the bid. Failure to furnish all the necessary information as required by the bid or submission of a proposal not substantially responsive to all the requirements of the bid shall be at Bidder's own risk and may be liable for rejection.
- ii. The Bid and all associated correspondence shall be written in English and shall conform to prescribed formats. If any supporting documents submitted are in any language other than English, translation of the same in English language is to be duly attested by the Bidders. Any interlineations, erasures or over writings shall be valid only if they are authenticated by the authorized person signing the Bid.
- iii. The bid shall be uploaded on the website as per the instruction given in the RFP by the Bidder or duly authorized person(s) to bind the Bidder to the contract.
- iv. No bidder shall be allowed to modify, substitute, or withdraw the Bid after its submission.
- v. The bidder shall be responsible for all costs incurred in connection with participation in the Bid process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of bid, in providing any additional information required by EdCIL to facilitate the evaluation process and all such activities related to the bid process. EdCIL will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding

- process.
- vi. Every page of the documents submitted by the bidder must be duly signed by the authorized signatory of the bidder along with the Organization seal.
  - vii. The bids submitted by fax/e-mail etc. shall not be accepted. No correspondence will be entertained on this matter.
  - viii. Failure to comply with the below requirements shall lead to the Bid rejection: -
    - a. Comply with all requirements as set out within this RFP.
    - b. Submission of the forms and other particulars as specified in this tender and respond to each element in the order as set out in this tender.
    - c. Non-submission of all supporting documentations specified in this RFP, corrigendum or any addendum issued.

#### **4.6 Language of Proposal:**

The proposal prepared by the firm and all correspondence and documents relating to the RFP exchanged by the bidder and the Client, shall be written in the English language, provided that any printed literature furnished by the firm may be written in another language so long as accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

#### **4.7 Bidder's Authorized Signatory:**

A Proposal should be accompanied by an appropriate board resolution or power of attorney in the name of an authorized signatory of the Bidder stating that he is authorized to execute documents and to undertake any activity associated with the Bidder's Proposal. Furthermore, the bid must also be submitted online after being digitally signed by an authorized representative of the bidding entity.

#### **4.8 Cost of Bidding:**

The bidder shall bear all costs associated with the preparation and submission of its bid, including cost of presentation for the purposes of clarification of the bid, if so desired by the client and client will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. The bidder is expected to carefully examine all instructions, forms, terms and specifications in the bid document. Failure to furnish all information required in the bid document or submission of a bid not substantially responsive to the bid document in every respect will be at the bidder's risk and may result in the rejection of the bid.

#### **4.9 EMD:**

The bidder should enclose EMD of Rs. 26,50,000/- (Rupees Twenty Six Lakhs Fifty Thousand only) in the form of Demand Draft drawn in favor of EdCIL (India) Limited and payable at NOIDA. In case EMD is submitted in the form of BG, the BG should be valid beyond 180 days after the bid validity date and should be as per the Annexure. Bidders registered with MSME and having valid registration certificate issued by NSIC/MSME are exempted for submission of EMD.

**However, MSMEs are advised to submit their financial solvency certificate issued not earlier than 3 months from the last date of bid submission as per Annexure. The Bid sent without EMD will be considered as UNRESPONSIVE and will not be considered.**

- i. The EMD will be returned without any interest to the unsuccessful bidders immediately after the signing of the agreement with the successful bidder.
- ii. EMD of the successful bidder will be released after the end of rate contract.
- iii. The EMD submitted shall be interest free and will be refundable to the bidders without any accrued interest on it.
- iv. The Earnest Money will be forfeited on account of one or more of the following reasons:
  - a) Earnest money will be forfeited if the bidder unilaterally withdraws the offer, or unilaterally amends, impairs or rescinds the offer within the period of its validity.
  - b) Bidder does not respond to requests for clarification of its bid.
  - c) Bidder fails to provide required information during the evaluation process or is found to be non-responsive.
  - d) In case of a successful bidder, the said bidder fails to sign the Agreement in time; or furnish Performance Bank Guarantee in time.
  - e) The Bank details for EMD preparation are

Name: EdCIL (India) Ltd

Bank Account No: 36830596465

IFSC Code: SBIN0000691

Bank Name: State Bank of India

Branch Name & Address: (00691) New Delhi Main Branch-11, Parliament Street,  
New Delhi-110001

#### **4.10 Acceptance/ Rejection of bids:**

- I. EdCIL reserves the right to reject any or all offers without assigning any reason.
- II. EdCIL based on the requirement without assigning any reason to the Bidder may split work/Scope/Bid offer in stages or in parts according to the need of work for ease of execution of work.

#### **4.11 Performance Security**

- I. Performance security in the form of following against each work order to be submitted by the successful bidder:
  - i. FDR/DD from any Bank in India.
  - ii. Performance Security should be form of Performance bank guarantee (PBG) from a Nationalized/ approved Scheduled banks in India as per Annexure XVI.
- II. Performance Security:
  - i. Whenever a work order is placed by the EdCIL, the concerned supplier would be required to submit a FDR / DD / PBG as per Annexure of an amount of 5% of the value of each work order issued within 15 working days of placing of order failing which appropriate action may be taken by EdCIL.

The PBG may vary if PBG more than 5% is required by respective client from EdCIL.

- ii. This FDR / DD/ PBG shall remain valid for a period of 90 (Ninety) days beyond the date of completion of warranty / AMC period.
- iii. In case the concerned “Supplier” fails to submit this PBG within the time stipulated, EdCIL at its discretion may cancel the work order for the “Supplier” without giving any notice and terminate the contract.

III. The successful bidder will not be entitled for any interest on the PBGs submitted.

IV. The EdCIL shall forfeit their respective PBG in full or part in the following cases:

- When the terms and conditions of contract are breached/ infringed.
- When contract is being terminated due to non-performance of the Supplier.
- EdCIL incurs any loss due to “Supplier’s” negligence in carrying out the project implementation as per the agreed terms & conditions.

V. PBG shall be returned to the successful bidder only after 90 days of the successful completion of the Contract. In case of any shortfall of any activity/ specification/ other terms and conditions of the contract, EdCIL reserves the right to recover damages or loss from the due the payment or by the encashment of PBG.

In case the work order is extended beyond the initial period the successful bidder is required to deposit Performance Bank Guarantee equivalent to 5% or as required by respective client of contract value to EdCIL within 15 days from the date of receipt of extension order.

#### **4.12 Amendment in Tender Document**

- i. At any time up to the last date for receipt of RFP, EdCIL may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bid Document by an amendment. EdCIL shall not be responsible for any oversight or negligence on part of the bidders on the amendments to the terms and conditions of the tender document and notified through the website.
- ii. The corrigendum (if any) & any other related communication regarding this tender shall be posted only on the website and no separate communication either in writing or through email will be made to any interested/ participating bidders.
- iii. Any such corrigendum(s) or addendum(s) or clarification(s) shall be deemed to be incorporated into the tender document.

#### **4.13 Clarifications on submitted bids**

During process of evaluation of the Bids, EdCIL may, at its discretion, ask Bidders for clarifications on their bids. The Bidders are required to respond within the prescribed time frame given for submission of such clarification.

#### **4.14 Validity of Bids**

- i. Bids shall remain valid till 180 (one eighty) days from the date of submission of bids. EdCIL reserves the right to reject a proposal valid for a shorter period as nonresponsive.

- ii. In exceptional circumstances, EdCIL may solicit the bidder's consent to extend the period of validity. The request and the response thereto shall be made in writing. Extension of validity period by the bidder should be unconditional. A bidder may refuse the request without forfeiting the Earnest Money Deposit. A bidder granting the request will not be permitted to modify its Bid.
- iii. EdCIL reserves the right to annul the tender process, or to accept or reject any or all the bids in whole or part at any time without assigning any reasons and without incurring any liability to the affected bidder(s) or any obligation to inform the affected bidder(s) of the grounds for such decision.

#### **4.15 Pre-Bid Conference**

The bidder is requested to submit any queries in writing by e-mail so as to reach EdCIL . If required, EdCIL reserves the right to conduct the pre-bid meeting using virtual mode only.

- i. Queries relevant to the bid documents shall be addressed to the CGM (DES), EdCIL at [destenders@edcil.co.in](mailto:destenders@edcil.co.in) and [avinashkumar@edcil.co.in](mailto:avinashkumar@edcil.co.in)
- ii. The queries should necessarily be submitted in the format as specified in the Annexure.
- iii. Any requests for clarifications post the indicated date and time may not be entertained by the Purchaser.
- iv. The officer notified by the Purchaser will endeavour to provide timely response to all queries. However, Purchaser makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does Purchaser undertake to answer all the queries that have been posed by the Bidders.
- v. At any time prior to the last date for receipt of bids, Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by a corrigendum.
- vi. The corrigendum (if any) & clarifications to the queries from all Bidders will be posted on the website [www.edcilindia.co.in](http://www.edcilindia.co.in) and on the e-tendering portal <http://www.tenderwizard.com/EDCIL> and may be emailed to all participants who have raised the queries.
- vii. Any such corrigendum shall be deemed to be incorporated into this RFP.
- viii. In order to provide prospective bidders reasonable time for taking the corrigendum(s) or addendum(s) into account, EdCIL, at its discretion, may extend the last date for the receipt of Bids.

#### **4.16 Acceptance/ Rejection of bids**

- i. EdCIL reserves the right to reject any or all offers without assigning any reason.
- ii. EdCIL based on the requirement without assigning any reason to the Bidder may split work/Scope/Bid offer in stages or in parts according to the need of work for ease of execution of work.
- iii. EdCIL reserves right to take decision according to requirement and no claim on whatsoever ground shall be entertained from the bidder.

## CHAPTER-V

### Scope of Work

#### **5.1 Background**

With the onset of emerging technologies such as Digital , Virtual and AI a paradigm shift has been underway in the education domain. With a vision to promulgate these emerging technologies to improve classroom learning in Government schools across India, EdCIL intends to enter into rate contract with system integrators for design, supply & installation of Virtual Classroom solutions

#### **5.2 Objectives and Benefits of Virtual Classroom (VC) Solution**

To inculcate concept-based learning using LIVE teaching, interaction, and assessment systems for various subjects and various standards of the school in English, Hindi and various Regional languages.

The benefits of the Virtual Classroom Solution are as below:

- 1) Interactive teaching facility shall ensure quality education across the State. Highly experienced teachers of the State shall be teaching from the studio.
- 2) Training solutions will be made available even at the remote locations.
- 3) Interactive teaching facility to deliver academic sessions and other skill development programs from a central location in a State.
- 4) Infrastructure and applications to receive satellite or leased line based LIVE sessions to build conceptual understanding for all subjects and for all standards of the school in English, Hindi and various Regional languages.
- 5) Students will not have to travel to the cities to get additional academic support. This will help poor students to save time and money.
- 6) Any useful skill development trainings and professional development courses can be introduced.
- 7) Achievers in various fields will be invited to share their knowledge with students.
- 8) The infrastructure can be used for building competitive examinations awareness and training.

The project under this rate contract will be implemented in the phased manner on turnkey basis as per table below:

| Phases | Description   |
|--------|---|
| 1      | Establishing Central studio infrastructure, Digital Content in different languages, Q&A Facility (Interaction Centre) at district HQ, Virtual Classroom setup |
| 2.     | Operation and Maintenance for 3 years   |

#### **5.3 Scope of Work**

Virtual Classroom solution will run during school hours to benefit pupils and teachers. Broad scope of work is as below:

- Upgradation of existing broadcasting studio in the state/setting up new studio to deliver LIVE

lessons to Government schools over HTS/VSAT/Bharatnet/Internet.

- Setting up Virtual Classrooms in Government Schools.
- Animation rich e-content to use in LIVE sessions and as recorded content.
- Supply of Clickers for every student for individual learning assessment.
- Setting up interactive doubt clarification system(facilitation) at district level using VSAT/Bharatnet/Internet.
- Training Services and Operations and Management.
- Operations and management of the studio and education services.
- Manpower supply.

#### **5.4 Technology Solution Requirement**

- a) The solution needs to enable LIVE teaching from studio through the Transmission Hub.
- b) The system should support the activities required for teaching, learning, assessment, professional development, and collaboration—from sophisticated multicast network.
- c) The system should be reliable and robust for school-wide, college wide, university wide, block-wide, and state-wide deployment.
- d) The solution should be a 2-way LIVE interactive model among
  - i. Studio Teachers and Students at multiple remote locations.
  - ii. Students and Online Teachers at multiple locations
  - iii. Studio Teachers and Online Teachers
- e) The solution must have capability to multicast LIVE classes to schools over the current HTSVSAT/Bharatnet/Internet network securely.
- f) Platform should allow doubt clarification through remote online teachers - called as Q&A system to be established at District HQ.
- g) Platform should allow using digital content (2D/3D animations and videos) as a tool for teaching from studio. Studio teachers should be able to use the content as teaching aid - teacher video, audio, animation, and teacher notes should be synced and projected at the classroom end. Even the govt. of India Content through NCERT/NIOS/any other MHRD Bodies should be supported by the bidder while running the Virtual classroom solution.
- h) Solution should be flexible to allow studio teachers and Online Teachers to include images/videos/ any other content during the LIVE sessions.
- i) Digital content should include substantial number of animations to make theoretical and practical concepts easy to understand. There shouldn't be distortions or pixilation while projected on the projector screen.
- j) Platform should have an integrated system for recording LIVE sessions automatically at the classroom end; automatic storage control facility should be made available with storage of sessions for one month. If teachers like to refer specific sessions beyond 30 days, there should be an option to bookmark/save such sessions. Unsaved sessions shall be deleted.
- k) Platform should support assessment of learning level of individual student/classroom/ school /block/ district level using clicker system.
- l) The solution should include connectivity for the below reasons:
  - a. 2-way interaction
  - b. Real-time School run status update
  - c. Real-time clicker data update

#### **5.4 Solution Specification:**

- a) The detailed Bill of Quantity is provided in Annexure XIX.
- b) Bidder should upgrade and maintain available studios or setup new studios.
- c) Bidder should supply, install, operate, and maintain Interaction center (Q&A Facility) and Virtual Classrooms.
- d) Bidder Should set up Q&A facility for students' doubt clarification at District HQ. This system should include application to receive LIVE queries, address queries in the real-time, and also take and answer questions offline.
- e) EdCIL seeks digital multimedia content in: English, Hindi and a local language.
- f) The bidder should ensure connectivity at and among the Studio, Q&A facility, and Virtual classrooms. The Bidder has to consider the delivery, installation and connectivity charges to be included in the Operations Cost.
- g) If the solution requires any server/cloud, the same should be arranged by the Bidder at his own expense.

#### **5.5 Preparation of Time-Table for Virtual Classrooms:**

- a) As a large number of schools will be brought under one remote program, in consultation with the government department a uniform program time-table is to be framed for all the participating schools before a new academic year begins as per the requirement of the end client.
- b) The successful bidder should help the Government/end client in framing a model timetable which would work well for all the schools across the regions.
- c) The following aspects should be finalized in the meeting:
  - i. Uniform program schedule for all schools
  - ii. Academic calendar with total work days and holidays [state and regional], probable test and exam schedule
  - iii. Time-Table and number of sessions for each class on a day and throughout the week
  - iv. No. of sessions required for each topic based on the difficulty level of the topic
  - v. Bridge course, regular sessions, revision sessions

#### **5.6 Digital multimedia content**

- a) Content should be developed as per the State Board, ICSE and CBSE syllabus.
- b) The characters and background used in the content should mostly cover State's cultural and geographical look and feel (in addition to Indian attire) except where the situation otherwise demands.
- c) Content should contain concepts of theory, lab experiments, and practical demonstrations in an engaging way which shall have higher impact than chalk and talk method.
- d) The content should be low bit rate transferrable without compromising the quality of the output.
- e) In order to maintain standardized teaching, the content should be based on a script displayed to the teacher while delivering the LIVE class.
- f) The content shall be used by teaching experts in the studio, so the modules should not have voiceover. The teaching expert shall use it as a LIVE teaching aid.
- g) The developed content should be suitable for LIVE delivery of a minimum of 40-minute session.
- h) All the software and content updates will be done frequently.
- i) Content by Govt of India NCERT/NIOS should be modified and made suitable to the end client through the consultants of EdCIL.

### **5.7 Clicker System**

- a) Bidder should provide on an average 50 Clickers and a receiver per Virtual Classroom for assessing student involvement and performance in the real time.
- b) Platform should include a comprehensive clicker based analytics solution. The solution should enable data analysis at student, section, grade, school, Q&A centre, district, and state levels. Separate intuitive Dashboards should be made available for decision makers at the set levels. The analysis should derive different aspects of teaching and student learning such as in which subjects and topics an individual student is lagging behind his/her peers, comparison of results between schools, conceptual understanding of students in particular block/district etc. for facilitating in instructional method changes or to help class teachers to give dedicated focus on any particular students.
- c) Monthly comprehensive analysis report should be submitted to EdCIL before 7<sup>th</sup> of every month.

### **5.8 Desired features of Clicker System**

- i. Studio expert should have the ability to poll the class on their understanding of concepts by asking true or false questions, multiple choice or multiple answer questions, and yes or no questions every session.
- ii. Teacher analysis tools need to be included to manage assessment results and help plan future student instruction.
- iii. The school should also have access to the individual record of each and every student's answer in the Teacher Tools section of application which helps to monitor class progress and understanding.
- iv. The clickers need to be mapped to student roll numbers throughout the academic year, and this identification number shall be registered to the student in computer-based database.

### **5.9 Manpower Requirements**

- a) Successful Bidder shall conduct LIVE classes from the studio by qualified and experienced teachers who are trained to deliver the classes from studio. Bidder is responsible for making arrangements for the teachers for LIVE delivery.
- b) The Successful Bidder has to make requisite arrangements at each Interaction Centre for the Government Teachers assigned by the Department, who will act as the online teacher and to perform duties of answering questions raised by students.
- c) Successful Bidder should deploy sufficient, qualified, and trained technical manpower to operate and maintain the studios for a period of three years after the date of commissioning of the project.
- d) Successful Bidder shall deploy sufficient trained technical manpower with operational and managerial capabilities for up-keeping of infrastructure at schools.

### **5.10 Roles and Responsibilities of Successful Bidder**

- Shall be required to operate the project on Turn-Key basis and also handle the operations maintenance and management of the program as per the Project Scope of this RFP.
- Shall carry out Feasibility Survey, risk assessment and site evaluation.
- Shall set up new studios at the designated locations.

- Shall procure, install and commission the Infrastructure for Virtual Classroom and complete the related documentation.
- Shall arrange, install and maintain the necessary application software as per the requirement mentioned in this RFP.
- Establishing 2-Way Interactivity, LIVE Streaming, Lecture Recording, and delivering contents shall be carried out by the bidder.
- Shall arrange, install and maintain equipment for delivery of content as may be required and approved by EdCIL/specific department.
- Shall provide dedicated connectivity among Studio, Interaction centres and virtual classrooms.
- Shall provide dedicated connectivity at Interaction Centres and schools.
- Shall create content in-line with CBSE, ICSE and State board Syllabus as per the requirement of the end client.
- Shall prepare periodic reports and status update to EdCIL on implementation progress, and Monitoring of implementation & SLA.
- Shall Prepare Backup policy, Security policy, business continuity plan and other Policy documents.
- Shall Maintain a copy of Project Documentation including communication plan, delivery, installation and commissioning plan, training plan, acceptance test plan etc. for each location of Studio, Interactive centers and Virtual Classrooms.
- All expenses pertaining to the manpower deployed in the process by the Bidder along with maintenance cost of hardware/software will be borne by the successful Bidder.
- Shall perform Operations & Management of the Studios, Interactive center and Virtual Classroom infrastructure as per SLA.
- Shall plans for Scalability in terms of availability of Virtual Classroom physical space and supporting infrastructure
- Shall be solely responsible for managing the activities of its personnel and will hold itself responsible for any misdemeanors.
- Provide technical assistance to EdCIL/User Department for effective implementation of the project.
- Shall provide the Comprehensive Analytics based reports as required by EdCIL
- Shall provide the Periodic SLA reports.
- Shall Facilitate for SLA Audit by EdCIL / PMA (Project Management agency)
- Shall provide comprehensive training to the end user personnel and handholding support to client and other stakeholders for maximizing the turnout and utilization of the project / equipment as per the scope.
- Any other points after the mutual discussion with the end client/EdCIL for entire duration of the project.

## **5.11 Manpower**

- a) Successful Bidder shall conduct LIVE classes from the studio by qualified and experienced teachers who are trained to deliver the classes from studio. Bidder is responsible for making arrangements for the teachers for LIVE delivery.
- b) The Successful Bidder has to make requisite arrangements at each Interaction Centre for the Government Teachers assigned by the Department, who will act as the online teacher and to perform duties of answering questions raised by students.

- c) Successful Bidder should deploy sufficient, qualified, and trained technical manpower to operate and maintain the studios for a period of three years after the date of commissioning of the project.
- d) Successful Bidder shall deploy sufficient trained technical manpower with operational and managerial capabilities for up-keeping of infrastructure at schools.
- e) The details of manpower is provided in Annexure XIX.

### **5.12 Project Monitoring**

Along with the EdCIL program management team, bidder will have to provide online project monitoring tool to monitor LIVE delivery of the classes, equipment health, staff, complaints, penalties etc. The monitoring tool may be modified later on as per the recommendations of the EDCIL without any cost. The reports generated from the monitoring tool will be used to analyse the outcome of the project.

**The Online Project Monitoring Tool should record the following:**

- a. Information regarding subject wise delivery of LIVE classes from studio.
- b. Real-time information about the number of virtual classrooms working/not working, issues at virtual classrooms etc.
- c. Total number of students benefitted class wise. Various types of reports school wise, block wise, tehsil wise, district wise, state-wise etc.
- d. Status of hardware installation, performance and maintenance by the bidder.
- e. Category-wise and class-wise beneficiaries.
- f. The school wise number of teachers trained

The monitoring tool should generate reports regarding the outcome reflecting shortcomings, achievement as well as suggestions for improvement.

### **5.13 Help Desk Setup**

Helpdesk shall comprise of Helpdesk tool, policies, and helpdesk personnel. Manpower deployed at the helpdesk shall log calls regarding the queries/complaints of Hardware users (Schools). This Helpdesk tool shall have facility which allows user to log ticket using internet, email, telephone call, SMS, and any app provided by the bidder. User shall be able to log ticket using any of these options. Helpdesk tool, if required shall be developed/ implemented by successful bidder in consultancy with EDCIL. Bidder should also manage the inventory of all hardware supplied and installed by him with the help of this setup.

A Help Desk coordinator shall monitor the Help Desk Operations. The Help Desk Agents shall also carry-out project related back-end work. The Help Desk setup shall be fully integrated with online project monitoring tool for real-time monitoring. The system should have a common toll-free number facility with a minimum up time of 98%. No extra cost shall be paid for this setup.

The bidder helpdesk team will work with the centralised helpdesk team of EdCIL in future (if required).

### **5.14 Insurance and Transportation**

- The successful Bidder shall be responsible for acquiring comprehensive insurance including transit insurance, liability insurance and any other insurance as required for all the equipment till the delivery, installation and commissioning at the respective end client location/school level (whichever applicable).
- For delivery of goods at the end client's location, the insurance should be obtained by the Supplier in an amount equal to 110% of the value of the goods from "supplier location to

end client location" (final destinations) on "All Risks" basis including War Risks and Strikes. The insurance should be valid for a period of not less than 3 months after the completion of installation and commissioning. If orders placed on CIF/CIP basis, the insurance should be up to End Client place.

- The Supplier should make all arrangements towards safe and complete delivery at End Clients Location. Such responsibility on part of the supplier will include taking care of insurance, freight, octroi, state level permits etc. as applicable.
- The supplier should also take care of transit insurance, comprehensive insurance or any other insurance as required which may have direct bearing on the delivery of the items / equipment's at End Clients location.
- It is the total responsibility of supplier to complete all formalities to transit of goods from the place of dispatch to End Clients Location.
- The bidder should ensure that no person can engage in the business of a common carrier unless he has granted a certificate of registration to do so for supply of items at End Clients Location.
- The transportation of goods through unregistered common carrier is illegal. The bidder should ensure to comply the carriage by latest Road Act and any other relevant.
- The supplier will keep EdCIL informed about various stages of deliveries & installation.
- All costs related to insurance shall be borne by the successful Bidder for goods supplied under the Agreement against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery etc. A copy of Insurance Certificate should be provided to EdCIL.
- Unless specified otherwise in the purchase order, Unloading and storage of the same at the designated place should be undertaken by the successful bidder. The Unpacking of the materials should also be arranged by successful bidder.

#### **5.15 Pre-Delivery Inspection**

- The pre-delivery inspection of the goods should be carried out (at the location provided by the supplier) by the EdCIL officials to check whether the goods are in conformity with the technical specifications attached to the purchase order. A team including the representative of the end client would inspect the material if required.
- The successful Bidder shall facilitate and make available a random 20% sample of each equipment type being supplied by them for a Pre-dispatch Inspection (PDI) by a committee comprising of EdCIL and end client. The PDI will be a key requirement prior to shipment of the equipment. As part of the preparation for PDI, the successful Bidder will provide to EdCIL PDI preparation report.
- The inspection test will be conducted by the EdCIL officials, their consultant or other such person nominated by the EdCIL and by the end client (if required), in the presence of supplier's representatives. The inspection will involve trouble free operation and ascertaining conformity with the ordered specifications and quality. There should not be any additional charges for carrying out inspection test. No malfunction, partial or complete failure of any part of the equipment is expected to occur.
- Successful conduct and inspection of the acceptance test for the installed goods and equipment should also be the responsibility and at the cost of the Supplier.
- The time taken for pre-dispatch inspection is inclusive of the scheduled completion time of the delivery & installation of the equipment's. Only the line item certified by the EdCIL official should be dispatched to the end client.

- If any of the equipment supplied by the Tenderer is found to be substandard, refurbished, unmerchantable or not in accordance with the description/specification or otherwise faulty, the EdCIL official or the official from end client (if required) will have the right to reject the equipment or its part. All damaged or unapproved goods should be returned at suppliers cost and risk and the incidental expenses incurred thereon should be recovered from the supplier.
- In the event of the hardware and software failing to pass the PDI, as per the specifications given, a period not exceeding 3 calendar days will be given to the successful Bidder to rectify the failure and clear the inspection, failing which, EdCIL reserves the right to cancel the Purchase Order and levy appropriate penalties in addition to the Liquidated Damages. EdCIL/client will not be responsible for any costs associated with such rejection. The bidder will be responsible for all equipment supplied till they are delivered and commissioned at the designated location/end client location.
- Additionally, the bidder shall replace the complete lot of equipment belonging to an equipment type, if more than 25% of the sample size for the equipment type are found defective during the PDI. If the lots for two consecutive types of equipment are rejected, the entire shipment of equipment by the manufacturer shall stand rejected and shall have to be replaced by the successful Bidder with a fresh batch of equipment for shipment and related PDI. Any cost impacts of rejection at any stage shall be borne by the Bidder. If the complete shipment is rejected, EdCIL reserves the right to cancel the Purchase Order and levy penalties in addition to the Liquidated Damages. All penalty calculation are explained in detail in SLA.

#### **5.16 Delivery Installation and Commissioning**

- Delivery, Installation and commissioning at the school level or the desired location should be made within a maximum of 120 calendar days from the date of placement of purchase order.
- The successful bidder to provide absolute supply and Commissioning schedule within 15 days from the receipt of Purchase Order.
- Within 24 hours of dispatch, the supplier should notify the EdCIL by cable/ telex/ fax/ e- mail the full details of the shipment.
- Till the EdCIL/end client takes over/ receives the equipment/ items, the supplier should be responsible to keep the same in safe custody and the charges (if any) to be borne by the successful bidder.
- As part of commissioning of the delivered equipment, the successful bidder shall depute its technically qualified representative(s) to facilitate the conduct of inspection of 100% of the delivered quantity in presence of the EdCIL Official(s) and End Client (s), if required. This inspection shall start immediately after delivery of the equipment's at the centralized location.
- After completion of the inspection, all the equipment shall be repackaged. Rejected equipment if any shall be returned back to the authorized representative of the successful bidder. The numbers of such rejected equipment shall be struck off from the Delivery Receipt/Acceptance Receipt and from the Invoice claimed by the bidder.
- The equipment to be commissioned for a specific schools/ colleges shall be decided by EdCIL and End client. The power supply and internet connectivity for commissioning will be arranged by End Client. Until the equipment is handed over to respective school

authorities/end client location, successful bidder will be solely responsible for the security of all the equipment.

- The successful bidder shall carry out for delivery of all the equipments to the school level/end client location provided by EdCIL and its subsequent installation in the classrooms.

### **5.17 Final Acceptance and Sign-off from client**

Against the Delivery and Installation & Commissioning in each school/Studio, the selected Bidder shall get a Delivery Certificate and Installation & Commissioning Sign-off certificate from the Headmaster/Teacher/authorised representative of the respective school/college. In all likelihood, the Delivery Certificate and Installation & Commissioning Sign-off certificate for a school/college shall be provided to the successful Bidder on the same day of successful delivery and commissioning of the equipment for that school. The damaged/defective equipment, if any shall be taken back by the successful Bidder

### **5.18 Warranty and Support Services**

- The Selected Bidder is required to provide a standard onsite warranty support. The warranty would ensure that the goods/ articles would continue to conform to the standards and specifications as prescribed in the RFP for the entire duration of the Contract.
- All infrastructure procured by the selected bidder for this Project adheres to the service level requirements. IT Infrastructure proposed by the selected bidder which will not meet the minimum service level requirements will be upgraded without any additional fee to the EdCIL.
- The period of warranty for all equipment shall commence after project commissioning sign-off date from the end client.
- The warranty shall cover the system software, pre-loaded software and all the hardware parts including patches and update (free of cost) of the Operating System.
- In case of offsite warranty, replacement of similar specification IT related hardware shall be provided to the end user.
- Selected Bidder shall ensure adequate regular supply of spare parts needed for a specific type of machinery and equipments. None of the components and sub-components proposed for this Project are second-hand or used items. None of the components and sub-components are declared "End-of-sale" by the respective OEM in next two years as on date of submission of Bid.
- All infrastructure procured by the Selected Bidder for this Project is purchased within last two months from the date of deployment and documentary proof for warranty and proof of purchase (unless existing infrastructure is being reused) should be produced at the time of deployment of infrastructure
- All infrastructure procured by the Selected Bidder for this Project is ready and functional before commencing any kind of services.
- The scope of post warranty support services will include preventive and corrective comprehensive maintenance and cover installation, diagnosis and resolution of hardware faults in response to the reported problems at the designated service centre. The selected bidder will also resolve all the problems detected during routine operational support activities and will ensure that the problems are resolved within the defined SLAs including appropriate replacement and /or replenishment of systems and equipment as and when required.

### **5.19 Site Preparation**

- I. The supplier should inform to the Consignee about the site preparation, needed for the installation of equipment, immediately after the receipt of the purchase order. The supplier must provide complete details regarding space and all the other infrastructural requirements needed for the equipment, which the End Client should arrange before the arrival of the equipment to ensure its timely installation and smooth operation thereafter.
- II. The supplier should visit the End clients Location and see the site where the equipment is to be installed and should offer his advice and render assistance to the End Client in the preparation of the site and other pre installation requirements.

### **5.20 Duration**

Duration of the rate contract is for 1 year. The same can be extended based on satisfactory performance for one year at a time to maximum period of 2 years. However, the financials would be negotiated after every one year/at the time of renewal of contract based on the volume of business awarded or expected and any other related factors.

### **5.21 Price Revision and Technology Advancement**

- I. The supplier empanelled through this RFP shall be asked to resubmit the prices for all the items every year in sealed bids.
- II. The prices quoted should either be the same or can be lower. No upward revision in prices shall be accepted.
- III. No conditional bid shall be accepted and the price format (to be provided by EdCIL) should be strictly adhered to.
- IV. If there is technology advancement and reasonable price reduction happens on any of the line items as per commercial bid then it should be passed on to EDCIL and end buyers.

### **5.22 Service Centre Setup**

The selected Bidder should have its own service centres or authorized local partner to operate a service centre in each region of India for the maintenance and warranty of all equipment supplied under this RFP.

Records of all calls/emails/visits made to the service centre shall be kept in a computerised system for easy tracking of complaints and calculating SLA.

### **5.23 SLA and Penalties**

- I. The purpose of this Service Level Agreement (hereinafter referred to as SLA) is to clearly define the levels of service which shall be provided by the Selected Bidder to EdCIL/ end client for the duration of this Agreement. EdCIL shall regularly review the performance of the services being provided by the Selected Bidder and the effectiveness of this SLA.

#### **II. Definitions:**

For purposes of this Service Level Agreement, the definitions and terms as specified in the Contract along with the following terms shall have the meanings set forth below:

- a. “Incident” refers to any event specifying the defect in all the IT related Hardware supplied for the Virtual classroom.

- b. "Service Centre Support" shall mean the Regional Service centres which will be set up by the Bidder in all the regions.
- c. "Resolution Time" shall mean the time taken (after the incident has been reported at the Online Ticketing Tool), in resolving (diagnosing, troubleshooting and fixing) or asking the school officials in case of a hardware or software technical issue which can only be resolved at or the incident resolved at the nearest Service Centre or the time taken by Service Centre to resolve a defective the IT related Hardware for Virtual classroom at this service centre.

### III. Category of SLAs

1. This SLA document provides for minimum level of services required as per contractual obligations based on performance indicators and measurements thereof. The Bidder shall ensure provisioning of all required services while monitoring the performance of the same to effectively comply with the performance levels. The services provided by the Bidder shall be reviewed by EdCIL as following:
  - a. Adherence of delivery as per the schedule.
  - b. Regularly check performance of the Bidder against this SLA.
  - c. Discuss escalated problems, new issues and matters still outstanding for resolution.
  - d. Review of statistics related to rectification of outstanding faults and agreed changes.
  - e. Obtain suggestions for changes to improve the service levels.
  - f. Periodic inspection of selected Bidder's Help Desk Records like:
    - Volume of tickets
    - Types of Incidents and requests
    - Time to resolve and number of unclosed tickets
    - Systems involved
    - Areas involved
2. The SLA shall be logically segregated in the following categories:
  - a. Pre-Dispatch Inspection
  - b. Implementation Service levels/Delivery Schedule
  - c. Warranty obligations
  - d. AMC
  - e. Compliance and Reporting Procedures
3. The following measurements and targets shall be used to track and report performance on a regular basis. The targets shown in the following tables are applicable for the duration of the Contract. All the targets for the measurements shall be calculated on a monthly basis. Please note that the selected bidder should provide comprehensive, end-to-end service including Installation, Commissioning and maintenance of virtual classroom solution and replacement of the defective in case of physical damage under the warranty and AMC period. No reason shall be entertained (unless those mentioned in Force Majeure) in case of un-availability of any service given in the Scope of Work in this RFP and the appropriate penalty shall be levied. All penalties shall be paid by the Selected Bidder to EdCIL.

#### **Delivery Schedule**

| Sl. No. | Measurement | Target | Penalty |
|---------|-------------|--------|---------|
|---------|-------------|--------|---------|

|    |  |   |  |
|----|--|---|--|
| 1. | Delivery of all the IT related Hardware supplied for the Virtual classroom/Studio at the centralized location/School Location/end client location.                       | Within 90 calendar days from issuance of LOA  | Penalty of 1% for first week, 2% per week for every subsequent week subject to a maximum of 10% of the relevant Milestone payment. |
| 2. | Installation and Commissioning of all the IT related Hardware supplied for the Virtual classroom/Studio at the centralized location/School Location/end client location. | Within 120 calendar days from issuance of LOA |  |

### **Operations & Maintenance**

The Virtual classroom and studios shall be operational as well as monitored & managed on all working days (Incl. Saturday) of the year as per the working hours defined below;

Indicative Time of Operations / Working: (To be decided by the End Client/EdCIL)

- Central Studio = from 8:00 AM to 6:00 PM
- Interaction centre = from 8:00 AM to 6:00 PM
- Virtual Classroom = from 8:00 AM to 6:00 PM

### **Upkeep of the Solution**

"**Uptime**" shall mean the time period for which the specified solution with specified technical and service standards **are available** for the proper functioning & performance of the of the virtual classroom and studio services to end users of the VCRS.

"**Downtime**" shall mean the time period for which the specified services with specified technical an service standards **are not available** for the proper functioning & performance of the virtual classroom to end users of the VCRS.

The reference hours for calculation of Uptime

Uptime (in %) =  $\frac{(\text{Total Expected time of Operations per quarter}) - (\text{Downtime of solution})}{(\text{Total Expected time of Operations per quarter})} \times 100$

### **Minimum guaranteed uptime per month required (without penalty)**

| # | Location of Solution deployed  | % Uptime per month |
|---|--------------------------------|--------------------|
| A | Central Studio/Regional Studio | 99.00 %            |
| B | Virtual Classroom              | 98.00 %            |

### **Penalties based on downtime of the virtual classroom system**

Penalties will be levied on the selected bidder based on the downtime as specified above in a quarter. For calculation of penalties, any four consecutive quarters taken together will be taken as one year. The penalty will be charged on the quarterly payment payable to the selected bidder towards the Total Project Cost. The mode of calculation for the same is given below. If the selected bidder performs as

per the baseline metrics, then 100% of the amount of the quarterly payment due will be paid to the selected bidder as per the payment terms specified. However, if the selected bidder fails in the SLA resulting in lower performance or breach, then penalty deduction would be appropriately levied as per table below subject to maximum penalty of 10% of quarterly payment. In case the selected bidder's penalty crosses the maximum limit of 10% of quarterly for three consecutive quarters then the EdCIL may decide to terminate the selected bidder's contract.

“QGR” denotes Quarterly Guaranteed Revenue (70% of the Total Project Cost/12 Quarters)

| # | Service Level Parameters                            | Baseline | Breach                                   |                | Basis of Measurement/ Remarks                                     |
|---|---|----------|--|----------------|---|
|   |   |          | Metric                                   | Deductions (%) |   |
| 1 | Uptime at Central Studio/Regional Studio            | 100%     | $\geq 99.00\%$                           | 0              | Measured using Help Desk call report. Penalty capped to 8% of QGR |
|   |   |          | For every 0.5% drop uptime below 99.00%  | 2% of QGR      |   |
|   |   |          | For every 0.5 % drop uptime below 99.00% | 1% of QGR      |   |
| 2 | Uptime at all Virtual Classrooms (For Solution 1&2) | 100%     | $\geq 98.00\%$                           | 0              | Measured using Help Desk call report. Penalty capped to 8% of QGR |
|   |   |          | For every 1 % drop uptime below 98.0%    | 0.5% of QGR    |   |

**\* Penalty for SLA violation for Operations and Maintenance shall be subject to a cap of 10% of QGR. However, in exceptional cases, EdCIL has the right to remove this cap. In case of repeated SLA breach in three consecutive quarters then the selected bidder is liable for termination by EdCIL.**

#### **Compliance & Reporting procedures SLAs**

| Sl. No. | Measurement               | Definition  | Target   | Penalty   |
|---------|---------------------------|---|--|---|
| 1.      | Submission of SLA Reports | The selected Bidder shall submit the SLA reports as requested by the EdCIL. | Report for the previous month shall be submitted by the 7th of the next month. | INR 500 every 1 day of delay in submission on an incremental basis to a maximum of 10% of quarterly payment |

#### **SLA Exclusions**

- Any approved planned downtime of the solution
- Any issues which are outside the scope of the selected bidder.

## CHAPTER-VI

### Eligibility and Bid Evaluation

#### 6.1 Bid Opening

- I. EdCIL will constitute a committee to evaluate the Bids submitted by Bidders. Only two persons for each participating bidder's shall be allowed to attend the Bid opening meetings. The representatives of the bidders are advised to carry the identity card or a letter of authority from the bidders to establish their identity for attending the bid opening.
  
- II. Committee will examine the Proposals to determine whether they are complete, whether the documents have been properly signed and the proposals are generally in order. Any proposals found to be non-responsive for any reason or not meeting any criteria specified in this RFP, will be rejected by the EDCIL and shall not be included for further consideration. Initial proposal scrutiny will be held and the proposals may be treated as non-responsive, if they are:
  - a. Not submitted in the format as specified in this RFP document;
  - b. Received without the Power of Attorney;
  - c. Found with suppression of details;
  - d. Submitted with incomplete information;
  - e. Submitted without the documents required under this RFP;
  - f. Non-compliant to any of the clauses mentioned in this RFP;
  - g. Lesser validity period than that prescribed in this RFP
  
- III. Committee may, at its discretion, call for additional information from the bidder(s) through email/fax/telephone/meeting or any other mode of communication. Such information has to be supplied within the set-out time frame as provided by Committee, otherwise Committee shall make its own reasonable assumptions at the total risk and cost of the bidder and the bid may lead to rejection. Seeking clarifications cannot be treated as acceptance of the bid. For verification of information submitted by the bidders, the committee may visit bidder's offices at its own cost. The bidders shall provide all the necessary documents, samples and reference information as desired by the committee.

#### 6.2 Pre-Qualification Criteria

##### PQ Criteria for Solution 1: Virtual Classroom Solution

| S.No. | Description of the Criteria   | Documents to be Submitted  |
|-------|---|--|
| 1     | <p>The firm should be a company registered in India under Companies Act 1956, Act 2013 or Proprietorship or a partnership registered under the India Partnership Act 1932 or Partnership firm registered under Limited Liability Partnership Act 2008 with their registered office in India in operation for the last seven years. Consortium of companies/ firms is not allowed.</p> <p><b><u>For MSME/NSIC registered bidder:</u></b></p> | <ul style="list-style-type: none"> <li>• Valid copy of certificate of incorporation and registration certificates.</li> <li>• Copy of GST registration. Copies of relevant certificates of registration income tax</li> <li>• PAN</li> </ul> |

|          |   |   |
|----------|---|---|
|          | <p>The firm should be a company registered in India under Companies Act 1956, Act 2013 or Proprietorship or a partnership registered under the India Partnership Act 1932 or Partnership firm registered under Limited Liability Partnership Act 2008 with their registered office in India in operation for the last five years. Consortium of companies/ firms is not allowed.</p>  |   |
| <b>2</b> | <p>Bidder must have minimum average annual turnover of Rs. 50 crores during the last three financial year i.e. 2021-22, 2022-23 and 2023-24<br/> AND<br/> Bidder must be profit making and have positive net worth in each of the last three financial year i.e. 2021-22, 2022-23 and 2023-24</p> <p><b><u>For MSME/NSIC registered bidder:</u></b><br/> Bidder must have minimum average annual turnover of Rs. 40 crores during the last three financial year i.e. 2021-22, 2022-23 and 2023-24<br/> AND<br/> Bidder must be profit making and have positive net worth in each of the last three financial year i.e. 2021-22, 2022-23 and 2023-24</p>   | <ul style="list-style-type: none"> <li>• Audited Profit and Loss Statement and Balance sheets for FY 2021-22, 2022-23 and 2023-24.</li> <li>• Auditor Certificate clearly specifying the turnover along with Profit and Net-worth during the FY 2021-22, 2022-23 and 2023-24.</li> <li>• MSME Bidder should produce valid registration certificate from NSIC/MSME.</li> </ul>   |
| <b>3</b> | <p>The BIDDER should not have been blacklisted by the Central Government, State Governments, PSU or any Government Corporations in India, preceding bid due date.</p>   | <p>Copy of undertaking signed by authorized signatory of bidder should be submitted with the technical bid. Format enclosed as Annexure IV</p>  |
| <b>4</b> | <p>The bidder should have the implementation of 750 smart classrooms/ Virtual Classroom across govt. schools in last three years preceding from bid due date.<br/> and<br/> The bidder should have the implementation of 500 smart classrooms/ Virtual Classroom across govt. schools in a single work order in last three years preceding from bid due date.</p> <p><b><u>For MSME/NSIC registered bidder:</u></b><br/> The bidder should have the implementation of 600 smart classrooms/ Virtual Classroom across govt. schools in last three years preceding from bid due date.<br/> and<br/> The bidder should have the implementation of 400 Smart classrooms/ Virtual Classroom across govt. schools in a single work order in last three years preceding from bid due date.</p> | <p>Copy of work order/MoU<br/> and<br/> completion certificate from client /email from client on project completion/Installation Certificate duly certified from client.</p> <p>The work order should be issued from Center/State Govt/Autonomous bodies only.</p> <p>The quantity of the smart/Virtual classroom should be clearly mentioned in the work order and completion certificate from client /email from client on project completion/Installation Certificate duly certified from client</p> |
| <b>5</b> | <p>The Bidder should have implemented at least one</p>  | <p>Copy of work order/MoU</p>   |

|                 |   |   |
|-----------------|---|---|
|                 | <p>Project of value not less than 20 crores or at least two Projects of value not less than 15 crores in Virtual Classroom/e-Classroom with VSAT solution which must include Hardware, Connectivity and Services as part of the project for Govt./ PSU/ Central Ministry/ State Govt. in India in last 5 years preceding from bid due date.</p> <p><b><u>For MSME/NSIC registered bidder:</u></b><br/> The Bidder should have implemented at least one Project of value not less than 15 crores or at least two Projects of value not less than 10 crores in Virtual Classroom/e-Classroom with VSAT solution which must include Hardware, Connectivity and Services as part of the project for Govt./ PSU/ Central Ministry/ State Govt. in India in last 5 years preceding from bid due date.</p>   | <p>and completion certificate from client /email from client on project completion/Installation Certificate duly certified from client.</p> <p>The work order should be issued from Center/State Govt/Autonomous bodies only.</p>   |
| <p><b>6</b></p> | <p>The bidder should have experience of sale, supply, installation, and maintenance of similar virtual Classroom/e-classroom/e-learning classroom two-way interactive projects (must include hardware (Projector/IFPD, OPS/Computing device, Power backup, student assessment kit, software) with satellite connectivity in minimum 200 Schools in India for educational purposes from any Central/State Government/PSUs in last 5 years preceding from bid due date.</p> <p><b><u>For MSME/NSIC registered bidder:</u></b><br/> The bidder should have experience of sale, supply, installation, and maintenance of similar virtual Classroom/e-classroom/e-learning classroom two-way interactive projects (must include hardware (Projector/IFPD, OPS/Computing device, Power backup, student assessment kit, software) with satellite connectivity in minimum 150 Schools in India for educational purposes from any Central/State Government/PSUs in last 5 years preceding from bid due date.</p> | <p>Copy of work order/MoU and completion certificate from client /email from client on project completion/Installation Certificate duly certified from client.</p> <p>The work order should be issued from Center/State Govt/Autonomous bodies only.</p> <p>The quantity of the schools/smart classroom should be clearly mentioned in the work order and completion certificate from client /email from client on project completion/Installation Certificate duly certified from client</p> |
| <p><b>7</b></p> | <p>VSAT service provider (whose authorization (MAF) is being submitted by the bidder), must have following experience and certifications:</p> <ul style="list-style-type: none"> <li>▪ Minimum 50,000 active VSAT base in India at the time of submission of this tender</li> <li>▪ Satellite gateway with minimum 8 meters antenna along with active operational hub in India Region in last 5 years</li> </ul>  | <p>Declaration by OEM with Supportive Documents</p>   |
| <p><b>8</b></p> | <p>The Bidder should have the following certificates:</p> <ul style="list-style-type: none"> <li>○ ISO 9001:2015 or latest</li> </ul>   | <p>Copies of the valid certificates.</p>  |

|           |   |   |
|-----------|---|---|
|           | <ul style="list-style-type: none"> <li>○ ISO 14001:2015 or latest</li> <li>○ ISO 27001:2013 or latest.</li> </ul>   |   |
| <b>9</b>  | A Power of Attorney / Board Resolution in the name of the person signing of the tender.   | Original Power of Attorney / Board Resolution Copy on a non-judicial stamp paper as per <b>Annexure VIII</b>  |
| <b>10</b> | The BIDDER must not have been declared insolvent/ bankrupt or should not have filed for insolvency/ bankruptcy or in the process of being declared bankrupt before any designated authority preceding bid due<br>Date | A Self Declaration on the Letter head of the BIDDER regarding BIDDER Company not being bankrupt or in process of being declared insolvent / bankrupt as on date as per <b>Annexure XVIII.</b> |
| <b>11</b> | The bidder has to give undertaking for acceptance of terms of “Restrictions on procurement from a bidder of a country which shares a land border with India”  | Undertaking as per <b>Annexure- XIX.</b>  |
| <b>12</b> | The bidder has to provide the MAF for the hardware equipment mentioned at Annexure XIX for Solution 1.  | MAF as per <b>Annexure VII.</b>   |

**Note:**

- EdCIL reserves the right to verify the work order submitted by prospective bidder from issuing department.
- Documents must be provided in support of the following otherwise bids will be summarily rejected.
- Technical bids will also be reviewed for compliance with the necessary Instructions, terms and conditions, scope of work, formats etc. as outlined in this tender.
- Notwithstanding anything stated above, the EdCIL reserves the right to assess bidder’s capability and capacity to perform the contract, should circumstances warrant such an assessment in the overall interest of the EdCIL.

**6.3 Bid Evaluation**

- Evaluation will be based on the bidder meeting the Pre- qualification criteria and subsequent evaluation of financial bid. It is mandatory for the bidder to fulfil all the Pre-qualification criteria to be technically qualified and for being considered for opening of their Financial Bid and evaluation thereof.
- The bidder with lowest financial quote (L1) for total cost of Virtual Classroom Solution (as per Form 1 of Financial Bid) shall be considered for award of contract.

**6.4 Contract Finalization and Award**

The Purchaser shall reserve the right to discuss with the Bidder(s) whose Proposal has been ranked best value bid based on Technical and Commercial Evaluation to the proposed Project, as per the guidance provided by Central Vigilance Commission (CVC).

**6.5 Signing of Contract**

- I. The successful bidder will sign the contract with EdCIL within 15 working days of the release of work order.
- II. At the time of execution of contract, successful bidder shall submit Rs 10,00,000 (Rs Ten lakh) for the VC solution RC as security deposit in the form of DD/NEFT/FDR. The security deposit

will be retained for complete duration of contract. Further, successful bidder will be required to renew the validity of security deposit as per contract validity. The security deposit shall remain valid for a period of 90 (Ninety) days beyond the contract duration.

- III. The contract will be signed as per Annexure XIII format.
- IV. After signing of the contract, no variation in or modification of the terms of the contract shall be made except by mutual written amendment signed by both the parties.

## **6.6 Work Order**

- I. Whenever the Client needs the VC solution, a requirement containing a list of line items or solution (as identified in commercial bid) would be generated. Then the work order will be issued to Selected bidder of that solution directly on the quoted price.
- II. Failure to provide services as per requirement by bidder may result into forfeiture of EMD, PBG & termination of the contract.
- III. The EdCIL reserves the right to place a work order of any time duration.
- IV. EdCIL will intimate the Supplier in writing regarding any extension in the work order. Extension in the contract would not lead to extension of any of the in-force work orders.
- V. Contract termination shall automatically lead to termination or expiry of all work orders which were issued based on the contract.
- VI. The expiry of the contract does not lead to the expiry of the work order. The supplier must complete the obligation of the work order as per the signed contract until the time duration which will be mention in the work order.

## **6.7 Fraud and Corrupt /Malpractices**

All the bidders must observe the highest standards of ethics during the process of selection of Successful Bidder and during the performance and execution of contract.

- I. For this purpose, definitions of the terms are set forth as follows:
  - a. "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the EdCIL or its personnel in contract executions.
  - b. "Fraudulent practice" means a misrepresentation of facts, in order to influence a selection process or the execution of a contract, and includes collusive practice among bidders (prior to or after Proposal submission) designed to establish Proposal prices at artificially high or noncompetitive levels and to deprive EdCIL of the benefits of -responsive. free and open competition.
  - c. "Unfair trade practice" means supply of services different from what is ordered on, or change in the Scope of Work.
  - d. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or execution of contract.
- II. EdCIL will reject a proposal for award, if it determines that the Bidder recommended for award, has been determined to be having been engaged in corrupt, fraudulent or unfair trade practices.

- III. EdCIL will declare a bidder ineligible, either indefinitely or for a stated period of time, for award of contract, if bidder is found to be engaged in corrupt, fraudulent and unfair trade practice in competing for, or in executing, the contract at any point of time.

## **6.8 Failure to Agree with the Terms and Conditions of the RFP**

Failure of the successful bidder to agree with the Draft Legal Agreement and Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event Purchaser may award the contract to the next best value Bidder or call for new proposals from the interested Bidders. In such a case, the Purchaser shall invoke the Fixed Performance Guarantee of the most responsive Bidder.

## **6.9 Indemnity**

- I. The selected Bidder shall execute and furnish to EdCIL a Deed of Indemnity in favor of “EdCIL” in a form and manner acceptable to EdCIL, indemnifying EdCIL from and against any costs, loss, damages, expense, claims including those from third parties or liabilities of any kind howsoever suffered, arising or incurred inter alia during and after the Agreement period out of:
- a) Any negligence or wrongful act or omission by the selected Bidder or the selected Bidder’s Team in connection with or incidental to this Agreement; or
  - b) A breach of any of the terms of selected Bidder Bid as agreed, the RFP and this Agreement by the Bidder or the selected Bidder’s Team.
- II. The indemnity shall be to the extent of 100% in favor of EdCIL.

## Chapter-VII Delivery Timeline & Payment terms

### 7.1 Delivery Schedule

- I. The Supplier should Provide the project plan after getting the work order from EdCIL. Also, the supplier should inform the deviation from the project plan with proper reason to EdCIL.
- II. Bidder shall make all the arrangements for the timely delivery and installation of equipment for successful completion of project. No other incidental/TA/DA/any other such expenditure shall be paid by EdCIL.

| S.No | Milestone   | Timeline<br>(In Calendar Days) |
|------|---|--------------------------------|
| 1.   | Acceptance of LOA   | T+3                            |
| 2.   | Submission of Performance Security                          | T+14                           |
| 3.   | Pre-Delivery Inspection                                     | T+30                           |
| 4.   | Delivery of equipment at school level                       | T+90                           |
| 5.   | Installation and commissioning of equipment at school level | T+120                          |

**Note:** In case of different timelines from the End Client, EdCIL may ask the bidder to implement the project with the timelines provided by the End Client and Bidder has to adhere to the provided timelines. (Note: Timelines may change as per the requirement of the End Client).

- III. In case of any miss happening/ damage to equipment and supplies during the carriage of supplies from the origin of equipment to the installation site, the supplier has to replace it with new equipment/supplies immediately at his own risk. Supplier will settle his claim with the insurance company as per his convenience. EdCIL or End Client will not be liable to any type of losses in any form.

### 7.2 Payment Terms:

- I. Payment will be processed after proper quality checks and signing of handing over certificates by concerned authorities.
- II. No advance payment shall be released to the Supplier.
- III. Payment to the Supplier shall be made in Indian Rupees through account payee cheque / NEFT / RTGS, Payments will be done only on the back-to- back basis on receipt of the related payment/funds from the end client. Subject to submission of following documents:
  - PDI Certificate issued by the nominated inspection committee (signed and stamped) as applicable.
  - Delivery Certificates in original duly Signed and Stamped by the authorized official (Teacher / Principal / Head Master / Head Mistress / Warden) of the end client. (Or as per the requirement of the end client).
  - Installation and commissioning report in original duly Signed and Stamped by the

authorized official (Teacher / Principal / Head Master / Head Mistress / Warden) of the end client. (Or as per the requirement of the end client).

- E-way Bills of all the equipments.
  - Suppliers/Manufacturer's warranty certificate of all the items after the installation of equipment.
  - If requested from end client, confirmation from the end client for the successful delivery and installation of the equipment at the specified location.
  - Letter of successful performance during warranty period signed and stamped by client/EdCIL.
- IV. However, 10% of the total project cost including taxes will be withheld for onsite comprehensive warranty.
- V. The payment terms may vary according to the order received by EdCIL from their respective clients.
- The invoices shall be billed to GST No. of EdCIL and should be based on work orders (or any amendments thereof) issued by EdCIL.
  - Payment will be done on back-to-back basis on receipt of related payment/funds from the end client.
  - Warranty start will be reckoned from the date of commissioning as approved by the end client.
  - The invoices must be based on work orders (or any amendments thereof) issued by the EdCIL.
  - SLA Breaches (if any) provided by the client may also result in deduction of the payment against the work order.
  - Geo-tagged school wise colored photographs of every delivery location when the product is delivered and when the product is installed provide location wise colored photographs and videos of 1 – minute duration (in soft copy) separately. The video must capture the functionality of the device(s) in presence of any school/concerned official/teacher.
  - Payments shall be subject to deductions / damages / penalties of any amount for which the Supplier is liable under the contract. Further, all payments shall be made subject to deduction of TDS (Tax Deduction at Source) at the rate applicable from time to time as per the Income-Tax Act, 1961 and any other applicable deductions/ taxes.

## Chapter-VIII

### Key Contract Terms

#### **8.1 Standards of Performance**

The Successful bidder shall deliver the services and carry out their obligations with due diligence, efficiency and economy in accordance with generally accepted professional standards and practices. The Successful bidder shall always act in respect of any matter relating to this contract as faithful successful bidder to EdCIL. The Successful bidder shall always support and safeguard the legitimate interests of EdCIL, in any dealings with the third party. The Successful bidder shall conform to the standards laid down in the RFP in totality.

#### **8.2 Applicable Law**

The Contract should be interpreted in accordance with the laws of the Union of India and all disputes should be subject to place of jurisdiction. The place of jurisdiction would be New Delhi (India).

#### **8.3 Governing Language**

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

#### **8.4 Taxes**

Successful Bidder should be entirely responsible for all taxes incurred until delivery of the contracted Services. Only GST charged in the invoice will be paid; other than that no other taxes/ duties/ levies will be paid.

#### **8.5 Successful bidder Integrity**

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

#### **8.6 Termination for default**

The EdCIL should, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Successful bidder, terminate the Contract in whole or part:

- I. In case the supplier fails to submit the performance bank guarantee within stipulated time, EdCIL reserved the right to terminate the contract without any further notice.
- II. If the Successful bidder fails to complete the work within the period(s) specified in the order, or within any extension thereof granted by the EdCIL; or
- III. If the Successful bidder fails to perform any other obligation(s) under the Contract.
- IV. If the Successful bidder, in the judgment of the EdCIL has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- V. For the purpose of this Clause:

- “Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
- “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition;
- In the event the EdCIL terminates the Contract in whole or in part, the EdCIL should procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Successful bidder should be liable to the EdCIL for any excess costs for such similar Goods or Services. However, the Successful bidder should continue the performance of the Contract to the extent not terminated.

### **8.7 Risk Purchase Clause**

In event of failure of completion of work within the stipulated delivery schedule, the consignee has all the right to purchase the item/equipment/service from the other source on the total risk and cost of the successful bidder under risk purchase clause.

### **8.8 Force Majeure**

The Successful bidder should not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, it’s delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

- I. For purposes of this Clause, "Force Majeure" means an event beyond the control of the Successful bidder and not involving the Successful bidder's fault or negligence and not foreseeable. Such events shall include, but are not limited to, acts of the Consignee either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- II. If a Force Majeure situation arises, the Successful bidder should promptly notify the Consignee in writing of such conditions and the cause thereof. Unless otherwise directed by the Consignee in writing, the Successful bidder shall continue to perform its obligations under the Contract as far as is reasonably practical, and should seek all reasonable alternative means for performance not prevented by the Force Majeure event.

### **8.9 Confidential Information**

Each Party (the “Receiving Party”) acknowledges and agrees to maintain the confidentiality of Confidential Information (as hereafter defined) provided by the other Party (the “Disclosing Party”) hereunder. The Receiving Party shall not disclose or disseminate the Disclosing Party’s Confidential Information to any person other than those employees, agents, contractors, subcontractors and licensees of the Receiving Party, or its affiliates, who have a need to know it in order to assist the Receiving Party in performing its obligations, or to permit the Receiving Party to exercise its rights under this Agreement. In addition, the Receiving Party (i) shall take all such steps to prevent unauthorized access to the Disclosing Party’s Confidential Information, as it takes to protect its own confidential or proprietary information of a similar nature, which

steps shall in no event be less than a reasonable standard of care, (ii) shall not use the Disclosing Party's Confidential Information, or authorize other persons or entities to use the Disclosing Party's Confidential Information, for any purposes other than in connection with performing its obligations or exercising its rights hereunder, and (iii) shall require all persons and entities who are provided access to the Disclosing Party's Confidential Information, to execute confidentiality or non-disclosure agreements containing provisions substantially similar to those set forth in this Clause. The provisions of this Clause respecting Confidential Information shall not apply to the extent, but only to the extent, that such Confidential Information is: (a) already known to the Receiving Party free of any restriction at the time it is obtained from the Disclosing Party, (b) subsequently learned from an independent third party free of any restriction and without breach of this provision; (c) is or becomes publicly available through no wrongful act of the Receiving Party or any third party; (d) is independently developed by the Receiving Party without reference to or use of any Confidential Information of the Disclosing Party; or (e) is required to be disclosed pursuant to an applicable law, rule, regulation, government requirement or court order, or the rules of any stock exchange. Upon the Disclosing Party's written request at any time, or following the completion or termination of this Agreement, the Receiving Party shall promptly return to the Disclosing Party, or destroy, all Confidential Information of the Disclosing Party provided under or in connection with this Agreement, including all copies, portions and summaries thereof.

#### **8.10 Non-Disclosure**

The firm and their personnel shall not, either during the term or after expiration of this contract, disclose any proprietary or confidential information relating to the services, contract, terms, prices or the client's business or operations details without the prior written consent of the client.

#### **8.11 Prices**

The prices must be quoted in the Performa given in Financial Bid failing which the Bid would be treated as unresponsive. Any discount or any other offers affecting the overall price must be mentioned in Financial Bid only. Discount or any other offers affecting the overall price mentioned at any other place of the bid other than Financial Bid will not be considered. Price information shall not be there in Technical Bid. The prices quoted by the bidder should be valid for a period of 5 years.

#### **8.12 Limitation of Liability**

Neither Party shall be liable to the other Party for any indirect or consequential loss or damage (including loss of revenue and profits) arising out of or relating to the Contract.

#### **8.13 Indemnity**

The successful bidder shall indemnify EdCIL from and against any costs, loss, damages, expense, claims including those from third parties or liabilities of any kind howsoever suffered, arising or incurred inter alia during and after the Contract period out of:

- I. Any negligence or wrongful act or omission by the successful Bidder or the successful Bidder's Team or any third party associated with Bidder in connection with or incidental to this contract; or

- II. Any breach of any of the terms of the successful Bidder's Bid as agreed, the Tender and this Contract by the successful Bidder, or the successful Bidder's Team or any third party.
- III. Any infringement of patent, trademark/copyright arising from the use of related services or any part thereof.

The indemnity shall be to the extent of 100% in favor of EdCIL.

#### **8.14 Liquidated Damages**

- I. Notwithstanding EdCIL's right to cancel the order, liquidated damages for non-conformance to the SLAs mentioned in this RFP document will be charged as per the penalties, subject to a maximum of 10% of the total value of the Work Order.
- II. EdCIL reserves its right to recover these amounts by any mode such as adjusting from any payments to be made by EdCIL to the successful bidder.
- III. Applicable GST shall be charged extra from the successful bidder on SLA penalty and other Liquidated Damages.

#### **8.15 Arbitration**

- I. Any dispute arising out or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration administered by the Indian International Arbitration Centre (IIAC) in accordance with the Indian International Arbitration Centre (conduct of arbitration) Regulations (IIAC regulations) for the time being in force, which regulations are deemed to be incorporated by reference in this clause.
- II. The place/seat of arbitration shall be New Delhi India. The tribunal shall consist of one arbitrator(s)
- III. The law governing the arbitration agreement shall be Indian law. The language of the arbitration shall be English. The governing law of the contract shall be Indian law
- IV. The arbitration cost shall be borne by the supplier.

#### **8.16 Jurisdiction**

Any legal disputes arising out of any breach of contract pertaining to this tender should be settled in the court of competent jurisdiction located within New Delhi.

#### **8.17 Compliance Certificate**

The bidder must provide this certificate on their letter head indicating conformity to the technical specifications. (as per Annexure VI).

#### **8.18 Award of Contract**

- I. EdCIL reserves the right to accept or reject any proposal and to annul the bidding process and reject all proposals at any time prior to award of contract, without hereby incurring any liability to the Bidders. In case of annulment, all proposals submitted and specifically, proposal securities shall be promptly returned to the Bidder.
- II. EdCIL has the right to review at any time prior to award of contract that the prequalification criteria, are still being met by the Bidder whose offer has been determined as first rank. A

proposal shall be rejected if the pre-qualification criteria, are no longer met by the Bidder whose offer has been determined as first rank.

### **8.19 Notices**

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

For the purpose of all notices, the following should be the address Consignee:

The Chief General Manager (DES)  
EdCIL (India) Limited,  
18 A, Sector-16A,  
Noida-201301, Uttar Pradesh  
Tel: 91-120-2512001 to 2512006

Successful bidder: (To be filled in by the successful bidder)

### **8.20 Escalation Matrix:**

The bidder should provide at-least 3 level escalation matrix for providing resolution of the complaints at local level.

### **8.21 Acknowledgement**

It is hereby acknowledged that we have gone through all the conditions mentioned above and below and we agree to abide by them.

### **8.22 Fall Clause**

The Bidder undertakes that he has not supplied/is not supplying the similar service/ product/ systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/ Department of the Government of India or PSU and if it is found at any stage that the similar service/ product/ systems or sub-system was supplied by the Bidder to any Ministry/ Department of the Government of India or PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the Bidder to the Purchaser, if the contract has already been concluded.

### **8.23 Termination for Convenience**

EdCIL reserves the right to terminate the contract at any time without assigning any reason thereof.

**ANNEXURE-I**  
**Technical Compliance Sheet**

We hereby confirm that we are complying to the technical specifications as specified in the tender document and the offer is submitted in accordance of the technical requirement. The all relevant documents in support of our claims are enclosed at the following pages:

Signature of Bidder Name: \_\_\_\_\_

Designation: \_\_\_\_\_

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

Contact No.: \_\_\_\_\_

Seal of the Company:

**ANNEXURE-II**  
**<< Organization Letter Head >>**  
**DECLARATION SHEET**

We, \_\_\_\_\_ hereby certify that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

We further certified that our organization meets all the conditions of eligibility criteria laid down in this tender document. Moreover, we will support on regular basis with technology / product updates and extend support for the warranty.

|  |   |
|--|---|
| We, further specifically certify that our organization has not been Black Listed/ De Listed or put to any Holiday by any Institutional Agency/ Govt. Department/ Public Sector Undertaking as on date. | NAME & ADDRESS of the VENDOR/<br>MANUFACTURER/<br>AGENT |
| 1 Phone  |   |
| 2 Fax  |   |
| 3 E-mail   |   |
| 4 Contact Person Name  |   |
| 5 Mobile Number  |   |
| 6 TIN Number   |   |
| 7 PAN Number   |   |
| (In case of on-line payment of EMD)<br>8. UTR No. (For EMD)  |   |
| 9. Kindly provide bank details of the bidder in the following format:<br>a) Name of the Bank   |   |
| b) Account Number  |   |
| c) Kindly attach scanned copy of one Cheque book page to enable us to return the EMD to unsuccessful   |   |

(Signature of the Tenderer)  
**Seal of the Company**

**ANNEXURE-III**  
**Letter of undertaking**  
**(ON THE LETTER HEAD OF THE BIDDER)**

To  
Chief General Manager (DES)  
EdCIL (India) Limited  
(EdCIL) EdCIL House, 18 A,  
Sector-16 A, NOIDA – 201301 (U.P.)

Sir,

**SUBJECT- Selection of System Integrator for Entering into Rate Contract for design, supply & installation of Virtual Classroom solution**

This bears reference to EdCIL Bid No. **EdCIL/DES/RC VC Solution/2025/004**  
dated .....

We, hereby, accept all the terms and conditions for submitting bid as mentioned in this Bid Document.

We hereby certify that no terms and conditions have been stipulated by us in the Technical Bid.

We warrant that the services do not violate or infringe upon any patent, copyright, trade secret or other property right of any other person or other entity. We agree that we shall not prevent EdCIL from any claim or demand, action or proceeding, directly or indirectly resulting from or arising out of any breach or alleged breach of any of the terms & conditions of bid document and contract.

The above document is executed on ..... at (place)\_\_\_\_\_ and we accept that if anything out of the information provided by us is found wrong, our bid/ work order shall be liable for rejection.

Thanking you,

Yours faithfully,

Date:

Place:

**ANNEXURE-IV**  
**UNDERTAKING OF NON-BLACKLISTING**

This is to confirm that we M/s \_\_\_\_\_ (give full address) have not been declared neither **failed to perform on any Agreement, nor have been expelled from any project or Agreement nor any Agreement terminated** for breach by the us (Agency) in any of the government department and public sector undertaking /enterprise or by any other Client in India, in last five year before release of advertisement.

If the above information found false at any stage after the placement of Work Order / Agreement, EdCIL (India) Limited (EdCIL), 18-A, Sector 16-A, Noida will have full right to cancel the Contact and forfeit the Performance Guarantee. All the direct and indirect cost related to the cancellation of the order will be borne by us besides any legal action by EdCIL which shall be deemed fit at that point of time.

Authorized Signatory

**Note: The undertaking regarding the non-blacklisting of firm is to be submitted on a non-judicial stamp paper of Rs. 100/- (Rupees Hundred only).**

**ANNEXURE-V**  
**Financial Statement**

| <b>Sl. No.</b>                                 | <b>Financial Year</b> | <b>Annual Turn over</b> | <b>Net Worth</b> |
|--|-----------------------|-------------------------|------------------|
| 1.   | 2022-23               |                         |                  |
| 2.   | 2023-24               |                         |                  |
| 3.   | 2024-25               |                         |                  |
| Total  |                       |                         |                  |
| Average of FY- 2022-23, 2023-24<br>and 2024-25 |                       |                         |                  |

Note: Certificate from Statutory Auditor/ Chartered Accountant certifying balance sheet only for all three years to be attached.

**Signature with Seal of the Chartered  
Accountant**

**Signature with Seal of the Bidder**

**ANNEXURE-VI**

**List of Orders Completed During Last 5 years for Govt. Organizations /Autonomous Institutes in India**

**Bid No.:**

**Date:**

**Name of the Firm:**

| S.No | Name of Client | Name of the Project and brief description | Value (Exclusive Tax) | Date of award | Date of Completion | Current Status and duration of maintenance period for ongoing project | Name of Contact Person and other details |
|------|----------------|---|-----------------------|---------------|--------------------|---|--|
| 1.   |                |   |                       |               |                    |   |  |
| 2.   |                |   |                       |               |                    |   |  |
| 3.   |                |   |                       |               |                    |   |  |
| 4.   |                |   |                       |               |                    |   |  |

Signature of Bidder

**(Signature with seal)**

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

Designation: \_\_\_\_\_

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

Contact No. : \_\_\_\_\_

**ANNEXURE-VII**

**Manufacturer's Authorization Form (MAF)**  
**{to be filled by OEM}**

To  
Chief General Manager (DES),  
EdCIL (India) Limited,  
EdCIL House, 18A, Sector- 16A,  
NOIDA- 201 301 (U.P)

**Subject: OEM Authorization Letter for Request for Proposal (RFP) for Selection of System Integrator for Entering into Rate Contract for design, supply & installation of Virtual Classroom solution**

Dear Sir,

We, who are established and reputable having factories / development facilities at (address of factory / facility) do hereby authorize \_\_\_\_\_ to submit a Bid, and accept the Purchase Order against the above Bid Invitation.

We hereby extend our full guarantee and warranty for the Solution, Products and services offered by the above firm against this Bid Invitation. We further undertake that we will support the supplier will all related spares and maintenance during the entire contract period.

We duly authorize the said firm to act on our behalf in fulfilling all installations, technical support and maintenance obligations required by the Project.

Yours faithfully,

Name:

Seal:

Note: This letter of authority should be on the letterhead of the OEM

**ANNEXURE-VIII**  
**Power of Attorney**

Know all men by these presents, we..... (name of firm and address of the registered office) do hereby constitute, nominate appoint and authorize Mr./Ms..... son/daughter/wife of ... and presently residing at....., who is presently employed with /retained by us and holding position of.....as our true and lawful attorney

(Hereinafter referred to as the “Authorized Representative”) to do in our name and on our behalf, all such acts, deeds and things as necessary or required in connection with or incidental to submission of our proposal for and selection as the <project title> for the <name of the client> project, proposed to be developed by the ..... (the “client”) including but not limited to signing and submission of all applications, proposals and other documents and writings, participating in pre bid and other conferences and providing information /responses to the client, representing us in all matters before the Client, signing and execution of all contracts and undertakings consequent to acceptance of our proposal and generally dealing with the client in all matter in connection with or relating to or arising out of our Proposal for the said project /or upon award thereof to us till the entering into of the Agreement with the client.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawful done or caused to be done by our said Authorized Representative pursuant to and in exercise of the powers conferred by this power and Attorney and that all acts, and things done by our said Authorized Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

[IN WITNESS WHEREOF WE..... THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON

THIS ..... DAY OF..... 2024.

For.....(Name and registered address of client)

(Signature, name, designation, and address)

Witness:

1. (Signature, name and address)
2. (Signature, name and address)

Notarized

Accepted

.....

(Signature, name, designation, and address of the attorney)

Notes:

1. The mode of the execution of the power of Attorney shall be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants (s) and when it is so required the same should be under seal affixed in accordance with the required procedure.
2. Wherever required, the applicant should submit for verification the extract of the charter documents and other documents such as a resolution/Power of Attorney in favor of the person executing this Power of Attorney for delegation of power hereunder on behalf of the applicant.
3. For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power and Attorney is being issued. However, the Power of Attorney provided by the applicants from countries that have signed The Hague Legislation Convention, 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.

**ANNEXURE-IX**  
**LETTER OF BID SUBMISSION**

To  
Chief General Manager (DES),  
EdCIL (India) Limited,  
EdCIL House, 18A,  
Sector- 16A,  
NOIDA- 201 301 (U.P)

**SUBJECT:** Selection of System Integrator for Entering into Rate Contract for design, supply & installation of Virtual Classroom solution

*-Submission of Bid -*

Sir,

Having examined the details given in Press Notice, Notice Inviting Bid & Bid Document for the above work, I/we hereby submit the relevant information.

1. I/We hereby certify that all the statements made and information supplied in the enclosed form \_\_\_\_\_ and accompanying statements are true and correct.
2. I / we certify that we have not changed/ altered any word/sentence or any figure in number/s or words appearing the original tender document uploaded by EdCIL on the designated web page for e-tendering. In case, if a fraudulent activity is found at any stage between tender submission to final closure of the tender/contract, our candidature/bid/contract shall be immediately cancelled and EMD/Performance security/ security deposit along with the due amount towards the work executed or advance shall be forfeited. EdCIL will not entertain any claim or entertain any reason for this intentional act. EdCIL may go for the legal action against the bidder for recovering any one or all damages caused to EdCIL or its client on this account.
3. I/We have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
4. I/We submit the requisite **certified solvency certificate** and authorize the EdCIL to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/We also authorize EdCIL to approach individuals, employers, firms and corporation to verify our competency and general reputation.

5. I/We submit the following **certificates** in support of our suitability, technical knowledge and capability for having successfully completed the following works:

| <b>S.No.</b> | <b>Name of Work</b> | <b>Certificate From</b> |
|--------------|---------------------|-------------------------|
|              |                     |                         |
|              |                     |                         |

6. Earnest Money Deposit amounting to Rs. \_\_\_ for solution \_\_ in the form of DD/Pay Order No. ----- dated ----- issued by ----- Bank is submitted.

7. Demand Draft of Rs. (NIL)/- towards Bid document cost.: If applicable

Enclosures:

Date of Submission:

**ANNEXURE – X**  
**Bank Guarantee towards Bid Security (EMD)**

Bank Guarantee No. \_\_\_\_\_

**To**  
**Chief General Manager (DES),**  
**EdCIL (India) Limited,**  
**EdCIL House, 18A, Sector- 16A,**  
**NOIDA- 201 301 (U.P)**

Whereas ..... (here in after called "the Bidder") has submitted its Bid dated .....(Date) in response to the RFP No: ..... for SELECTION OF SERVICE PROVIDER FOR “Selection of System Integrator for Entering into Rate Contract for design, supply & installation of Virtual Classroom solution (here in after called "theBid")

KNOW ALL MEN by these presents that We..... having our registered office at..... (hereinafter called the "Bank") are bound onto EdCIL India Limited, Noida (hereinafter called "EdCIL") in the sum of.....for which payment well and truly to be made to the said EdCIL itself, its successorsand assignees by these presents.

The conditions of these obligations are:

1. If the Bidder withdraws its Bid during the period of Bid validity or
2. If the Bidder, having been notified of the acceptance of its Bid by EdCIL

during the period of Bid validity:

1. fails or refuses to execute the Agreement form if required; or
2. fails or refuses to furnish the performance security, in accordance with the Bid requirement

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

This guarantee will remain in force up to (Date) and any demand in respect thereof should reach the Bank not later than the above date.

Dated: The Day of for

(Indicate the name of bank)

Signature of Banks Authorized official

Witness (Name)\_\_\_\_\_

Designation with Code No. -----

1. Full Address-----

2.

**Annexure XI**  
**PERFORMANCE BANK GUARANTEE FORMAT**

Name of the Bank: \_\_\_\_\_

To

**Chief General Manager (DES),  
EdCIL (India) Limited,  
EdCIL House, 18A, Sector- 16A,  
NOIDA- 201 301 (U.P)**

In consideration of the Chief General Manager EdCIL acting through \_\_\_\_\_  
(Designation & address of Contract Signing Authority), (hereinafter called “The EdCIL  
(India) Ltd”) having agreed under the terms and conditions of agreement/ Contract  
Acceptance letter No. \_\_\_\_\_

Dt : \_\_\_\_\_ Made between \_\_\_\_\_ (Designation & address of contract  
signing Authority) and \_\_\_\_\_ (here in after called “the said Agency” for the  
work \_\_\_\_\_ (here in after called “the said agreement”) having agreed  
for submission of a irrevocable Bank Guarantee Bond for \_\_\_\_\_ ₹  
( ₹ \_\_\_\_\_ only) as a performance security Guarantee from the Agency for  
compliance of his obligations in accordance with the terms & conditions in the said  
agreement.

1. We \_\_\_\_\_ (Indicate the name of the Bank) hereinafter referred to as the Bank,  
undertake to pay to the EdCIL (India) Ltd an amount not exceeding  
₹ \_\_\_\_\_ ( ₹ \_\_\_\_\_ only) on demand by the EdCIL (India) Ltd.
  
2. We \_\_\_\_\_ (Indicate the name of the bank, further agree that (and promise) to  
pay the amounts due and payable under this guarantee without anydemur merely on a  
demand from the EdCIL (India) Ltd through the CGM(DES),  
EdCIL, (India) Ltd. Noida or \_\_\_\_\_ (Designation & Address of  
contract signing authority), stating that the amount claimed is due by way of

loss or damage caused to or would be caused or suffered by the EdCIL (India) Ltd by reason of any breach by the said Agency of any of the terms of conditions contained in the said agreement or by reason of the Agency failure to perform the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding (\_\_\_\_\_ Only).

3. (A) We ₹ \_\_\_\_\_ (indicate the name of Bank) further undertake to pay to the EdCIL (India) Ltd any money so demanded notwithstanding any dispute or dispute raised by the Agency in any suite or proceeding pending before any court or Tribunal relating to liability under this present being absolute and unequivocal.

(B) The payment so made by us under this Performance Guarantee shall be a valid discharge of our liability for payment there under and the Agency shall have no claim against us for making such payment.

4. We \_\_\_\_\_ (Indicate the name of bank) to further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the EdCIL (India) Ltd under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged by \_

(Designation & Address of contract signing authority) on behalf of the EdCIL (India) Ltd, certify that the terms and conditions of the said agreement have been fully and properly carried out by the said Agency and accordingly discharges this guarantee.

5 (a) Notwithstanding anything to the contrary contained herein the liability of the bank under this guarantee will remain in force and effect until such time as this guarantee is discharged in writing by the EdCIL (India) Ltd or until ( date of validity/ extended validity) whichever is earlier and no claim shall be valid under this guarantee unless notice in writing thereof is given by the EdCIL (India) Ltd within validity/ extended period of validity of guarantee from the date aforesaid.

(b) Provided always that we \_\_\_\_\_ (indicate the name of the Bank) unconditionally undertakes to renew this guarantee or to extend the period of guarantee form year to year before the expiry of the period or the extended period of the guarantee, as the case shall be on being called upon to do so by the EdCIL (India) Ltd. If the guarantee is not renewed or the period extended on demand, we \_\_\_ (indicate the name of the Bank) shall pay the EdCIL (India) Ltd the full amount of guarantee on demand and without demur.

6. We \_\_\_\_\_ ( indicate the name of Bank ) further agree with the EdCIL (India) Ltd that the EdCIL (India) Ltd shall have the fullest liberty without our consent and without effecting in any manner out of obligations hereunder to vary any of the terms and

conditions of the said contract from time to time or to postpone for any time or from time to time any to the powers exercisable by the EdCIL (India) Ltd against the said Agency and to forbear or enforce any of the terms and conditions of the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Agency for any bearing act or omission on the part of the EdCIL (India) Ltd or any indulgence by the EdCIL (India) Ltd to the said Agency for by any such matter or thing whatsoever under the law relating to sureties for the said reservation would relieve us from the liability.

7. This guarantee will not be discharged by any change in the constitution of the Bank or the Agency.
8. We, \_\_\_\_\_ (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the EdCIL (India) Ltd in writing.
9. This guarantee shall be valid up to (Date of Completion plus 90 Days). Unless extended on demand by EdCIL (India) Ltd. Notwithstanding anything to the contrary contained hereinbefore, our liability under this guarantee is restricted to Rs..... (Rs.....only) unless a demand under this guarantee is made on us in writing on or before..... we shall be discharged from our liabilities under this guarantee thereafter.

Dated:                    The                    Day of                    For

(Indicate the name of bank)

Signature of Banks Authorized official

Witness (Name) \_\_\_\_\_

Designation with Code No. -----

1 Full Address-----

2.

**ANNEXURE-XII**  
**PROFORMA PRE CONTRACT INTEGRITY**  
**PACT**

**GENERAL**

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on day of the month of .... 2024, between, on one hand, acting through Shri/Smt. \_\_\_\_\_, Designation, EdCIL (India) Limited (hereinafter called the “BUYER”/ “EdCIL” interchangeably, which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part

**AND**

M/s \_\_\_\_\_ represented by Shri \_\_\_\_\_, Chief Executive Officer (hereinafter called the “BIDDER/Seller” which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the EdCIL proposes to procure services towards **“Selection of System Integrator for Entering into Rate Contract for design, supply & installation of Virtual Classroom solution”**.

For its clients and BIDDER/Seller is willing to offer the said services and related items as referred to in the Bid document No. **EdCIL/DES/RC VC Solution/2025/004** Dated .....2025.

WHEREAS the BIDDER is a private company /public company / Government undertaking / partnership / registered expert agency, constituted in accordance with the relevant law in the matter and the EdCIL is a Public Sector Undertaking under Ministry of Human Resource Development performing its functions.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence / prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

Enabling the EdCIL to obtain the desired services as referred to in the Bid document No. **EdCIL/DES/RC VC Solution/2025/004** dated .....2025 at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement and Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the EdCIL will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

## **1. Commitments of the EdCIL**

- 1.1 The EdCIL undertakes that no official of the EdCIL, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favor or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
- 1.2 The BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
- 1.3 All the officials of the EdCIL will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the EdCIL with full and verifiable facts and the

same is prima facie found to be correct by the EdCIL, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings shall be initiated by the EdCIL and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the EdCIL the proceedings under the contract would not be stalled.

### **3. Commitments of Bidders**

The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:

- 3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the EdCIL, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
- 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the EdCIL or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavor to any person in relation to the contract or any other contract with the Government.
- 3.3 Bidders shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.

- 3.4 BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
- 3.5 The BIDDER further confirms and declares to the EdCIL that the BIDDER is the original manufacturer/integrator/authorized government sponsored export entity and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the EdCIL or any of its functionaries, whether officially or unofficially to the award to the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation, as the case shall be for satisfactory performance of the proposed terms of Bidder.
- 3.6 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the EdCIL or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
- 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the EdCIL as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.12 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the EdCIL, or alternatively, if any relative of an officer of the EdCIL has financial interest / stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of Bid.

3.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the EdCIL.

#### **4. PREVIOUS TRANSGRESSION**

4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this integrity pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the bid process.

4.2 The BIDDER agrees that if it makes incorrect statement on this subject. BIDDER can be disqualified from the Bid process or the contract, if already awarded, can be terminated for such reason.

#### **5. EARNEST MONEY DEPOSIT**

5.1 While submitting Technical bid, the BIDDER shall deposit an amount of Rs. 10,00,000 for each solution as Earnest Money with the EdCIL through Account Payee Bank Demand Draft/ BG in favor of EdCIL (India) Limited.

5.2 The instrument for Security Deposit made shall be valid up to the specified period and the bidder shall be liable to keep the said instrument valid for such extended period as the case shall be for satisfactory performance of the terms of Bidder above referred till the complete conclusion of the contractual obligations to the complete satisfaction of

both the BIDDER and the EdCIL, including O&M period, whichever is later.

- 5.3 In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond in the corresponding Contract governing such agreement that the provisions of Sanctions for Violation shall be applicable for encashment of Performance Bank Guarantee deposited towards forfeiture of said amount in case of a decision by the EdCIL to forfeit the same without assigning any reason for imposing such sanction.
- 5.4 No interest shall be payable by the EdCIL to the BIDDER on Earnest Money Deposit for the period of its currency.

## 6. SANCTIONS FOR VIOLATIONS

- 6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the EdCIL to take all or any one of the following actions, wherever required:
- To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
  - The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit / Performance Bond (Bank Guarantee) (after the contract is signed) shall stand forfeited either fully or partially, as decided by the EdCIL and the BUYER (EdCIL) shall not be required to assign any reason therefore.
  - To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
  - To recover all sums already paid by the EdCIL, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR as the case shall be. If any outstanding payment is

due to the BIDDER from the EdCIL in connection with any other contract for any other stores or on any account whatsoever and by whatsoever name called, such outstanding payment could also be utilized to recover the aforesaid sum and interest thereto.

- To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the EdCIL, along with interest.
- To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the EdCIL resulting from such cancellation/rescission and the EdCIL shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.
- To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which shall be further extended at the discretion of the EdCIL.
- To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.
- In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the EdCIL with the BIDDER, the same shall not be opened.
- Forfeiture by way of encashment of Performance Bond in case of a decision by the EdCIL to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The EdCIL will be entitled to take all or any of the actions mentioned at Para 6.1(i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of any offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the EdCIL to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, an Independent Monitor(s) shall be appointed by EdCIL, in case of breach of the provisions of the pact.

## 7. INDEPENDENT MONITORS

- 7.1 An Independent monitor (s) shall be appointed by EdCIL, in case of breach of the provisions of the pact.
- 7.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.
- 7.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.
- 7.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project / procurement, including minutes of meetings.
- 7.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the EdCIL.
- 7.6 The BIDDER(s) accept that the Monitor has the right to access without restriction to all Project documentation of the EdCIL including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Sub-bidders. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Sub-bidder(s) with confidentiality.
- 7.7 The EdCIL will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.
- 7.8 The Monitor will submit a written report to the designated Authority of BUYER/Secretary in the Department/within 8 to 10 weeks from the date of reference or intimation to him by the EdCIL / BIDDER and, shall the occasion arise, submit proposals for correcting problematic situations.

## **8. FACILITATION OF INVESTIGATION**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the EdCIL or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

## **9. LAW AND PLACE OF JURISDICTION**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the EdCIL.

**10. OTHER LEGAL ACTIONS**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that shall follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

**11. VALIDITY**

11.1 The validity of this Integrity Pact shall be governed by the terms of the Bid No. EdCIL/DES/RC VC Solution/2025/004 towards complete execution of the contract to the satisfaction of both the EdCIL and the BIDDER/Seller, including O&M period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract awarding the Bidder with successful bidder.

11.2 Shall one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

12. The parties hereby sign this Integrity Pact at \_\_\_\_\_ on \_\_\_\_\_.

EdCIL (India) Limited  
Name of the Officer

BIDDER  
: CHIEF  
EXECUTIVE OFFICER

Designation:

Witness:

\_\_\_\_\_

\_\_\_\_\_

Witness:

1. \_\_\_\_\_

2. \_\_\_\_\_

*(The Pre-Contract Integrity Pact shall be modified based in line with the conditions of the Bid Documents)*

**Annexure XIII**

**Contract Form**

THIS AGREEMENT made the ..... day of ..... 2024 between ..... EdCIL (Hereinafter called "the Purchaser") of the one part and ..... (Name & address of Supplier) ..... (Hereinafter called "the Supplier") of the other part:

WHEREAS the Purchase is desirous that certain Goods and ancillary services viz. .... (Brief Description of Goods and Services) and has accepted a bid by the Supplier for the supply of those goods and services in the sum of ..... (Contract Prize in words and Figures) (Hereinafter called "the Contract Price")

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.,
  - [a] The Price Schedule submitted by the Bidder;
  - [b] The Schedule of Requirements;
  - [c] The Terms & Conditions
  - [d] The EdCIL's Notification of Award/ Purchase Order
3. In consideration of the payments to be made by the EdCIL to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the EdCIL to provide the goods and services and to remedy defects herein in conformity in all respects with the provisions of the Contract.
4. The EdCIL hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract prices or such other sum as shall become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

Brief particulars of the goods and services, which shall be supplied/ provided by the Supplier, are as under:

| S. No. | Brief Description of Goods & Services | Quantity to be supplied | Unit Price | Total Price | Delivery Terms |
|--------|---------------------------------------|-------------------------|------------|-------------|----------------|
|--------|---------------------------------------|-------------------------|------------|-------------|----------------|

TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS where of the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first abovewritten.

Signed, Sealed and Delivered by the  
said..... (For the EdCIL)

in the presence of .....

Signed, Sealed and Delivered by the  
said.....(For the Supplier)

in the presence of .....

**Annexure XIV**  
**DELIVERY CERTIFICATE FORMAT**

The items mentioned as per details given below, have been physically verified by way of opening the cartons/packing and verifying the machine/ equipment supplied and model of the Equipment/Items. It is certified and acknowledged that the same have been received at this Institution in good condition.

| Sl. No. | Address | School Name | Description of Equipment | Serial No of Device | Make | Model | Quantity |
|---------|---------|-------------|--------------------------|---------------------|------|-------|----------|
| 1       |         |             |                          |                     |      |       |          |
|         |         |             |                          |                     |      |       |          |
|         |         |             |                          |                     |      |       |          |

Please make appropriate column, as per requirement.

The items as per details given below was/were received in damaged conditions and therefore are not acceptable. This damaged goods / equipment have been returned to the supplier and supplier is required to supply the new equipment in lieu of damaged one.

**Details of the Goods/Equipment received in objectionable condition**

| Sl. No. | Addresses | School Name | Description of Equipment | Serial No of Device | Make | Model | Quantity |
|---------|-----------|-------------|--------------------------|---------------------|------|-------|----------|
| 1       |           |             |                          |                     |      |       |          |
|         |           |             |                          |                     |      |       |          |
|         |           |             |                          |                     |      |       |          |

**Signature of Supplier or its representative**

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

Designation: \_\_\_\_\_

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

Rubber Seal: \_\_\_\_\_

**Signature of School Representative**

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

Designation: \_\_\_\_\_

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

Rubber Seal of the institution

**Verified by EdCIL representative**

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

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

Designation: \_\_\_\_\_

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

**Annexure XV**  
**INSTALLATION CERTIFICATE FORMAT**

1. The following goods/equipment, supplied by the Supplier at this school have been successfully installed and commissioned by the Supplier.

| Sl. No. | School Name | Description of Equipment | Serial No of Device | Make | Model | Quantity |
|---------|-------------|--------------------------|---------------------|------|-------|----------|
| 1       |             |                          |                     |      |       |          |
|         |             |                          |                     |      |       |          |
|         |             |                          |                     |      |       |          |

**Note:**

- i. In case of need, a fresh form on these lines shall be prepared & issued by EdCIL.  
Two copies of this certificate to be provided to Supplier.  
Serial Number of devices has to be recorded in the certificate.
- ii. The Supplier has fulfilled his contractual obligations related to supply & installation of the
- Projector mounted to the wall mount arrangement
  - Wifi Dongle Connected to the HDMI and USB port of the Projector
  - Projector is switched on and Wifi dongle home screen is displayed
  - Projector display is properly calibrated to the board

**OR**

- iii. The Supplier has not fulfilled his contractual obligation with regard to following.  
(Mention here deviation, if any, related to successful installation.)
- \_\_\_\_\_

**Remarks:** \_\_\_\_\_

\_\_\_\_\_

**Signature of Supplier or its representative**

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

Designation: \_\_\_\_\_

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

Rubber Seal: \_\_\_\_\_

**Signature of School Representative**

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

Designation: \_\_\_\_\_

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

Rubber Seal of the institution

**Verified by EdCIL representative**

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

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

Designation: \_\_\_\_\_

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

**ANNEXURE- XVI**  
**LIST OF AUTHORISED BANKS FOR BG**

Any Guarantee issued by PSU Bank (or) Private Bank operating in India must be operational and invocable in Noida only. For Guarantee to be operational in Noida the issuing bank must designate a specified Bank Branch in Noida.

Following banks are permissible for accepting Bank Guarantees:

**SCHEDULED PUBLIC SECTOR BANKS**

| S.No. | Name of the Bank      |
|-------|-----------------------|
| 1     | Bank of Baroda        |
| 2     | Bank of India         |
| 3     | Bank of Maharashtra   |
| 4     | Canara Bank           |
| 5     | Central Bank of India |
| 6     | Indian Bank           |
| 7     | Indian Overseas Bank  |
| 8     | Punjab & Sind Bank    |
| 9     | Punjab National Bank  |
| 10    | State Bank of India   |
| 11    | UCO Bank              |
| 12    | Union Bank of India   |

**SCHEDULED PRIVATE SECTOR BANKS**

| S.No. | Name of the Bank        |
|-------|-------------------------|
| 1     | HDFC Bank Ltd           |
| 2     | ICICI Bank Ltd          |
| 3     | Axis Bank Ltd           |
| 4     | Kotak Mahindra Bank Ltd |
| 5     | IndusInd Bank Ltd       |

**Annexure XVII**  
**Equipment Specification Compliance**

**COMPLIANCE STATEMENT FORM**

- a) Bidders shall respond to basic sections of this tender clause by clause/Clauses, using a compliance summary statement, the sample format of which is given below. This shall be in sequential order, the same as is given in this specification.

| <b>S.N.</b> | <b>Technical specification of each line items as per Scope of work</b> | <b>Compliance statement</b> | <b>Description</b>   |
|-------------|--|-----------------------------|--|
|             |  | Put Comply or not Comply    | Explain how the offered good is complaint or not compliant with the requirement of the Technical specification attached (if the bidder does not mention justification for compliance, it might be considered as non-compliant) |

- b) If a compliance is stated for a clause, the good will be assumed not to comply with that particular specification item, contract and standard commercial terms and Conditions
- c) For purpose of compliance verification, a document and page number cross- reference should be given (where applicable) in the reference column of the compliance summary statement.
- d) The supplier may include other relevant documentation by indicating a page number of document. It is mandatory to include detailed technical documentation, covering specification and quality performance of goods to be offered.
- e) Any clause marked with “comply” in the bidders’ compliance summary statement is binding on the successful bidder to supply goods that meet the requirements of that clause. This shall apply for the lifetime of any awarded contract.

**Annexure XVIII**  
**PERFORMA FOR DECLARATION ON PROCEEDINGS UNDER INSOLVENCY**  
**AND BANKRUPTCY CODE, 2016**

Tender No. : .....

Name of Work : .....

Bidder 's Name : .....

I/ We, M/s. \_\_\_\_\_ declare that:-

- a) I /We am / are not undergoing insolvency resolution Process or liquidation or bankruptcy proceeding as on date.
- b) I /We am / are undergoing insolvency resolution process or liquidation or bankruptcy proceeding as on date as per Details mentioned below. (Attached detail with technical bid)

Note: Strike out one of above which is not applicable.

It is understood that if this declaration is found to be false, EdCIL (India) Ltd. shall have the right to reject my / our bid, and forfeit the EMD, if the bid has resulted in a contract, the contract will be liable for termination without prejudice to any other right or remedy (including holiday listing) available to EdCIL (India) Ltd.

Place:

Date: Signature of Bidder Name of Signatory

**EQUIPMENT SPECIFICATION**

**Virtual Classroom Solution**

| <b>A. Main Studio Setup</b> |  |
|-----------------------------|--|
| <b>S.No.</b>                | <b>Items with Minimum Specifications</b>   |
| <b>1</b>                    | <p><b>Digital Video Camera</b></p> <ul style="list-style-type: none"> <li>• Image sensor: Full Frame 35 mm/2/3-inch sensor</li> <li>• Lens mount: Standard</li> <li>• Built-in ND Flite: Variable Electronic ND/Clear, approx. 1/4, 1/16, 1/64</li> <li>• Monitor/Viewfinder: LCD capacitive touchscreen</li> <li>• Recording media: CF express Type A / SD card / CFAST 2.0/SDXC UHS-II Card Slots</li> <li>• Recording resolution: 3840 x 2160, 3072 x 2560, 2048 x 1152, 2048 x 1080 and 1920 x 1080</li> <li>• Video Output: SDI</li> <li>• Audio Input: XLR-type 3-pin (female) (x2)</li> <li>• Audio Output: 3.5mm stereo</li> <li>• Battery, battery charger, AC adaptor, AC cable, microphone holder kit, shoulder strap, eye cup</li> </ul> |
| <b>2</b>                    | <p><b>Video Switcher</b></p> <ul style="list-style-type: none"> <li>• Total Video Inputs 8 (4 x HDMI type A, 10-bit SD/HD switchable. 2 channel embedded audio.)</li> <li>• Total Video outputs 8 channel SDI Rates: 270Mb, 1.5G, 3G.</li> <li>• HD Video Standards: 720p50, 720p59.94, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p50, 1080p59.94, 1080i50, 1080i59.94</li> <li>• Upstream Keyers: 1 with Chroma/Linear/Luma key.</li> <li>• Total Number of Layers: 5</li> <li>• Multi View Monitoring: 1 x 10 Views.</li> <li>• Chroma Keyers: 1</li> </ul>  |
| <b>3</b>                    | <p><b>Audio mixer</b></p> <ul style="list-style-type: none"> <li>• Channels: 12</li> <li>• AUX: 3 x Pre/Post or better</li> <li>• Subgroups: 2 mono/1 stereo or better</li> <li>• Inputs - Mic Preamps: 8 x XLR</li> <li>• Phantom Power: Required</li> <li>• Fader: 13 x 60mm Throw</li> <li>• USB Interface: Required</li> <li>• Bands: 3-band</li> </ul>  |
| <b>4</b>                    | <p><b>Camera Tripod</b></p> <ul style="list-style-type: none"> <li>• Camera Plate Features: Sliding Balance Plate</li> <li>• Base Mount: 75 mm</li> <li>• Drag Control: Fixed</li> <li>• Counter Balance: Fixed</li> <li>• Head Mount Type: 75 mm Bowl</li> <li>• Materials: Aluminium</li> <li>• Pay Load: 12Kg or Better</li> <li>• Dolly: Required</li> </ul>   |
| <b>5</b>                    | <p><b>Hard Disk Based Recorder</b></p> <ul style="list-style-type: none"> <li>• Processor Intel i7 12<sup>th</sup> Gen</li> <li>• RAM: 64 GB, SSD: 250 GB</li> </ul>   |

|    |   |
|----|---|
|    | <ul style="list-style-type: none"> <li>• Storage: 4TB HDD, Graphic Card: 2GB</li> <li>• Application: Recording Software</li> <li>• Video Input: SDI and HDMI</li> </ul>   |
| 6  | <b>Digital SD/HD-SDI video distribution</b> <ul style="list-style-type: none"> <li>• 1 Input to 4 Output Distribution Amplifier</li> <li>• Low power consumption</li> </ul>   |
| 7  | <b>Teleprompter</b> <ul style="list-style-type: none"> <li>• Size: 32" HD monitor</li> <li>• Reflector: Anti-glare High Efficiency Reflector</li> <li>• Adjustment: Angle adjustment for reflector</li> <li>• Mount: Adjustable balanced Floor Stand</li> </ul>   |
| 8  | <b>Microphone: Cordless</b> <ul style="list-style-type: none"> <li>• System: Dual channel wireless microphone system 2.4GHz digital transmission</li> <li>• Encryption: 128-bit encryption</li> <li>• Output 3.5mm TRS analog output, USB-C and iOS compatible digital audio output Ability to switch between mono or stereo output</li> <li>• Battery: In-built rechargeable lithium-ion battery – up to 5 hours' battery life</li> <li>• Range: 200m transmission range</li> </ul>  |
| 9  | <b>Wired Mic with Table Mic Stand</b> <ul style="list-style-type: none"> <li>• Connectors: 3-pin XLR-3</li> <li>• Frequency Range: Dynamic cardioid microphone</li> <li>• Polar Pattern: Transparent high-end and warm but defined lower mids</li> <li>• Housing: Extremely rugged metal housing</li> <li>• Phantom Power: Yes</li> </ul>   |
| 10 | <b>Audio Monitor</b> <ul style="list-style-type: none"> <li>• Type: 2 Way Active Studio Monitor</li> <li>• Frequency Range: 50 Hz-18 kHz or better</li> <li>• Max Peak SPL: 100 dB or better</li> <li>• LF Driver Size: Min. 5" to Max. 6.6"</li> <li>• HF Driver Size: 1" or better</li> <li>• Low-Frequency Amplifier Power: 40 watts or Better</li> <li>• High-Frequency Amplifier Power: 40 watts or Better</li> <li>• Total Power Output: 80 Watt or Better</li> <li>• Input Types: 1 x XLR, 1 x TRS Balanced</li> <li>• AC Input Voltage: 100-240 VAC +/- 10% 50/60 Hz</li> </ul>   |
| 11 | <b>Digital Pad</b> <ul style="list-style-type: none"> <li>• Type: A4 Size input device consisting of a flat, pressure-sensitive pad on which the user can keep any paper or a note book up to 200 pages and using pen (with standard ink refill) draws or writes and the same is displayed on the screen on a canvas which can be later processed/saved with custom built application or equivalent</li> <li>• Technology: EMR or better technology</li> <li>• Active writing area(L*B): 291.5mm*210 mm</li> <li>• Platform support: PC/Laptop/Windows/ Tablets/ IFP/ Projectors/ Android Mobile/Tablets/ Smart TV with USB Port</li> <li>• Absolute Accuracy (milli meter): +/- 0.4</li> <li>• Min Resolution (Lines per Inch): 2048 LPI</li> <li>• Min Data Rate (Coordinate Pair per second): 200 Hz</li> <li>• Port Connectivity: USB</li> <li>• Type of Pen/Stylus: Active D1 Pen with Normal Ink Refill -Standard Mini ball point refill .6 mm</li> </ul> |

|    |  |
|----|--|
|    | <ul style="list-style-type: none"> <li>• Pen/Stylus: Active Pen with 80 mAH, Li Ion battery pen with normal ink refill and can write up to 20 hours of pen down situation - Charging time of 3.5 hours for full charge</li> <li>• Power Supply for USB: DC 5 V &lt;100mA</li> <li>• Weight &lt; 600 grams</li> <li>• Certification: CE, RoHS</li> </ul>  |
| 12 | <p><b>Multi-touch Interactive Panel with 14" Laptop</b></p> <p><b>Multi-touch Interactive Panel</b></p> <ul style="list-style-type: none"> <li>• Min 13.0-inch display</li> <li>• Resolution support up to 1920 x 1080</li> <li>• HDMI Input</li> <li>• Stylus Pen</li> <li>• Colour Displays: 16.7M</li> <li>• Contrast Ratio: 700:1</li> <li>• Viewing Angle: 168°</li> <li>• Response time: 25ms or less</li> </ul> <p><b>Laptop:</b></p> <ul style="list-style-type: none"> <li>• Intel Core i5</li> <li>• Minimum 8G RAM</li> <li>• Minimum 1 TB HDD</li> <li>• Display Minimum 14.0"</li> <li>• USB 3.0/USB 2.0, HDMI, VGA,</li> <li>• Windows 10, 64 bit</li> </ul>   |
| 13 | <p><b>85" Interactive flat Panel:</b></p> <ul style="list-style-type: none"> <li>• Panel Size: 85" or more</li> <li>• Panel Grade: Professional A- Grade Panel</li> <li>• Type/Tech: LED Backlight</li> <li>• Aspect Ratio 16:09</li> <li>• Native Resolution: 3840*2160 (UHD)</li> <li>• Colours: 1.07 billion (10 bit)</li> <li>• Brightness: 350nits</li> <li>• Contrast Ratio: 1200:1</li> <li>• Response Time: 8ms</li> <li>• Refresh Rate: 60Hz</li> <li>• Viewing Angles: H = 178, V = 178 typ.</li> </ul> <p><b>TOUCH</b></p> <ul style="list-style-type: none"> <li>• Type/ Tech: Infra-Red</li> <li>• Touch Point: 20 Point Multi Touch</li> </ul> <p><b>INPUT</b></p> <ul style="list-style-type: none"> <li>• HDMI x2</li> <li>• Touch USB x2</li> <li>• RGB / VGA x1</li> <li>• Audio x1</li> <li>• YPbPr x1</li> <li>• MIC(Microphone) x1</li> <li>• AV in x1</li> <li>• OPS: OPS Slot support 4K@60HZ</li> </ul> <p><b>OUTPUT:</b></p> <ul style="list-style-type: none"> <li>• Audio x1</li> <li>• AV out Yes</li> </ul> <p><b>USB</b></p> |

|                          |  |   |
|--------------------------|--|---|
|                          | <ul style="list-style-type: none"> <li>Type A x2</li> <li>SPEAKERS: 10Wx2</li> <li>Certifications: ROHS, BIS, FCC, CE</li> </ul> <p><b>COMPATIBILITY:</b></p> <ul style="list-style-type: none"> <li>CVBS: 480i,</li> <li>HDMI: 480i, 480p,720p,1080i,1080p</li> </ul> <p><b>ACCESSORIES:</b></p> <ul style="list-style-type: none"> <li>Key Board &amp; Mouse- both Wireless</li> <li>2 Stylus</li> </ul>   |   |
| 14                       | <b>OPS PC</b>  |   |
|                          | <b>Parameters</b>  | <b>Specifications</b>   |
|                          | CPU  | Intel Core i5 12th Generation   |
|                          | Chipset  | SoC   |
|                          | Graphics   | Intel Iris Xe Graphics  |
|                          | Multiple Display   | Supports Dual Display   |
|                          | Display Interface  | 1 x HDMI1.4 (4K30Hz)<br>1 x 80 PIN (HDMI2.0 4K60Hz output + DP1.2 4K60Hz output)  |
|                          | Memory   | 16 GB Dual Channel SO-DIMM DDR4-3200MHz support Upt   |
|                          | Storage  | 2TB 1 x M.2 2280 size for NVMe/SATA SSD   |
|                          | Ethernet   | 1 x Realtek 8111H 1000M Ethernet RJ45 Port  |
|                          | Wireless   | 1 x M.2 2230 slot for WIFI_BT Module  |
|                          | I/O Ports  | 1 x HDMI1.42 x USB 3.1<br>1 x USB2.0<br>1 x Type-C(USB3.1)<br>1 x RJ451 x MIC IN & 1 x Line-out Connector<br>2 x Wi-Fi/BT Antenna |
|                          | OPS Interface  | 1 x 2.5/5.5 DC IN JACK<br>1 x HDMI2.01 x 4K60Hz output<br>2 x USB2.01 x USB3.0<br>1 x TTL<br>Other Control Signals                |
|                          | Power Inputs   | 12 - 19V DC IN, 2.5/5.5 DC Jack & JAE 80 pin DC IN  |
|                          | Operating Temperature  | 0 to 40C  |
|                          | Storage Temperature  | 20 to 70C   |
| Operating Humidity       | 10% - 90% non-Condensing   |   |
| Operating System Support | Windows 11/Windows IoT   |   |
| Warranty                 | 3 Years on site  |   |
| 15                       | <p><b>Transmission Server</b></p> <ul style="list-style-type: none"> <li>Vector Encoder Server</li> <li>Dual Vector-MPEG-4 codec SD/HD 4:2:0/4:2:2 encoding</li> <li>Broad SD/HD format input support</li> <li>Audio encoding of up to 32 stereo or 64 mono channels</li> <li>Broadcast-quality video content distribution</li> <li>IP outputs</li> <li>Ultra-low delay mode</li> <li>User-friendly web-based control panel</li> <li>Fast boot time</li> <li>Dual codec (Vector)</li> <li>Colour space Conversion Hardware based real time</li> <li>Vector encoder using custom encryption algorithm</li> <li>HD Down Conversion Built-in, high-quality software down converter on playback &amp; capture</li> </ul> |   |

|    |  |
|----|--|
|    | <ul style="list-style-type: none"> <li>• HD Up Conversion Built-in, high-quality software up converter from SD to 720HD or 1080HD on input</li> <li>• Colour Space REC 601, REC 709</li> <li>• Colour Precision 8, 10, 12-bit RGB 4:4:4 in all modes</li> <li>• Video Sampling 8, 10, 12-bit RGB 4:4:4 in all modes</li> <li>• SDI Video Inputs bidirectional 12-bit SD/HD independently configurable as either Input or Output.</li> <li>• SDI Video Outputs bidirectional 12-bit SD/HD independently configurable as either Input or Output.</li> <li>• SD Video Standards 525i59.94 NTSC, 625i50 PA</li> <li>• Supports Background noise removal and echo cancellation of audio.</li> <li>• Supports controlling frame rate and resolution</li> <li>• Supports Multiple Video and audio input.</li> <li>• Create PIP with multiple video inputs and positioning.</li> <li>• Supports multiple types of content/documents.</li> <li>• Support Whiteboard collaboration.</li> <li>• Supports Whiteboard write/Type.</li> <li>• Screen sharing support partial/Full (Customizable)</li> <li>• Streaming content auto-save</li> </ul> |
| 16 | <p><b>Laptop with HDMI output</b></p> <ul style="list-style-type: none"> <li>• Intel Core i7 12<sup>th</sup> Gen or latest or AMD equivalent</li> <li>• Minimum 16GB RAM DDR4</li> <li>• Minimum 512 GB SSD</li> <li>• Display Diagonal Size: maximum 14.0" FHD display</li> <li>• USB 3.0/USB 2.0, HDMI, VGA</li> <li>• Windows 11 Home</li> <li>• Backlit Keyboard</li> <li>• Minimum 45 Wh Integrated Battery</li> <li>• Weight should be less than 1.8 Kgs.</li> </ul>   |
| 17 | <p><b>Satellite Receiving Antenna, Satellite Modem (Compatible with EDUSAT Network) and LNB</b></p> <p>Refer the specs of Virtual classroom item no.11 and 17.</p>   |
| 18 | <p><b>LED Lights with ceiling mount movable Grid and mounting clamps</b></p> <ul style="list-style-type: none"> <li>• Colour temperature: 5600 K/3200K</li> <li>• Dimmable output from 100% to 10%</li> <li>• Power consumption: Less than 180W.</li> <li>• Ceiling mounts facility</li> <li>• AC Adaptor</li> <li>• Operated from nominal 230 V/50 Hz Ac Supply</li> </ul>  |
| 19 | <p><b>Video light</b></p> <ul style="list-style-type: none"> <li>• Studio Grade LED stand lights with soft box, minimum 190 watt</li> </ul>  |
| 20 | <p><b>Editing Setup</b></p> <ul style="list-style-type: none"> <li>• Processor: 1 x Intel® Xeon W-2133 Processor (6 Core/3.6GHz)</li> <li>• Chipset: C422 chipset or better</li> <li>• RAM: 16GB ECC DDR4 RAM</li> <li>• Controller: SATA3 (6Gbps) via Intel C422 controller</li> <li>• HDD: 1x 256 GB SSD, 2 x 2TB SATA 7.2K RPM Enterprise</li> <li>• Optical Drive: DVD RW</li> <li>• Network: RJ45 Gigabit Ethernet LAN ports</li> <li>• Graphics Card: 1 x NVIDIA Quadro P2200 5GB GDDR5</li> </ul>   |

|    |  |
|----|--|
|    | <ul style="list-style-type: none"> <li>• OS: Windows 10 64 Bit</li> <li>• Capture Card: Capture card with SDI input</li> <li>• Additional Software for Video editing: Adobe Premiere Pro Subscription (Annual Subscription) for 3 Years</li> <li>• Live Switching with Croma key</li> <li>• Video Switching and Mixing Software</li> <li>• Supports 4k, HD and SD Video formats</li> <li>• Multiple Keying</li> <li>• Live Stream and Recording</li> <li>• Supports Multiple Camera inputs, Video files</li> <li>• Peripherals: 2x 24" LED Monitor, Speaker, USB Keyboard &amp; Optical Scroll</li> <li>• Mouse</li> </ul> |
| 21 | <p><b>Technical Table for Studio</b></p> <ul style="list-style-type: none"> <li>• Size: as per Control room dimension</li> <li>• Material: High Quality Laminated plywood/MDF wood (15MM to 25MM)</li> <li>• Table Top Size: Minimum of 4ft*2ft</li> <li>• Height: minimum of 28-30 Inches</li> <li>• Cable Management: Wire Manager hole</li> <li>• Monitor Shelf: Elevated/lower shelf for monitor</li> </ul>  |
| 22 | <p><b>Studio Room Table for Studio</b></p> <ul style="list-style-type: none"> <li>• Size: as per Control room dimension</li> <li>• Material: High Quality Laminated plywood/MDF wood (15MM to 25MM)</li> <li>• Tabletop Size: Minimum of 4ft*2ft</li> <li>• Height: minimum of 28-30 Inches</li> <li>• Cable Management: Wire Manager hole</li> </ul>  |
| 23 | <p><b>Executive Chair for Studio</b></p> <ul style="list-style-type: none"> <li>• Type: High-back ergonomic executive chair</li> <li>• Material: Breathable mesh/Foam</li> <li>• Seat Cushion: Foam</li> <li>• Max. Load capacity :120 Kg</li> <li>• Swivel :360-degree swivel base</li> </ul>   |
| 24 | <p><b>Wooden Almira for Studio</b></p> <ul style="list-style-type: none"> <li>• Material: Solid engineered wood with laminated matte or textured finish</li> <li>• Size: Minimum 6 ft (H) × 3 ft (W) × 1.5 ft (D), with adjustable shelves inside</li> <li>• Compartments: 3–4 lockable sections with internal divisions for files/equipment</li> <li>• Hardware: Heavy-duty hinges and handles for durability</li> <li>• Protection: Termite-resistant and moisture-protected construction</li> </ul>   |
| 25 | <p><b>Sofa (3+2) for Studio</b></p> <ul style="list-style-type: none"> <li>• Type: 3+2-seater sofa set</li> <li>• Frame: Sturdy wooden construction for durability</li> <li>• Cushions: High-density foam for lasting comfort</li> <li>• Upholstery: Durable fabric or leatherette (easy to clean, non-reflective for studio use)</li> <li>• Seat Depth: 20–22 inches for ergonomic support</li> <li>• Back Support: Soft cushioning designed for extended comfort</li> <li>• Colour Options: Neutral tones (grey, black, beige) to match professional studio aesthetics</li> </ul>  |
| 26 | <p><b>Earthling + Cabling &amp; Installation + Integration + Testing+ Accessories for integration</b></p> <ul style="list-style-type: none"> <li>• <b>Cabling</b><br/>It is required to set-up the facility for HD/SD operations; therefore, all the cabling should seamlessly support required operations.</li> <li>• <b>Installation Material</b></li> </ul>   |

|    |  |
|----|--|
|    | <p>All installation materials including, equipment racks, power cables, interconnection cables, connectors and other accessories (including nuts, bolts, screws etc.) required for installation of the complete system shall be quoted</p> <ul style="list-style-type: none"> <li>• <b>System Completeness</b><br/>Completeness of the system will be responsibility of the Bidder. Any hardware and/or software including passive and active devices required for completeness of the technical workflow shall be quoted. Bidder shall be responsible for technical and operational completeness of the entire system.</li> <li>• <b>Workflow Diagram</b><br/>The Bidder has to provide schematic diagram of the technical workflow to ensure the workability of the offered solution in all respects.</li> <li>• <b>Any Additional Items for Complete the workflow</b><br/>Bidder must mention any additional items required to complete the workflow with proper justification. (Accessories like required convertors, cables, audio/video connectors, adopters etc.)</li> </ul>  |
| 27 | <p><b>Acoustic, Fabric Above Acoustics, Green Screen (Chroma key) and Light board 7*4'</b><br/>Provision &amp; fixing of pre-fabricated acoustic panels for the walls inside the studio topped with suitable fabric giving an aesthetic finish, Required Partitioning of room, Closing of windows. Green Screen on one complete wall.</p> <ul style="list-style-type: none"> <li>• <b>Interior</b><br/>Provision &amp; fixing of pre-fabricated acoustic panels for the walls inside the studio topped with suitable fabric giving an aesthetic finish</li> <li>• <b>Carpet</b><br/>Providing and Fixing Wall to Wall</li> <li>• <b>Door Type and Size</b> <ul style="list-style-type: none"> <li>○ Acoustic Doors of 3X 7' with provisioning and fixing panel with vision panel for main door and control room.</li> <li>○ Provision &amp; fixing of frame and sound proof casement door with multipoint locking system and both sides handle with locking arrangement with vision panel for studio main door and control room door.</li> </ul> </li> <li>• <b>Window</b><br/>Provisioning and fixing sound proof window hermitically sealed with Glass (Size 3' X 5')</li> <li>• <b>Light board</b> <ul style="list-style-type: none"> <li>○ Length 7 Feet and Height 4 Feet</li> <li>○ Writable Area should be made of Fine Glass (Low Iron), Glass without a single Air Bubble and should be free of any thin scratches. Scratches should not be visible during Power ON condition. Thick Aluminium Channel Frame on all Four Sides. Cushioning should be between Glass and Aluminium A pair of Stand made up of Heavy Iron Pipe to upright the Light board standing 3 Feet above the ground. Total Height (Stand + Light board) from the Ground goes to 7 Feet.</li> <li>○ HDMI TO USB 3.0 Capture Device</li> <li>○ Input RGB/YUV 4:4:4 8/10/12-bit, YUY 4:2:2 12-bit</li> <li>○ Up to 8-channel 24-bit HDMI-embedded audio at 192kHz</li> <li>○ Video processing pipeline up to 160M pixels/s</li> <li>○ Capture videos up to 2048x2160, frame rates up to 120fps.</li> <li>○ Support for YUY2/UYYVY/RGB24/RGB32</li> <li>○ Support video cropping, up/down scaling, de-interlacing, aspect ratio conversion, colour format conversion, frame rate conversion, flip and mirror</li> <li>○ Up to 2-channel IEC60958 audio streams</li> <li>○ Professional Continuous Studio Light</li> <li>○ Continuous LED Video Light Colour Temperature 500K+/-300K.</li> <li>○ Max Power Consumption: 80W.</li> <li>○ All Metal Body.</li> </ul> </li> </ul> |

|                             |   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
|-----------------------------|---|---------------|---------------|--------------|--|---------|--|--------------|-------------------|------------|----------------|-----------------|---------------------------------|------------|-------------------------------|--------------|-----|------------|---------------------------------------|----------------|------------------|---------|-----------------|--------------|-------|-----------------------------|---------------|-------------------|-----------------------|----------------|--------------------------------|-----------|------|--------------|---------------|--------------------|----------------------------------|------------|--|------------|---------|-----------------|-------------|----------------|--------|----------------|----------------------------|----------------|---------------------------------------|--------------|--------------------|-----------------|--------------------------------|------------------------|---|
|                             | <ul style="list-style-type: none"> <li>○ 1200 True Colour LEDs.</li> <li>○ Light Stand: 9 Feet Height</li> <li>○ Micro Fiber Cleaning Cloth Set of 5 piece</li> </ul>   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| <b>28</b>                   | <b>Air Conditioner- 2 Ton</b> <ul style="list-style-type: none"> <li>● Type: 2 Ton Split Inverter AC</li> <li>● Energy Efficiency: 3-star BEE rating</li> <li>● Condenser Coil: Copper (Better cooling &amp; low maintenance)</li> <li>● Features: Auto-restart, stabilizer-free operation, dust filter, and low noise</li> </ul>   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| <b>29</b>                   | <b>Smart Podium</b> <table border="1"> <tr> <td>Type/Mounting</td> <td>Free Standing</td> </tr> <tr> <td>Construction</td> <td>The Podium shall be wheel mounted capable of moving in all directions with a facility of lock them while the Electronic podium is in use. The enclosure shall be made of Polymer Powder Coated Steel Body with wooden top panels, designed to work in suitable environmental conditions. The wooden top shall have lock and key and should have a sliding cover for opening/closing easily. The Podium should have housing and connectivity for Visual Presenter while the visualiser is in use and not in use. At the time of using the Visualiser, drawer can be opened and Visualiser can be used. The construction of the podium should be such that, while the podium is locked and not in use, there should not be any port exposed/ visible on the outer body for breakage/mishandling.</td> </tr> <tr> <td>Display</td> <td>Built-in highly sensitive Interactive Panel with adjustable Manual tilt &amp; a mechanism to make the Panel stable so that it does not shake while writing with following minimum features -</td> </tr> <tr> <td>Display Size</td> <td>21 inch or higher</td> </tr> <tr> <td>Panel Type</td> <td>IPS Technology</td> </tr> <tr> <td>Active area(mm)</td> <td>476.064(H)x267.786(V) or better</td> </tr> <tr> <td>Resolution</td> <td>1920 x 1080 Full HD or better</td> </tr> <tr> <td>Light Source</td> <td>LED</td> </tr> <tr> <td>Brightness</td> <td>350 cd/m<sup>2</sup> (typ) or higher</td> </tr> <tr> <td>Contrast Ratio</td> <td>1200:1 or higher</td> </tr> <tr> <td>Colours</td> <td>16.7M or better</td> </tr> <tr> <td>Aspect Ratio</td> <td>16:09</td> </tr> <tr> <td>Response Time (Typical GTG)</td> <td>8ms or better</td> </tr> <tr> <td>Operational Hours</td> <td>30000 Hours or higher</td> </tr> <tr> <td>Viewing Angles</td> <td>178° horizontal, 178° vertical</td> </tr> <tr> <td>Curvature</td> <td>Flat</td> </tr> <tr> <td>Colour Gamut</td> <td>72% or better</td> </tr> <tr> <td>Interactive Method</td> <td>Electromagnetic resonance method</td> </tr> <tr> <td>Touch Type</td> <td>Pressure-sensitive, cordless, battery-free</td> </tr> <tr> <td>Resolution</td> <td>5080LPI</td> </tr> <tr> <td>Pressure levels</td> <td>8192 Levels</td> </tr> <tr> <td>Tracking speed</td> <td>266PPS</td> </tr> <tr> <td>Touch Accuracy</td> <td>±0.5mm(center);±1 mm(edge)</td> </tr> <tr> <td>Touch Response</td> <td>First touch:30ms;Continuous touch:5ms</td> </tr> <tr> <td>Touch Screen</td> <td>Multi-touch Points</td> </tr> <tr> <td>Control Buttons</td> <td>Power, Menu, +/-, Auto or more</td> </tr> <tr> <td>Connectivity (Minimum)</td> <td>USB x 1, HDMI x 1, DVI x 1, VGA x 1 or better</td> </tr> </table> | Type/Mounting | Free Standing | Construction | The Podium shall be wheel mounted capable of moving in all directions with a facility of lock them while the Electronic podium is in use. The enclosure shall be made of Polymer Powder Coated Steel Body with wooden top panels, designed to work in suitable environmental conditions. The wooden top shall have lock and key and should have a sliding cover for opening/closing easily. The Podium should have housing and connectivity for Visual Presenter while the visualiser is in use and not in use. At the time of using the Visualiser, drawer can be opened and Visualiser can be used. The construction of the podium should be such that, while the podium is locked and not in use, there should not be any port exposed/ visible on the outer body for breakage/mishandling. | Display | Built-in highly sensitive Interactive Panel with adjustable Manual tilt & a mechanism to make the Panel stable so that it does not shake while writing with following minimum features - | Display Size | 21 inch or higher | Panel Type | IPS Technology | Active area(mm) | 476.064(H)x267.786(V) or better | Resolution | 1920 x 1080 Full HD or better | Light Source | LED | Brightness | 350 cd/m <sup>2</sup> (typ) or higher | Contrast Ratio | 1200:1 or higher | Colours | 16.7M or better | Aspect Ratio | 16:09 | Response Time (Typical GTG) | 8ms or better | Operational Hours | 30000 Hours or higher | Viewing Angles | 178° horizontal, 178° vertical | Curvature | Flat | Colour Gamut | 72% or better | Interactive Method | Electromagnetic resonance method | Touch Type | Pressure-sensitive, cordless, battery-free | Resolution | 5080LPI | Pressure levels | 8192 Levels | Tracking speed | 266PPS | Touch Accuracy | ±0.5mm(center);±1 mm(edge) | Touch Response | First touch:30ms;Continuous touch:5ms | Touch Screen | Multi-touch Points | Control Buttons | Power, Menu, +/-, Auto or more | Connectivity (Minimum) | USB x 1, HDMI x 1, DVI x 1, VGA x 1 or better |
| Type/Mounting               | Free Standing   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Construction                | The Podium shall be wheel mounted capable of moving in all directions with a facility of lock them while the Electronic podium is in use. The enclosure shall be made of Polymer Powder Coated Steel Body with wooden top panels, designed to work in suitable environmental conditions. The wooden top shall have lock and key and should have a sliding cover for opening/closing easily. The Podium should have housing and connectivity for Visual Presenter while the visualiser is in use and not in use. At the time of using the Visualiser, drawer can be opened and Visualiser can be used. The construction of the podium should be such that, while the podium is locked and not in use, there should not be any port exposed/ visible on the outer body for breakage/mishandling.  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Display                     | Built-in highly sensitive Interactive Panel with adjustable Manual tilt & a mechanism to make the Panel stable so that it does not shake while writing with following minimum features -  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Display Size                | 21 inch or higher   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Panel Type                  | IPS Technology  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Active area(mm)             | 476.064(H)x267.786(V) or better   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Resolution                  | 1920 x 1080 Full HD or better   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Light Source                | LED   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Brightness                  | 350 cd/m <sup>2</sup> (typ) or higher   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Contrast Ratio              | 1200:1 or higher  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Colours                     | 16.7M or better   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Aspect Ratio                | 16:09   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Response Time (Typical GTG) | 8ms or better   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Operational Hours           | 30000 Hours or higher   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Viewing Angles              | 178° horizontal, 178° vertical  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Curvature                   | Flat  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Colour Gamut                | 72% or better   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Interactive Method          | Electromagnetic resonance method  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Touch Type                  | Pressure-sensitive, cordless, battery-free  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Resolution                  | 5080LPI   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Pressure levels             | 8192 Levels   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Tracking speed              | 266PPS  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Touch Accuracy              | ±0.5mm(center);±1 mm(edge)  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Touch Response              | First touch:30ms;Continuous touch:5ms   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Touch Screen                | Multi-touch Points  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Control Buttons             | Power, Menu, +/-, Auto or more  |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |
| Connectivity (Minimum)      | USB x 1, HDMI x 1, DVI x 1, VGA x 1 or better   |               |               |              |  |         |  |              |                   |            |                |                 |                                 |            |                               |              |     |            |                                       |                |                  |         |                 |              |       |                             |               |                   |                       |                |                                |           |      |              |               |                    |                                  |            |  |            |         |                 |             |                |        |                |                            |                |                                       |              |                    |                 |                                |                        |   |

|  |  |
|--|--|
| Pen Type                                       | Battery Free EM Pen  |
| Pen Control                                    | Two Key and Pen tip Control  |
| Interactive Method                             | Electromagnetic resonance method   |
| Display Stand                                  | Should support tilting and Table standing type   |
| Power Supply                                   | 12V DC   |
| System Details                                 |  |
| Processor                                      | Intel Core i5 (10th Gen or better processor)   |
| Small Form Factor                              | Computer should be of 2 liters Volume or less  |
| In-Built Wi-Fi /Wireless LAN Card              | Should have a inbuilt Wi-Fi / Wireless LAN Card  |
| RAM  | 8 GB   |
| Storage  | 256 GB SSD or better   |
| Ports (Min.)                                   | HDMI x 1, USB ports x 4, LAN Port x 1  |
| Keyboard & Mouse                               | Wireless   |
| Operating System                               | Windows 10   |
| Certifications                                 | BIS Certifications Required for Mini PC. BIS of Mini PC should be registered in name of Podium's OEM   |
| Controller                                     |  |
| Ports on front Panel of Controller (Minimum)   | VGA,HDMI,USB3.0x2,Audio IN or more   |
| Buttons on front Panel of Controller (Minimum) | Push buttons to control Volume Up& Down, Volume Mute and to switch sources of HDMI Visual Presenter, VGA Visual Presenter, HDMI Laptop, PC HDMI, VGA Laptop, VGA PC and Controller Power On/Off, Display Power On and Power Off or more  |
| Ports on Rear Panel of Controller (Minimum)    | USB 3.0 X 2, VGA Input x 2, VGA Output x 2, RCA Audio IN X 1,RCA Audio Output x 2,HDMI Inputx2,HDMI Outputx2 , Programming Port (Phoenix connector) or more  |
| Built in HDMI Repeater                         | Yes (HDMI Output port should support 15mtr HDMI cable)   |
| Controller Resolution Output                   | 4K (3840 x 2160) Native  |
| Power  | 5 V DC (Suitable Adaptor should be supplied with controller)   |
| Built in devices                               |  |
| Gooseneck Microphone                           | Gooseneck Microphone with XLR output. It should be Phantom powered so that there is no requirement of batteries thereby eliminating consumable cost. The gooseneck length should be at least 21.5 inches with ON/OFF switch and with LED light indicating ON/OFF status. The gooseneck microphone shall be permanently polarised condenser, highly directional featuring hypercardioid /lobar directivity. |
| Built in Amplifier Power                       | Amplifier : Class D<br>Rated Power : 150 W or better<br>Impedance : MIC input: 5mV / 600Ω balanced; AUX1,2 input: 350mV / 10KΩ unbalanced RCA connection terminal<br>Mic Input : Minimum 4 input or better<br>Line Input : Minimum 2 input or better<br>Output : MIX OUT: 1000mV / 470Ω unbalanced RCA connector   |

|                                 |   |
|---------------------------------|---|
|                                 | <p>Tone : Bass: <math>\pm 10\text{dB}</math> at 100Hz; Treble: <math>\pm 10\text{dB}</math> at 10KHz<br/> Frequency Response : 80Hz ~16KHz (+ 1dB, -3dB)<br/> SNR : MIC1,2,3: 66dB; AUX1,2: 85dB<br/> THD : &lt; 0.05% (at 1KHz, 1/3 rated power)<br/> Mute Function : MIC 1 is prior to MIC2-4, AUX1-2 audio input; EMC is prior to all audio inputs<br/> Channel Crosstalk Attenuation : <math>\geq 50\text{dB}</math><br/> Heat Dissipation : Side-in and rear-out forced fan cooling; fan starts automatically when the device is turned on; infinitely variable speed<br/> Protection : Overheat protection, overcurrent protection, short circuit protection<br/> Power Supply : AC ~ 220V / 50Hz<br/> Power Consumption : 180W</p> |
| Sliding Trays                   | Provision for keeping laptop and Keyboard & Mouse   |
| Power Supply                    | 180 -240V, 50Hz, AC Supply  |
| Security                        | Physical Key for secure access to system.   |
| Fans                            | Suitable cooling fans to be provided in the lower body.   |
| <b>Ceiling Array Microphone</b> |   |
| Audio Pickup pattern            | 360° Omnidirectional  |
| Audio Pickup Range              | 8 Meter Radius or better  |
| Digital microphone array        | Built-in 24 MEMS microphone connected in arrays to form an Omnidirectional  |
| Multi Zones                     | Minimum 8 Zones beamforming or better   |
| Effective Audio pickup area     | 60 Sq Meter or better   |
| Sensitivity                     | -38dBV/Pa 94dB SPL@1kHz   |
| SNR                             | 63 dB or better   |
| Audio Algorithms                | Should support 3A algorithm (AEC, AGC & ANS) to provide Clear Audio experience  |
| Audio Features                  | Should support Intelligent background noise suppression, Howling suppression, Adaptively switching pickup beams supported & Smart reverberation to ensure clear sound quality and comfortable communication   |
| Audio Modes requirement         | Should support Local Sound reinforcement for local audio requirement, Remote conference audio only, and Hybrid mode   |
| Intelligent voice Pickup        | Should support Adaptive blind beamforming technology with automatic speaker alignment and speech reinforcement, to prevent from interference and to keep speech clear   |
| Cascade                         | Device should have capability to cascade upto 6 Unit in Daisy-chain mode using Cat-6 Cable  |
| <b>Ceiling Microphone DSP</b>   |   |
| Signal Processing               | 32-bit fixed/floating-point DSP 300MHz  |
| Audio System Delay              | < 1ms or better   |
| Digital-Analog Conversion       | 24-bit or better  |
| Sampling Rate                   | 48KHz or better   |
| Audio Interface                 | 3.5mm line-in & Line-Out, 6.5mm Mic-in, USB Mic in, RJ45 Array Mic input with PoE   |
| Speaker Interface               | 8 x Phoenix plug for Speaker out  |
| Control Port                    | RJ45 & USB Type-B for controlling   |
| USB Port                        | Should support USB for Audio input and output used for video conferencing   |

|                                  |   |
|----------------------------------|---|
|                                  | requirement   |
| Remote Control button            | Should supply with Remote control button with functionality like Volume up and down, Mic Mute & local sound Re-enforcement  |
| PoE Support                      | Device should support PoE to connect up to 8 no's of ceiling microphone in Dasy chain   |
| Local Sound                      | DSP should support Local sound re-enforcement which ceiling mic and Speakers without and noise or feedback  |
| <b>30-Watt Ceiling Speaker</b>   |   |
| Frequency Range (-10dB)          | 74 Hz – 20 kHz  |
| Power Rating                     | 30 Watts  |
| Frequency Response ( $\pm 3$ dB) | 100 Hz – 20 kHz   |
| Sensitivity                      | 87 dB (1kHz - 16 kHz)   |
| Coverage Angle                   | 120° conical  |
| Maximum SPL (1m)                 | 101 dB (low-impedance, 108 dB peak), 101 dB (top 70V/100V tap) or better  |
| Impedance                        | 8 ohms (in direct/bypass setting)   |
| Drivers                          | LF Driver: 100 mm (4 in), HF Driver: 19 mm (3/4 in)   |
| <b>30</b>                        | <p><b>Online UPS (10KVA)</b></p> <ul style="list-style-type: none"> <li>• Configuration: 10 KVAIGBT based On-Line UPS. UPS must support common battery bank in redundant configuration with another UPS of same type and rating.</li> <li>• Capacity: 10 KVA</li> <li>• AC Input Voltage Range: 160-280 V AC, 1 Phase @100% load</li> <li>• Input Frequency: 50Hz <math>\pm</math> 10% (Suitable for Generators)</li> <li>• AC Output Voltage: 230 V AC, 1-phase <math>\pm</math> 1% (Sine Wave Output)</li> <li>• Output Frequency: 50 Hz <math>\pm</math> 0.05 Hz</li> <li>• Overload Capacity: 110% for 60 minutes, 125% for 10 minutes, 150% for 60 seconds</li> <li>• Harmonic Distortion: &lt;2% for Linear Loads and &lt;5% for non-linear loads</li> <li>• Crest Factor 4:1 or better</li> <li>• Indications &amp; Audible Alarms: Mains On, Inverter On, Overload, Load On Mains, Load On Battery, Battery Low</li> <li>• Digital Metering LCD display for measurement of AC Voltage, Battery voltage, Battery Current, Load Current, Output frequency.</li> <li>• Battery Charger Offered UPS must have inbuilt 20 Amps Charging Current for proper charging of Battery Bank. External Chargers shall not be accepted.</li> <li>• Certification &amp; Compliance: <ul style="list-style-type: none"> <li>• ISO 9001, ISO 14001 or latest certification as applicable.</li> <li>• RoHS Compliance</li> <li>• After Sales Support &amp; Manufacturer's Credibility</li> </ul> </li> <li>• UPS OEM should have adequate technical manpower and spares for ensuring 24 x 7 x 365 support as per contract SLA</li> <li>• Contact numbers and addresses to be provided for support centres</li> </ul> |
| <b>31</b>                        | <p><b>Batteries for Back up for 1 Hour</b></p> <ul style="list-style-type: none"> <li>• The battery back-up time should be 60 Minutes using 12V, VRLA Sealed Maintenance Free Batteries with UPS.</li> <li>• Required VAH: 11160 VAH for 60 minutes</li> <li>• Individual Battery Capacity must not be less than 62 AH</li> </ul>   |
| <b>32</b>                        | <p><b>Generator</b></p> <ul style="list-style-type: none"> <li>• Capacity: 15 KVA</li> <li>• Cooling Method Air-cooled</li> </ul>   |

|    |  |
|----|--|
|    | <ul style="list-style-type: none"> <li>• Fuel Diesel</li> <li>• Phase Three-phase</li> <li>• Type Automatic</li> <li>• Noise Soundproof</li> <li>• Voltage 320 V</li> <li>• Frequency 50 Hz</li> </ul>   |
| 33 | <p><b>Training of Teachers at Studio (Batch of 10 Teachers)</b></p> <p>Building the capacity of the teacher in a comprehensive manner to enable them to use operate train other teachers and teach students. The bidder is required to provide comprehensive training to the end user personnel and handholding support to client and other stakeholders may be imparted for maximizing the turnout and utilization of the project / equipment.</p> <ul style="list-style-type: none"> <li>• Basic IT usage of all the studio components.</li> <li>• Teaching them how to give lectures in the studio</li> <li>• Introduction of Multimedia Content and teach the usage of it.</li> <li>• Classroom Management and Soft Skills.</li> <li>• Training shall be provided to the batch of 10 trainees.</li> </ul> <p><b>Objective of training:</b></p> <ul style="list-style-type: none"> <li>• The trainee becomes capable of using the Virtual classroom solution for normal operations.</li> <li>• The trainee must understands the manner in which the topic is dealt with answer questions/queries from students on the topics.</li> <li>• The trainee should be able to make his/her own lesson plans.</li> <li>• The training should be hands on with the help of the Virtual classroom solution and educational content developed.</li> <li>• The training should include presentation/ discussion by subject experts.</li> <li>• A teacher’s manual to be made available to all the trainees.</li> <li>• Expected set of Questions and answers should be provided at the end of the training (For eg. FAQs).</li> <li>• Should provide the Manual containing the solutions to the frequently encountered problem, compiled with the assistance of facility management personnel.</li> </ul> <p><b>Training Module:</b></p> <ul style="list-style-type: none"> <li>• The bidder should have the provision for physical trainings of the teachers. However, as per requirement, the bidder will have to provision for virtual trainings as well.</li> </ul> |

| <b>B. Regional Studio Setup</b> |  |
|---------------------------------|--|
| S.No.                           | Items with Minimum Specifications  |
| 1                               | <p><b>Digital Video Camera</b></p> <ul style="list-style-type: none"> <li>• Image sensor: 1”- or 2/3-inch sensor</li> <li>• Lens mount: Standard</li> <li>• Optical System: F1.6 prism system</li> <li>• Neutral Density filter: Clear, 1/4, 1/16, 1/64 or 2 stop, 4 stop, 6stop nd filters</li> <li>• Optical Image stabilizer: Required</li> <li>• Sensitivity: F12 or better</li> <li>• Horizontal Resolution: <ul style="list-style-type: none"> <li>i. 2,000 TV lines or more (3840 x2160p mode) or better</li> <li>ii. 1,000 TV lines or more (1920 x1080p mode) or better</li> </ul> </li> <li>• Monitor/Viewfinder: 3.5" type TFTLCD color monitor and 0.39 type OLED Viewfinder</li> <li>• Recording media: CF express Type A / SD card / CFAST 2.0/SDXC UHS-II Card Slots</li> </ul> |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"> <li>Recording resolution: 3840 x 2160, 3072 x 2560, 2048 x 1152, 2048 x 1080 and 1920 x 1080</li> <li>Video Output: SDI</li> <li>Audio Input: XLR-type 3-pin (female) (x2)</li> <li>Audio Output: 3.5mm stereo</li> <li>Battery, battery charger, AC adaptor, AC cable, microphone holder kit, shoulder strap, eye cup</li> </ul>  |
| 2 | <p><b>Camera Tripod</b></p> <ul style="list-style-type: none"> <li>Camera Plate Features: Sliding Balance Plate</li> <li>Base Mount: 75 mm</li> <li>Drag Control: Fixed</li> <li>Counter Balance: Fixed</li> <li>Head Mount Type: 75 mm Bowl</li> <li>Materials: Aluminium</li> <li>Pay Load: 8KG or Better</li> <li>Dolly: Required</li> </ul>   |
| 3 | <p><b>Microphone</b></p> <ul style="list-style-type: none"> <li>Connectors: 3-pin XLR-3</li> <li>Microphone Type: Dynamic cardioid</li> <li>Frequency Response: Tailored for speech and vocals</li> <li>Polar Pattern: Transparent high-end, warm and defined lower mids</li> <li>Housing: Extremely rugged metal housing</li> <li>Phantom Power Support: Yes</li> <li>Microphone Type: Large-diaphragm condenser with cardioid polar pattern</li> <li>Frequency Range: 20 Hz – 20 kHz</li> <li>Self-Noise: 4.5 dBA</li> <li>Max SPL: 132 dB</li> <li>Build: High-grade aluminium with ceramic coating</li> <li>Power Requirements: 24V or 48V phantom power (XLR)</li> <li>Wired Microphone</li> </ul> |
| 4 | <p><b>Audio Mixer</b></p> <ul style="list-style-type: none"> <li>8-Input Mixer</li> <li>Ultra-low noise mixer for podcasting and recording</li> <li>Stereo USB audio interface to connect your computer or mobile device</li> <li>Direct mixing of PC/gaming sounds into the streaming output</li> <li>Analog mixing and equalization for pure sound</li> <li>Versatile sub mixer for network enabled audio devices</li> </ul>  |
| 5 | <p><b>All IN One PC</b></p> <ul style="list-style-type: none"> <li>Processor: Intel Core i5/ AMD Ryzen 5 or better</li> <li>RAM: Minimum 8GB</li> <li>Storage: 256 GB SSD</li> <li>Display Minimum 23.8"</li> <li>Inputs: USB 3.0</li> <li>Outputs: HDMI / VGA/DP</li> <li>Operation System: Windows 10 pro 64 bit</li> <li>Accessories: Wireless Keyboard and Mouse</li> </ul>   |
| 6 | <p><b>PTZ Camera- 20X</b></p> <ul style="list-style-type: none"> <li>Camera Resolution should have 1920×1080@60fps</li> <li>Camera should have 1/2.7 inches High quality CMOS sensor</li> <li>Camera Should have Minimum 20 X optical zoom &amp; 16X Digital Zoom</li> <li>Camera Should have minimum 59.5 degrees field of view</li> <li>Should have auto focus facility</li> </ul>  |

|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• Should support Auto &amp; Manual white balance</li> <li>• Camera Focal length should have f=5.2 - 98.0mm</li> <li>• Camera Should have USB 3.0, HDMI, IP, SDI, Line in, IP and RS232 interfaces</li> <li>• Camera should support PoE from the Day one</li> <li>• Camera should support 255 Presets from IR Remote &amp; RS 232 control Interface</li> <li>• Should Support Pan: <math>\pm 170^\circ</math> Tilt: <math>+90^\circ / -30^\circ</math></li> <li>• Tracking setting should be done in IR remote and in PTZ management software</li> <li>• PTZ Management software should be from the same OEM</li> <li>• PTZ Management software should support Live Video Preview</li> <li>• Camera should support Pan, Tilt, Zoom, Focus &amp; Preset Control settings through the PTZ Management software</li> <li>• Camera Should support firmware upgradation through PTZ Management software</li> <li>• Should support Built in RTMP &amp; RTSP based Live streaming</li> <li>• Camera should have BIS, CE, FCC &amp; RoHS compliance certificates.</li> <li>• Camera should have 3 Years warranty</li> <li>• OEM should have ISO 9001:2015 &amp; 14001:2015 certification for ensuring quality &amp; standard and including design and Manufacturing unit process.</li> <li>• OEM Manufacturing unit should be available in India.</li> </ul>  |
| 7 | <p><b>PTZ Camera- 12X</b></p> <ul style="list-style-type: none"> <li>• Camera Resolution should support 1920×1080@60fps</li> <li>• Camera should have 1/2.7 inch High quality CMOS sensor</li> <li>• Camera Should have Minimum 12 X optical zoom &amp; 16X Digital Zoom</li> <li>• Camera Should have minimum 72.5 or above of Horizontal field of view</li> <li>• Should have auto focus facility</li> <li>• Should support Auto &amp; Manual white balance</li> <li>• Camera Should have USB 3.0, HDMI, IP, Line in, IP and RS232 interfaces</li> <li>• Camera should support 1080p 60fps through USB3.0 &amp; HDMI</li> <li>• Camera should support 255 Presets from IR Remote &amp; RS 232 control Interface</li> <li>• Should Support Pan <math>\pm 170^\circ</math> Tilt: <math>+90^\circ / -30^\circ</math></li> <li>• PTZ Management software should be from the same OEM</li> <li>• PTZ Management software Should support Live Video Preview</li> <li>• Camera should support Pan, Tilt, Zoom, Focus &amp; Preset Control through the PTZ Management software</li> <li>• Camera Should support firmware upgradation through PTZ Management software</li> <li>• Should support Built in RTMP &amp; RTSP based Live streaming</li> <li>• Speakerphone should have BIS, CE, FCC &amp; RoHS compliance certificates.</li> <li>• Speakerphone should have 3 Years warranty</li> <li>• Bidder should submit bid specific MAF from the OEM</li> <li>• OEM should have ISO 9001:2015 &amp; 14001:2015 certification for ensuring quality &amp; standard and including design and Manufacturing unit process.</li> <li>• OEM Manufacturing unit should be available in India.</li> </ul> |
| 8 | <p><b>55 inches Professional Display</b></p> <ul style="list-style-type: none"> <li>• Screen Size: 55"</li> <li>• Aspect Ratio: 16:9 or better</li> <li>• Panel Type: IPS LED / Equivalent</li> <li>• Resolution: 1,920 × 1,080 pixels</li> <li>• Brightness: 350 cd/m<sup>2</sup> or better</li> <li>• Viewing Angle: 178° / 178°</li> </ul>  |

|    |   |
|----|---|
|    | <ul style="list-style-type: none"> <li>• Inputs: HDMI (2), RGB, Audio, USB or better</li> <li>• Mounting Options: One floor mount and two wall mounts</li> <li>• Certifications: BIS</li> </ul>   |
| 9  | <p><b>Transmission Server</b></p> <ul style="list-style-type: none"> <li>• Vector Encoder Server</li> <li>• Dual Vector-MPEG-4 codec SD/HD 4:2:0/4:2:2 encoding</li> <li>• Broad SD/HD format input support</li> <li>• Audio encoding of up to 32 stereo or 64 mono channels</li> <li>• Broadcast-quality video content distribution</li> <li>• IP outputs</li> <li>• Ultra-low delay mode</li> <li>• User-friendly web-based control panel</li> <li>• Fast boot time</li> <li>• Dual codec (Vector)</li> <li>• Colour space Conversion Hardware based real time</li> <li>• Vector encoder using custom encryption algorithm</li> <li>• HD Down Conversion Built-in, high-quality software down converter on playback &amp; capture</li> <li>• HD Up Conversion Built-in, high-quality software up converter from SD to 720HD or 1080HD on input</li> <li>• Colour Space REC 601, REC 709</li> <li>• Colour Precision 8, 10, 12-bit RGB 4:4:4 in all modes</li> <li>• Video Sampling 8, 10, 12-bit RGB 4:4:4 in all modes</li> <li>• SDI Video Inputs bidirectional 12-bit SD/HD independently configurable as either Input or Output.</li> <li>• SDI Video Outputs bidirectional 12-bit SD/HD independently configurable as either Input or Output.</li> <li>• SD Video Standards 525i59.94 NTSC, 625i50 PA</li> <li>• Supports Background noise removal and echo cancellation of audio.</li> <li>• Supports controlling frame rate and resolution</li> <li>• Supports Multiple Video and audio input.</li> <li>• Create PIP with multiple video inputs and positioning.</li> <li>• Supports multiple types of content/documents.</li> <li>• Support Whiteboard collaboration.</li> <li>• Supports Whiteboard write/Type.</li> <li>• Screen sharing support partial/Full (Customizable) Streaming content auto-save</li> </ul> |
| 10 | <p><b>Laptop with HDMI output</b></p> <ul style="list-style-type: none"> <li>• Intel Core i5 11<sup>th</sup> Gen or equivalent AMD or higher</li> <li>• Minimum 8GB RAM DDR4 or better.</li> <li>• Minimum 1 TB HDD/512 GB SSD or better.</li> <li>• Display Diagonal Size: maximum 14.0" FHD display</li> <li>• USB 3.0/USB 2.0, HDMI, VGA</li> <li>• Windows 11 Home or Ubuntu Latest</li> <li>• Minimum 45 Wh Integrated Battery</li> <li>• Weight should be less than 1.8 Kgs.</li> </ul>   |
| 11 | <p><b>LED Lights with ceiling mount movable Grid and mounting clamps</b></p> <ul style="list-style-type: none"> <li>• Grid</li> <li>• Ceiling Mount: Designed for fixed tracks</li> <li>• Fixed Track: 12 feet length</li> <li>• Moveable Track: 12 feet length</li> <li>• Moveable Clamps: As required</li> </ul>  |

|    |  |
|----|--|
|    | <ul style="list-style-type: none"> <li>• Hooks: As required</li> <li>• LED Lights</li> <li>• Colour Temperature: 5600K / 3200K</li> <li>• Dimmable Output: Adjustable from 100% to 10%</li> <li>• Power Consumption: Less than 100W</li> <li>• Mounting: Ceiling mount facility</li> <li>• Adaptor: AC Adaptor</li> <li>• Barn Door &amp; Filters: Included for light control</li> <li>• Supply: Operated from nominal 230V / 50Hz AC supply</li> </ul>  |
| 12 | <p><b>Earthing + Cabling &amp; Installation + Integration + Testing+ Accessories for integration</b></p> <ul style="list-style-type: none"> <li>• <b>Cabling</b><br/>It is required to set-up the facility for HD/SD operations; therefore, all the cabling should seamlessly support required operations.</li> <li>• <b>Installation Material</b><br/>All installation materials including, equipment racks, power cables, interconnection cables, connectors and other accessories (including nuts, bolts, screws etc.) required for installation of the complete system shall be quoted</li> <li>• <b>System Completeness</b><br/>Completeness of the system will be responsibility of the Bidder. Any hardware and/or software including passive and active devices required for completeness of the technical workflow shall be quoted. Bidder shall be responsible for technical and operational completeness of the entire system.</li> <li>• <b>Workflow Diagram</b><br/>The Bidder has to provide schematic diagram of the technical workflow to ensure the workability of the offered solution in all respects.</li> <li>• <b>Any Additional Items to Complete the workflow</b><br/>Bidder must mention any additional items required to complete the workflow with proper justification. Accessories like required convertors, cables, audio/video connectors, adopters etc.</li> </ul> |
| 13 | <p><b>Acoustic, Fabric Above Acoustics, Green Screen (Chroma key)</b></p> <p>Provision &amp; fixing of pre-fabricated acoustic panels for the walls inside the studio topped with suitable fabric giving an aesthetic finish, Required Partitioning of room, Closing of windows. Green Screen on one complete wall.</p> <ul style="list-style-type: none"> <li>• <b>Interior</b><br/>Provision &amp; fixing of pre-fabricated acoustic panels for the walls inside the studio topped with suitable fabric giving an aesthetic finish</li> <li>• <b>Carpet</b><br/>Providing and Fixing Wall to Wall</li> <li>• <b>Door Type and Size</b> <ol style="list-style-type: none"> <li>Acoustic Doors of 3X 7' with provisioning and fixing panel with vision panel for main door and control room.</li> <li>Provision &amp; fixing of frame and sound proof casement door with multipoint locking system and both sides handle with locking arrangement with vision panel for studio main door and control room door.</li> </ol> </li> <li>• <b>Window</b><br/>Provisioning and fixing sound proof window hermitically sealed with Glass (Size 3' X 5')</li> </ul>   |
| 14 | <p><b>Air Conditioner-1.5 Ton</b></p> <ul style="list-style-type: none"> <li>• Type: 1.5 Ton Split Inverter AC</li> <li>• Energy Efficiency: 3-star BEE rating</li> <li>• Condenser Coil: Copper (Better cooling &amp; low maintenance)</li> <li>• Features: Auto-restart, stabilizer-free operation, dust filter, and low noise</li> </ul>  |

|    |                       |                             |  |
|----|-----------------------|-----------------------------|--|
| 15 | <b>Digital Podium</b> |                             |  |
|    | 1                     | Type/Mounting               | Free Standing  |
|    | 2                     | Construction                | The Podium shall be wheel mounted capable of moving in all directions with a facility of lock them while the Electronic podium is in use. The enclosure shall be made of Polymer Powder Coated Steel Body with wooden top panels, designed to work in suitable environmental conditions. The wooden top shall have lock and key and should have a sliding cover for opening/closing easily. The Podium should have housing and connectivity for Visual Presenter while the visualiser is in use and not in use. At the time of using the Visualiser, drawer can be opened and Visualiser can be used. The construction of the podium should be such that, while the podium is locked and not in use, there should not be any port exposed/ visible on the outer body for breakage/mishandling. |
|    | 3                     | Display                     | Built-in highly sensitive Interactive Panel with adjustable Manual tilt & a mechanism to make the Panel stable so that it does not shake while writing with following minimum features -   |
|    |                       | Display Size                | 21 inch or higher  |
|    |                       | Panel Type                  | IPS Technology   |
|    |                       | Active area(mm)             | 476.064(H)x267.786(V) or better  |
|    |                       | Resolution                  | 1920 x 1080 Full HD or better  |
|    |                       | Light Source                | LED  |
|    |                       | Brightness                  | 350 cd/m <sup>2</sup> (typ) or higher  |
|    |                       | Contrast Ratio              | 1200:1 or higher   |
|    |                       | Colours                     | 16.7M or better  |
|    |                       | Aspect Ratio                | 16:09  |
|    |                       | Response Time (Typical GTG) | 8ms or better  |
|    |                       | Operational Hours           | 30000 Hours or higher  |
|    |                       | Viewing Angles              | 178° horizontal, 178° vertical   |
|    |                       | Curvature                   | Flat   |
|    |                       | Colour Gamut                | 72% or better  |
|    |                       | Interactive Method          | Electromagnetic resonance method   |
|    |                       | Touch Type                  | Pressure-sensitive, cordless, battery-free   |
|    |                       | Resolution                  | 5080LPI  |
|    |                       | Pressure levels             | 8192 Levels  |
|    |                       | Tracking speed              | 266PPS   |
|    |                       | Touch Accuracy              | ±0.5mm(center);±1mm(edge)  |
|    |                       | Touch Response              | First touch:30ms;Continuous touch:5ms  |
|    |                       | Touch Screen                | Multi-touch Points   |
|    |                       | Control Buttons             | Power, Menu, +/-, Auto or more   |
|    |                       | Connectivity (Minimum)      | USB x 1, HDMI x 1, DVI x 1, VGA x 1 or better  |
|    | Pen Type              | Battery Free EM Pen         |  |
|    | Pen Control           | Two Key and Pen tip Control |  |

|     |  |  |
|-----|--|--|
|     | Interactive Method                             | Electromagnetic resonance method   |
|     | Display Stand                                  | Should support tilting and Table standing type   |
|     | Power Supply                                   | 12V DC   |
| 4   | Controller                                     |  |
| (a) | Ports on front Panel of Controller (Minimum)   | VGA,HDMI,USB3.0x2,Audio IN or more   |
| (b) | Buttons on front Panel of Controller (Minimum) | Push buttons to control Volume Up& Down, Volume Mute and to switch sources of HDMI Visual Presenter, VGA Visual Presenter, HDMI Laptop, PC HDMI,VGA Laptop, VGA PC and Controller Power On/Off, Display Power On and Power Off or more   |
| (c) | Ports on Rear Panel of Controller (Minimum)    | USB 3.0 X 2,VGA Input x 2, VGA Output x 2, RCA Audio IN X 1,RCA Audio Output x 2,HDMI Inputx2,HDMI Outputx2 , Programming Port (Phoenix connector) or more   |
| (d) | Built in HDMI Repeater                         | Yes (HDMI Output port should support 15mtr HDMI cable)   |
| (e) | Controller Resolution Output                   | 4K (3840 x 2160) Native  |
| (f) | Power  | 5 V DC (Suitable Adaptor should be supplied with controller)   |
| 5   | Built in devices                               |  |
| (a) | Gooseneck Microphone                           | Gooseneck Microphone with XLR output. It should be Phantom powered so that there is no requirement of batteries thereby eliminating consumable cost. The gooseneck length should be at least 21.5 inch with ON/OFF switch and with LED light indicating ON/OFF status. The gooseneck microphone shall be permanently polarised condensor, highly directional featuring hypercardioid /lobar directivity.   |
| (b) | Built in Amplifier Power                       | <p>Amplifier : Class D</p> <p>Rated Power : 150 W or better</p> <p>Impedance : MIC input: 5mV / 600Ω balanced; AUX1,2 input: 350mV / 10KΩ unbalanced RCA connection terminal</p> <p>Mic Input : Minimum 4 Mono input or better</p> <p>Line Input : Minimum 2 RCA input or better</p> <p>Output : MIX OUT: 1000mV / 470Ω unbalanced RCA connector</p> <p>Tone : Bass: ± 10dB at 100Hz; Treble: ± 10dB at 10KHz</p> <p>Frequency Response : 80Hz ~16KHz (+ 1dB, -3dB)</p> <p>SNR : MIC1,2,3: 66dB; AUX1,2: 85dB</p> <p>THD : &lt; 0.05% (at 1KHz, 1/3 rated power)</p> <p>Mute Function : MIC 1 is prior to MIC2-4, AUX1-2 audio input; EMC is prior to all audio inputs</p> <p>Channel Crosstalk Attenuation : ≥50dB</p> <p>Heat Dissipation : Side-in and rear-out forced fan cooling; fan starts automatically when the device is turned on; infinitely variable speed</p> <p>Protection : Overheat protection, overcurrent protection, short circuit protection</p> <p>Power Supply : AC ~ 220V / 50Hz</p> <p>Power Consumption : 180W</p> |
| 6   | Visual Presenter                               | Visual Presenter with Min. 8 Mega Pixel or better, inbuilt Microphones, Minimum A3 shooting Area or better, Minimum 100x Zooming Capability or better, Should support LED Light Brightness Adjustment & Dimming capability, Should support SD/SDHC card with min. 32 GB Capability or more, Minimum Connectivity ports: 1x VGA In, 1x VGA  |

|           |   |  |   |
|-----------|---|--|---|
|           |   | <p>out, 1x HDMI out, 1x USB, 1x SD Card, Should have kensington lock (K-Lock), PC Less Annotation, Image roaming drag Region zoom in, Split Screen function, Camera Rotation, Device Portability, Microscope Capability, It should have minimum Zoom in/out, Res/Exit, Menu, VGA/HDMI, Light, Auto/OK, UP/Down buttons or more for ease of access, Device should allows the live image of an object being captured to be displayed alongside an image stored on the external memory, Should have Touch screen support to perform interactive features, Device should portable structure allows users to fold and easy to store, Multimedia Function : Freeze, Focus Adjustment, LED on/off, Brightness Adjustment, Contrast, Negative, Black and While, Split Screen, Slideshow, Video Capture, Flicker Redction, Image Rotation(0/180degrees), Source(PC/SD Card), Image Mirror, Picture in Picture, On Screen Toolbar, should have on-board Annotation feature without using any other computing device. BIS Certification required for Visual Presenter, BIS of Visual Presenter should be registered in name of Podium's OEM</p> |   |
|           | 7   | Sliding Trays  | Provision for keeping laptop and Keyboard & Mouse       |
|           | 8   | Power Supply   | 180 -240V, 50Hz, AC Supply                              |
|           | 9   | Security   | Physical Key for secure access to system.               |
|           | 10  | Fans   | Suitable cooling fans to be provided in the lower body. |
| <b>16</b> | <p><b>Online UPS (5KVA)</b></p> <ul style="list-style-type: none"> <li>• Configuration: 5 KVA based On-Line UPS</li> <li>• Capacity: 5 KVA</li> <li>• AC Input Voltage Range: 160-280 V AC, 1 Phase @100% load</li> <li>• Input Frequency: 50Hz ± 10% (Suitable for Generators)</li> <li>• AC Output Voltage: 230 V AC, 1-phase ± 1% (Sine Wave Output)</li> <li>• Output Frequency: 50 Hz ± 0.05 Hz</li> <li>• Overload Capacity: 110% for 60 minutes, 125% for 10 minutes, 150% for 60 seconds</li> <li>• Harmonic Distortion: &lt;2% for Linear Loads and &lt;5% for non-linear loads</li> <li>• Crest Factor: 4:1 or better</li> <li>• Indications &amp; Audible Alarms: Mains On, Inverter On, Overload, Load On Mains, Load On Battery, Battery Low</li> <li>• Digital Metering: LCD display for AC Voltage, Battery Voltage, Battery Current, Load Current, Output Frequency</li> <li>• Battery Charger: Inbuilt 20 Amps Charging Current (External Chargers not accepted)</li> <li>• Battery Back-up &amp; Other Details: 60-minute backup using 12V VRLA Sealed Maintenance-Free Batteries; Required VAH: 6200 VAH; Individual Battery Capacity ≥ 65 AH</li> <li>• Certification &amp; Compliance: ISO 9001, ISO 14001 (latest applicable certification), RoHS Compliance</li> <li>• After Sales Support &amp; Manufacturer's Credibility: UPS OEM must have service centres across the State with 24x7x365 technical support as per contract SLA</li> </ul> |  |   |
| <b>17</b> | <p><b>Batteries for Back up for 2 Hour</b></p> <ul style="list-style-type: none"> <li>• Backup Duration: 120 minutes using 12V VRLA sealed maintenance-free batteries with UPS</li> <li>• Capacity: Required VAH: 22,320 VAH for 120 minutes</li> <li>• Individual Battery Capacity: Minimum 120 A</li> </ul>   |  |   |

**C. Virtual Classrooms with Digital Assessment**

| S.No. | Items with Minimum Specifications |
|-------|-----------------------------------|
| 1     | Projector                         |

|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• Display Technology: DLP</li> <li>• Native Resolution: WXGA 1280 x 768</li> <li>• Brightness :3600 ANSI Lumens</li> <li>• Aspect Ratio: 16:10 / 16:9</li> <li>• I/O Connectors: HDMI, VGA-in, VGA-out, USB, Audio-in, Audio-out, RS232</li> <li>• Displayable Colours:1073.4 million colours</li> <li>• Projection Distance :0.5- 2.5 m</li> <li>• Contrast Ratio: 18000:1 or above</li> <li>• Lamp Life: 6000 hrs Minimum</li> <li>• Light Source: Lamp</li> <li>• Certification: BIS, RoHS</li> </ul>  |
| 2 | <p><b>Projector Screen</b></p> <ul style="list-style-type: none"> <li>• Size :6 X 8</li> <li>• Type: Manual Pull Down</li> <li>• Lock: Pull down auto lock</li> <li>• Mounting: Wall mount</li> <li>• Fabric: High Gain fabric</li> </ul>  |
| 3 | <p><b>Laptop-Basic</b></p> <ul style="list-style-type: none"> <li>• Processor (CPU): Intel Core i3 12<sup>th</sup> Gen /AMD Equivalent or better</li> <li>• Memory: 8GB RAM</li> <li>• Storage: 512 GB SSD/ 1TB HDD or better.</li> <li>• Display Diagonal Size: maximum 14.0" FHD display</li> <li>• USB 3.0/USB 2.0, HDMI, VGA</li> <li>• Graphics : Integrated</li> <li>• Interface : HDMI, Ethernet, USB</li> <li>• Windows 11 Home or Ubuntu Latest</li> <li>• Minimum 45 Wh Integrated Battery</li> <li>• Weight should be less than 1.8 Kgs.</li> </ul>   |
| 4 | <p><b>Audio System for Projector Based Classroom</b></p> <ul style="list-style-type: none"> <li>• 6 Speaker system with amplifier</li> <li>• Connectivity: AUX</li> <li>• Sound Output power: 60 W (each of 10 W speaker)</li> <li>• Power Supply Power Requirements 220-220 V AC 50/60 Hz</li> </ul>  |
| 5 | <p><b>Audio System for IFP based Classroom</b></p> <ul style="list-style-type: none"> <li>• Power Output: 120-Watt (20Watt + 10 Watt) x 4,</li> <li>• Features: Fully Functional IR Remote, Multi Playability of Aux, USB and Bluetooth, USB Support of 32 GB, Analogue Control of Volume, Bass.</li> <li>• Informative LED Display, Immersive Glowing Lights with Music.</li> </ul>   |
| 6 | <p><b>Server</b></p> <ul style="list-style-type: none"> <li>• Edge AI Classroom Server</li> <li>• Component Specification</li> <li>• MEMORY :5th Gen 8GB DDR OR Higher (Standard/LP)</li> <li>• CPU multi-core processor (6-core or higher; 1.5Ghz or Higher)</li> <li>• GPU Made for Edge AI</li> <li>• NVIDIA Ampere architecture</li> <li>• 32 tensor core or higher</li> <li>• 63.9 Tera Operations per second or higher with INT8 AI interface in any mode</li> <li>• Power consumption of 350Watt or lower</li> <li>• Storage :1TB NVMe M.2 SSD</li> <li>• Display :1x DisplayPort (DP 1.2 or higher) or HDMI 2.1</li> </ul> |

|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• USB :4x USB 3.0 or 3.2 (Type-A or Type-C)</li> <li>• Networking :1x Gigabit Ethernet (1GbE)</li> <li>• Size: Compact/Standard</li> </ul>  |
| 7 | <p><b>75” Interactive Flat Panel</b></p> <ul style="list-style-type: none"> <li>• Size (Diagonal): 75 inches</li> <li>• Panel Technology: Direct type LED</li> <li>• Brightness: 350 cd/m2 or higher</li> <li>• Resolution: UHD (3840 x 2160-HDR10)</li> <li>• Display Colours: 1.07 billion</li> <li>• Viewing angle: 178 degrees</li> <li>• Screen Treatment: 7H or better</li> <li>• Contrast Ratio (typical): 1200:1</li> <li>• Dynamic Contrast Ratio: 35000:1</li> <li>• Panel Life Time (Min.): 30000 Hrs</li> <li>• Active Area (H x V): 1428 x 804 mm or better</li> <li>• Operating Humidity: 90%</li> <li>• Refresh Rate: 60Hz</li> <li>• Deep Standby: 0.5W</li> <li>• Mechanical Features: Front Buttons, Rocker Switch</li> <li>• Video Input: 1xHDMI2.0</li> <li>• Audio Input/output: Line In / Line Out</li> <li>• External Control: RJ45</li> <li>• USB: 1 x Type B for Touch</li> <li>• Touch Interactivity: IR Technology</li> <li>• Continuous Touch Points: 10 Points</li> <li>• Sensitivity: Any Touch with Finger, gloved hand or pointer</li> <li>• Glass Type: Anti-Glare (AG), 3mm Tempered</li> <li>• Response Time: 10mS or better</li> <li>• Touch Accuracy: +/-2mm (90% area)</li> <li>• Operating Temperature: +40 degree Celsius / 0 degree Celsius</li> <li>• Power Supply: 100~240V</li> <li>• Power Consumption: 430 W Typical or better</li> <li>• Built-in Android version: ANDROID 13.0 or higher</li> <li>• ROM: 32 GB</li> <li>• RAM: 4 GB</li> <li>• Built-in Speakers: Minimum 16W x 2 Speakers</li> <li>• OEM ISO Certificate/MAF: Required</li> <li>• OEM Having minimum 10 Yrs Establishment in India</li> </ul> |
| 8 | <p><b>65” Interactive Flat Panel</b></p> <ul style="list-style-type: none"> <li>• Size (Diagonal): 65 inches</li> <li>• Panel Technology: Direct type LED</li> <li>• Brightness: 350 cd/m2 or higher</li> <li>• Resolution: UHD (3840 x 2160-HDR10)</li> <li>• Display Colours: 1.07 billion</li> <li>• Viewing angle: 178 degrees</li> <li>• Screen Treatment: 7H or better</li> <li>• Contrast Ratio (typical): 1200:1</li> <li>• Dynamic Contrast Ratio: 35000:1</li> <li>• Panel Life Time (Min.): 30000 Hrs</li> <li>• Active Area (H x V): 1428 x 804 mm or better</li> </ul>  |

|                       | <ul style="list-style-type: none"> <li>• Operating Humidity: 90%</li> <li>• Refresh Rate: 60Hz</li> <li>• Deep Standby: 0.5W</li> <li>• Mechanical Features: Front Buttons, Rocker Switch</li> <li>• Video Input: 1xHDMI2.0</li> <li>• Audio Input/output: Line In / Line Out</li> <li>• External Control: RJ45</li> <li>• USB: 1 x Type B for Touch</li> <li>• Touch Interactivity: IR Technology</li> <li>• Continuous Touch Points: 10 Points</li> <li>• Sensitivity: Any Touch with Finger, gloved hand or pointer</li> <li>• Glass Type: Anti-Glare (AG), 3mm Tempered</li> <li>• Response Time: 10mS or better</li> <li>• Touch Accuracy: +/-2mm (90% area)</li> <li>• Operating Temperature: +40 degree Celsius / 0 degree Celsius</li> <li>• Power Supply: 100~240V</li> <li>• Power Consumption: 350W Typical or better</li> <li>• Built-in Android version: ANDROID 13.0 or higher</li> <li>• ROM: 32 GB</li> <li>• RAM: 4 GB</li> <li>• Built-in Speakers: Minimum 16W x 2 Speakers</li> <li>• OEM Having Service Centre in the state / Not blacklisted in any Govt. Org</li> <li>• OEM ISO Certificate/MAF: Required</li> <li>• OEM Having minimum 10 Yrs Establishment in India</li> </ul>   |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
|-----------------------|---|------------|----------------|-----|-------------------------------|---------|-----|----------|------------------------|------------------|-----------------------|-------------------|--|--------|--|---------|---|----------|--|----------|--------------------------------------|-----------|--|---------------|--|--------------|--|-----------------------|----------|---------------------|-----------|
| 9                     | <p><b>OPS PC</b></p> <table border="1"> <thead> <tr> <th>Parameters</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>CPU</td> <td>Intel Core i5 11th Generation</td> </tr> <tr> <td>Chipset</td> <td>SoC</td> </tr> <tr> <td>Graphics</td> <td>Intel Iris Xe Graphics</td> </tr> <tr> <td>Multiple Display</td> <td>Supports Dual Display</td> </tr> <tr> <td>Display Interface</td> <td>1 x HDMI1.4 (4K30Hz)<br/>1 x 80 PIN (HDMI2.0 4K60Hz output + DP1.2 4K60Hz output)</td> </tr> <tr> <td>Memory</td> <td>8 GB Dual Channel SO-DIMM DDR4-3200MHz support Upto 32GB</td> </tr> <tr> <td>Storage</td> <td>1TB 1 x M.2 2280 size for NVMe/SATA SSD</td> </tr> <tr> <td>Ethernet</td> <td>1 x Realtek 8111H 1000M Ethernet RJ45 Port</td> </tr> <tr> <td>Wireless</td> <td>1 x M.2 2230 slot for WIFI_BT Module</td> </tr> <tr> <td>I/O Ports</td> <td>1 x HDMI1.42 x USB 3.1<br/>1 x USB2.0<br/>1 x Type-C(USB3.1)<br/>1 x RJ45 1 x MIC IN &amp; 1 x Line-out Connector<br/>2 x Wi-Fi/BT Antenna</td> </tr> <tr> <td>OPS Interface</td> <td>1 x 2.5/5.5 DC IN JACK<br/>1 x HDMI2.01 x 4K60Hz output<br/>2 x USB2.01 x USB3.0<br/>1 x TTL<br/>Other Control Signals</td> </tr> <tr> <td>Power Inputs</td> <td>12 - 19V DC IN, 2.5/5.5 DC Jack &amp; JAE 80 pin DC IN</td> </tr> <tr> <td>Operating Temperature</td> <td>0 to 40C</td> </tr> <tr> <td>Storage Temperature</td> <td>20 to 70C</td> </tr> </tbody> </table> | Parameters | Specifications | CPU | Intel Core i5 11th Generation | Chipset | SoC | Graphics | Intel Iris Xe Graphics | Multiple Display | Supports Dual Display | Display Interface | 1 x HDMI1.4 (4K30Hz)<br>1 x 80 PIN (HDMI2.0 4K60Hz output + DP1.2 4K60Hz output) | Memory | 8 GB Dual Channel SO-DIMM DDR4-3200MHz support Upto 32GB | Storage | 1TB 1 x M.2 2280 size for NVMe/SATA SSD | Ethernet | 1 x Realtek 8111H 1000M Ethernet RJ45 Port | Wireless | 1 x M.2 2230 slot for WIFI_BT Module | I/O Ports | 1 x HDMI1.42 x USB 3.1<br>1 x USB2.0<br>1 x Type-C(USB3.1)<br>1 x RJ45 1 x MIC IN & 1 x Line-out Connector<br>2 x Wi-Fi/BT Antenna | OPS Interface | 1 x 2.5/5.5 DC IN JACK<br>1 x HDMI2.01 x 4K60Hz output<br>2 x USB2.01 x USB3.0<br>1 x TTL<br>Other Control Signals | Power Inputs | 12 - 19V DC IN, 2.5/5.5 DC Jack & JAE 80 pin DC IN | Operating Temperature | 0 to 40C | Storage Temperature | 20 to 70C |
| Parameters            | Specifications  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| CPU                   | Intel Core i5 11th Generation   |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Chipset               | SoC   |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Graphics              | Intel Iris Xe Graphics  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Multiple Display      | Supports Dual Display   |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Display Interface     | 1 x HDMI1.4 (4K30Hz)<br>1 x 80 PIN (HDMI2.0 4K60Hz output + DP1.2 4K60Hz output)  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Memory                | 8 GB Dual Channel SO-DIMM DDR4-3200MHz support Upto 32GB  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Storage               | 1TB 1 x M.2 2280 size for NVMe/SATA SSD   |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Ethernet              | 1 x Realtek 8111H 1000M Ethernet RJ45 Port  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Wireless              | 1 x M.2 2230 slot for WIFI_BT Module  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| I/O Ports             | 1 x HDMI1.42 x USB 3.1<br>1 x USB2.0<br>1 x Type-C(USB3.1)<br>1 x RJ45 1 x MIC IN & 1 x Line-out Connector<br>2 x Wi-Fi/BT Antenna  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| OPS Interface         | 1 x 2.5/5.5 DC IN JACK<br>1 x HDMI2.01 x 4K60Hz output<br>2 x USB2.01 x USB3.0<br>1 x TTL<br>Other Control Signals  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Power Inputs          | 12 - 19V DC IN, 2.5/5.5 DC Jack & JAE 80 pin DC IN  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Operating Temperature | 0 to 40C  |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |
| Storage Temperature   | 20 to 70C   |            |                |     |                               |         |     |          |                        |                  |                       |                   |  |        |  |         |   |          |  |          |                                      |           |  |               |  |              |  |                       |          |                     |           |

|    |   |                                    |
|----|---|------------------------------------|
|    | Operating Humidity  | 10% - 90% non-Condensing           |
|    | Operating System Support  | Windows 11 Home/Windows IoT/UBUNTU |
|    | Warranty  | 3 Years on site                    |
| 10 | <p><b>Protective Casing For The Interactive Flat Panel:</b></p> <ul style="list-style-type: none"> <li>• Outer Length of Frame: 3780 mm/ As per the dimension of panel</li> <li>• Outer width of Frame: 1210 mm/ As per the dimension of panel</li> <li>• Thickness of Frame (Depth): 200 mm</li> <li>• Frame is made of Aluminium with Bronze colour anodizing.</li> <li>• 1 number boards are fitted as per requirement for safe and secure fitting (1 board to be fixed with 1 board to be movable with lock &amp; key.</li> <li>• Base material with 14 mm thickness.</li> <li>• Metal L- Clamp for mounting frame is 8 nos. with thickness of 5 mm, Movable board is having lock system to safe IFPD from vandalism</li> <li>• Front metal sheet is having thickness 0.3 mm.</li> <li>• Back Side metal sheet is colour coated/ GI sheet with thickness of 0.20-3mm.</li> <li>• The magnet is provided in the system which will get locked when it is completely open and the boards are having wheels with bearing for</li> <li>• smooth movement.</li> <li>• Whole system is mounted on the wall with the help of 6 metal clamps having thickness of 3mm.</li> </ul>   |                                    |
| 11 | <p><b>Virtual Classroom Application Software</b><br/>(Detailed specifications and features should cover all the RFP needs)</p> <p><b>1. Overview</b> The software shall enable classrooms to connect to a central broadcasting studio for receiving live and recorded educational content. It should support low-bandwidth environments and be easy to operate.</p> <p><b>2. Core Features</b></p> <ul style="list-style-type: none"> <li>• Receive live sessions from the studio with low latency (&lt;5 sec)</li> <li>• Access recorded content (online/offline)</li> <li>• Multi-language UI and subtitles</li> <li>• Chat/Q&amp;A module for moderated interaction</li> <li>• Raise hand / send doubts to studio</li> </ul> <p><b>3. System Requirements</b></p> <ul style="list-style-type: none"> <li>• OS: Windows 10/11, Ubuntu, Android</li> <li>• Interface: Web-based or desktop client</li> <li>• Hardware: Compatible with projectors, smart panels, speakers, basic PC setup</li> </ul> <p><b>4. Integration &amp; Connectivity</b></p> <ul style="list-style-type: none"> <li>• Protocols: RTMP, HLS, HTTP/HTTPS</li> <li>• Supports satellite and IP delivery</li> <li>• Auto-reconnect on signal loss</li> <li>• Works with classroom AV equipment</li> </ul> <p><b>5. Teacher Tools</b></p> <ul style="list-style-type: none"> <li>• Session playback control</li> <li>• Student attendance marking</li> <li>• Submit feedback and session reports</li> <li>• Conduct assessment/surveys (if enabled)</li> </ul> <p><b>6. Security &amp; Maintenance</b></p> <ul style="list-style-type: none"> <li>• Encrypted content delivery (AES-128 or better)</li> <li>• Role-based access control</li> <li>• Logs of session usage and interactions</li> <li>• OTA (Over-the-Air) updates and remote support</li> </ul> <p><b>7. Other</b></p> <ul style="list-style-type: none"> <li>• AI-based engagement via webcam (Edge AI)</li> </ul> |                                    |

|    |  |
|----|--|
|    | <ul style="list-style-type: none"> <li>• LMS/Diksha integration</li> <li>• Mobile access for teacher monitoring</li> </ul> <p><b>8. Compliance</b></p> <ul style="list-style-type: none"> <li>• Aligned with NEP 2020 &amp; Digital India</li> </ul> <p><b>9. Support</b></p> <ul style="list-style-type: none"> <li>• Training for teachers</li> <li>• Helpdesk/ticketing system for issue resolution</li> </ul>  |
| 12 | <p><b>4k Camera:</b></p> <ul style="list-style-type: none"> <li>• Camera Resolution: 4k@30fps or better,</li> <li>• Camera Sensor- 8 Mega Pixel CMOS Sensor or better,</li> <li>• Zoom: 8x or higher, Field of View 120 degrees or better,</li> <li>• Minimal Illumination: 0.5 Lux @ (F1.8, AGC ON),</li> <li>• Shutter: 1/30s ~ 1/10000s or better,</li> <li>• White Balance Auto, Indoor, Outdoor, One Push, Manual,</li> <li>• Camera bracket: bracket with damper,</li> <li>• Backlight – Compensation,</li> <li>• Should support Backlight Compensation,</li> <li>• Digital Noise Reduction: 2D &amp; 3D Digital Noise Reduction, HDR,</li> <li>• Should Support High Dynamic Range,</li> <li>• Preset- Should have 3 Presets on Remote control,</li> <li>• Resolution Should support 4K Ultra HD with super resolution up to 4K@30fps/25fps encoding output, and down compatible with 1080p,720p.</li> <li>• Video Output: Should support USB 3.0 Video output suitable for software-based video conference</li> <li>• Auto Focus Lens: Should be Complete customizable auto focus non-distortion lens, view angle to 120°,</li> <li>• Should support EPTZ,</li> <li>• Built in Microphone: Should available Built in beamforming microphone array with noise suspension and automatic gain algorithm with audio pickup distance up to 4 meters or better,</li> <li>• AI Powered Tracking: Should support Person Tracking, Auto framing with advance AI tracking Method,</li> <li>• Remote control: All the parameters of the camera should be remote controlled using IR remote control,</li> <li>• Interface: 1x USB 3.0 Type C or more,</li> <li>• Input Voltage: 5V (USB power supply)</li> </ul> |
| 13 | <p><b>HD Camera</b></p> <ul style="list-style-type: none"> <li>• Connection Type: USB</li> <li>• OS Support: Windows 10, Chrome OS, Android, Mac OS, Ubuntu 18.04</li> <li>• Resolution: 1080P</li> <li>• USB Type: High Speed USB 2.0</li> <li>• Microphone: Built-in Stereo microphone, noise suppression</li> <li>• Focus Type: Auto</li> <li>• Field of View (FOV): 60°</li> <li>• Focal Length: 2.2 mm or higher</li> <li>• Frame rate: 30 FPS</li> <li>• Clip: Yes</li> <li>• Cable Length: 5 Feet or more base on the requirement</li> <li>• Brightness: Auto brightness</li> <li>• Indicator Lights: Activity/Power</li> <li>• Connection Type; USB</li> <li>• Certification: BIS</li> </ul>   |

|    |   |
|----|---|
| 14 | <ul style="list-style-type: none"> <li>• OEM should have ISO 9001</li> </ul> <p><b>MICROPHONE</b></p> <ul style="list-style-type: none"> <li>• Microphones: 2 microphones (wireless Handheld and wireless collar mic)</li> <li>• Frequency Response:50-12,000Hz</li> <li>• Controls: On /Off Switch</li> <li>• Indication: LED for Mic ON</li> </ul> <p><b>CLIP</b></p> <ul style="list-style-type: none"> <li>• RF Output Power: 10Mw (Max.)</li> <li>• Modulation Mode: FM</li> <li>• Microphone Element: Condenser, Cardioid</li> <li>• Frequency Response: 80-15,000Hz</li> <li>• Controls: On /Off Switch, Volume Control</li> <li>• Indication: LED</li> </ul> <p><b>RECEIVER</b></p> <ul style="list-style-type: none"> <li>• Frequency Stability: 0.01%</li> <li>• Audio Output: 0-50mV</li> <li>• S/N Ratio: &gt;80dB</li> <li>• Distortion: &lt;0.5%</li> <li>• Controls: Power Switch, Output Volume Control</li> <li>• Indication: Led for Power ON.</li> <li>• Frequency Stability: 0.01%</li> </ul>   |
| 15 | <p><b>Student Digital Assessment Set (50:1)</b></p> <p><b>Receiver</b></p> <ul style="list-style-type: none"> <li>• 2.4GHz digital two-way RF technology, 32 RF channels</li> <li>• Should have common channel for all receivers as set up frequency for configuration</li> <li>• Should be able to change operating channel in real-time from the application</li> <li>• Port: REC-A: USB port or 232 port REC-C: USB port</li> <li>• Should be integrated with Virtual Classroom application</li> </ul> <p><b>Transmitter Devices – 50 Nos.</b></p> <ul style="list-style-type: none"> <li>• Button to press 0-10, ABCDEF, true/false, like/dislike and hand-raise question</li> <li>• Text on the tools should be inscribed in English languages</li> <li>• Min 11 buttons with Functional Test report*#</li> <li>• Three modes configurable–RF receiver, Bluetooth, and Local Storage</li> <li>• 2.4GHz two-way RF with resting and operating channel managed by application</li> <li>• Should be able to send data over Bluetooth without receiver</li> <li>• Store capacity of responses of 500 questions and auto-sync on Bluetooth/RF</li> <li>• LED status: green and red with various status indication</li> <li>• Transmission distance: around 50meters*#</li> <li>• Transmission angle:360 degree</li> <li>• Vibration test as per IS-9000*#</li> <li>• Drop Test as per IS9000*#</li> <li>• Operable environment (-10°Cto55°C) as perIS-9000*#</li> <li>• Colour coded (Red, Green, Yellow, Blue)</li> <li>• Transmitting Distance of 10-50 meters controllable from application real time</li> <li>• Should be operable by replaceable two AAA batteries</li> <li>• OEM Should be ISO certified</li> <li>• Should be ROHS Compliant*#</li> </ul> |

|    |   |
|----|---|
|    | <ul style="list-style-type: none"> <li>Storage Rack should hold 50+Transmitter devices</li> <li>Testing Certificate from Government/ Government authorized testing LAB required</li> </ul>  |
| 16 | <p><b>e-Podium</b></p> <ul style="list-style-type: none"> <li>Podium can be of wood or metal or combination of both with the lockable door in the back for storage.</li> <li>Monitor: 19.5” LED Display (FHD)</li> <li>The storage inside the podium should be capable of accommodating the server, keyboard, mouse, Camera, Router, Student Digital Assessment sets and Satellite modem and E-lock facility for safety.</li> <li>The podium should have the mounting option for the monitor on the top and should be comfortable to read the content in the standing position</li> <li>The approximate height of the podium can be between 3ft and 3.5ft.</li> <li>If the metal is used for the podium, then the metal thickness should be minimum 0.8mm and if wood to be used then 17mm natural wood colour MDF sheet.</li> </ul>  |
| 17 | <p><b>Communication Equipment (2-Way)</b></p> <ul style="list-style-type: none"> <li>Antenna <ul style="list-style-type: none"> <li>Antenna Size - Minimum 1.2 Meter</li> <li>Mount Type -Elevation over Azimuth heavy-duty antenna mount.</li> <li>Type of Feed - Offset feed</li> <li>Antenna Adjustment Range - 0° to 360° Continuous Fine</li> </ul> </li> <li>Satellite Modem <ul style="list-style-type: none"> <li>Satellite Modem with Ethernet output 10/100/1000 BaseT, RJ 45</li> <li>Two-way system, able to Transmit and Receive data</li> <li>Accessories like adaptor, connecting cables etc.</li> </ul> </li> <li>Ku-band LNBF: <ul style="list-style-type: none"> <li>Receive Frequency :10.70 to 12.75 GHz</li> <li>Output Frequency:950 to 1450 MHz, L band</li> </ul> </li> </ul> <p><b>BUC:</b></p> <ul style="list-style-type: none"> <li>Power Output: Minimum 2 Watt Power should be adjustable to counter rain-fade effect during rainy days to maintain the quality of communication</li> <li>Transmit (Output) frequency:13.75-14.50 G Hz</li> <li>Receive (Input) frequency :950 to 1450 MHz, L band</li> <li>OEM should be ISO certified</li> <li>VSAT service provider should have more than 5000 installations in India.</li> <li>OEM should have unified license holder in India with CUG VSAT, NLD license, Class A</li> </ul> |
| 18 | <p><b>Wi-Fi router and accessories like cables, Extension box, Connectors</b></p> <ul style="list-style-type: none"> <li>Wireless Speed: 1200Mbps (2.4G + 5G)</li> <li>SDRAM: 128MB or higher</li> <li>Flash: 16MB or higher</li> <li>Antenna Type: External Fixed Antenna</li> <li>WAN: 1(10/100/1000)</li> <li>LAN: 4 (10/100/1000)</li> <li>IPv6 support: Yes</li> <li>PPPoE: Yes</li> <li>Band: Dual Band</li> <li>Dynamic IP (DHCP): Yes</li> <li>WPS: Yes</li> <li>Built-in Quality of Service (QoS): Yes</li> <li>Certification: OEM Should BE ISO 9001 and 14001 Certified</li> </ul>   |
| 19 | 1 KVA <b>Online UPS</b>   |

|    |  |
|----|--|
|    | <ul style="list-style-type: none"> <li>• Parameter: Minimum Specifications</li> <li>• Capacity: 1 KVA</li> <li>• Topology: True Online Double Conversion UPS Standalone UPS</li> <li>• Technology: Microprocessor based, PWM with IGBT based</li> <li>• 1 KVA UPS designed with 0.8 output power factor</li> </ul> <p><b>INPUT</b></p> <ul style="list-style-type: none"> <li>• Input Voltage Range: 170 ~ 270 VAC (On 100% Load),</li> <li>• Input Frequency Range: 40 ~70Hz, Auto-sensing</li> <li>• Input Power Factor: <math>\geq 0.99</math></li> </ul> <p><b>OUTPUT</b></p> <ul style="list-style-type: none"> <li>• Power Factor: 0.9</li> <li>• Nominal Output Voltage: 220/230VAC</li> <li>• Voltage regulation: <math>\pm 1\%</math> static, <math>\pm 5\%</math> for Dynamic Load</li> <li>• Nominal Frequency: 50Hz</li> <li>• Waveform: Sine wave</li> <li>• Crest factor: 3:1</li> <li>• Total harmonic distortion (THDv): <math>&lt; 3\%</math> (linear load); <math>&lt; 5\%</math> (nonlinear load)</li> <li>• Output Short Circuit Protection: Electronic, trip</li> <li>• Transfer time Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: <math>&lt; 4\text{ms}</math></li> <li>• Maintenance/Manual: Bypass Automatic &amp; Manual</li> <li>• DC Ripple factor: <math>\leq 1\%</math></li> <li>• Efficiency: Overall (Ac to AC): <math>&gt; 88\%</math></li> </ul> <p><b>BATTERY CHARGER</b></p> <ul style="list-style-type: none"> <li>• DC BUS voltage: 36VDC,</li> <li>• Environmental Operating Temperature: 0-40-degree C</li> <li>• Noise Level: <math>&lt; 60</math> dBA at 1-meter distance</li> <li>• Pulse shape: Half-sine</li> </ul> <p><b>CERTIFICATIONS</b></p> <ul style="list-style-type: none"> <li>• ISO Certification: BIS Certificate, ISO 9001:2015, ISO14001:2015, ISO 27001:2013, FCC</li> <li>• CE Certification (Safety): IEC/EN-50091-2, IEC/EN 62040-2</li> <li>• OEM Presence in India: The OEM shall be present in India from minimum 10 Years and having office/service in state.</li> </ul> |
| 20 | <p><b>Battery for UPS:</b></p> <ul style="list-style-type: none"> <li>• The battery back-up time should be minimum 45 Minutes back up using 12V, VRLA Sealed Maintenance Free Batteries.</li> <li>• Required VAH: 1512 VAH. Individual Battery Capacity must not be less than 42 AH. Battery housing should be compact and space saving MS Steel Open Racks complete with interconnectors.</li> </ul>  |
| 21 | <p><b>Solar power Hybrid UPS along with Solar Panel</b></p> <p><b><u>STRUCTURE FOR PV MODULE</u></b></p> <p>The array structure is so designed that it will occupy minimum space without sacrificing the output from SPV panels.</p> <ul style="list-style-type: none"> <li>• The structure shall be designed to allow easy replacement of any module.</li> <li>• The structure shall be made of HDG Mild Steel (suitable galvanized thickness) of suitable size. The detail design drawing will be submitted after approval of this document and final site measurement.</li> <li>• The foundation for the mounting structure shall be made based on site condition in such a way so that it can with stand wind speed up to 150 kmph.</li> <li>• The module structure will be designed such a way that natural air cooling will be happening to get the maximum efficiency from the module.</li> </ul>   |

| Parameters       | Specifications   |
|------------------|--|
| Type             | Roof Top Fixed Tilt/ Ground Top as per the requirement of the site |
| Tracking         | as per site condition  |
| Materials        | MS - Galvanized  |
| Wind withstands  | 150 KM/hrs.  |
| Foundation       | PCC 1:2:4  |
| Ground Clearance | As per site requirement  |

**ACDB:**

This connects the output of the Inverter to the local grid. This panel is fitted with MCB/ MCCBS, bus bars/ connectors etc. During installation as well maintenance this facilitates isolations of parts. This also provides protection against overloading and short circuit in the system.

| Parameters        | Description                    |
|-------------------|--------------------------------|
| Material          | Thermoplastic/MS Powder Coated |
| Protection Class  | IP54/Indoor                    |
| Bus Bar           | As per rated current           |
| SPD               | Applicable                     |
| Glands & Terminal | As per inverter required.      |

**ARRAY JUNCTION BOXES:**

- Junction boxes shall used for bundling module strings and safely routed to Inverters.
- The array junction box should be dust, vermin & water proof and made of FRP/ABS plastic.
- The junction boxes should have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming & outgoing cables.
- All junction boxes will be outdoor type and will be of IP65 grade.
- Junction boxes should be provided with class-II Surge Protective Device, terminals wiring of required sizes and number.

| Parameters            | Description               |
|-----------------------|---------------------------|
| Type                  | DCDB                      |
| Make                  | Reputed IEC standard      |
| Monitoring parameters | As per inverter required. |
| Other details         | NA                        |

**COPPER CABLES (AC & DC):**

Cables will be of following characteristics.

- Temperature range: -15°C to +70°C
- Voltage rating :1100V
- Conductors are electrolytic grade bright annealed copper which provides maximum conductivity.
- Conductors are insulated with specially formulated PVC compound having high insulation resistance, Di-electric, strength, high critical oxygen index and high temperature index.
- The separate insulated cores are to be assembled to form multi core cable. Cables are provided with exclusively formulated PVC compound for sheathing.
- Flame retardant.
- Flexible / armoured type as required at site condition
- DC cables Fulfils EN-IEC 60332-1
- All AC side cables will conform to IS 694
- Sizes of DC and AC cabling will be made to minimize the loss in the system

| Parameters    | Specification   |
|---------------|---|
| DC Cable Type | DC Cable, Halogen free, UV resistant, Outdoor application |

|                   |                                     |
|-------------------|-------------------------------------|
| DC Cable Standard | IEC 60228                           |
| DC Cable Size     | 4sq mm single core flexible         |
| AC Cable          | 6/10/16 sqmm 2core as per required. |
| AC Cable Type     | PVC                                 |
| AC Cable Standard | IS 694                              |

**SOLAR BATTERY AND INVERTER:**

- Type : C- 10 tubular battery
- Capacity : 150 Ah.
- Voltage: 12 Volts
- Capacity : 900VA or as per need of the School
- Wattage : 740W or as per need of the School
- Wave Form: Sine Wave
- Nominal Output Voltage: 220V+/-5VAC
- Normal mode mains input range :90V to 290V +/-10V
- System Operating Voltage: 24 V
- Frequency : 50Hz
- Efficiency: 85%
- Display: LED
- Connectivity: Wi-Fi through App
- Logs: Battery load, Battery percentage, Grid current etc.
- Protection Overload, Battery low voltage, Battery overcharging
- Short Circuit Protection: Yes
- Overload: Automatic Overload Sensing
- Backup Time: 2 Hr on actual load
- Certification: BIS

**Three Steps Protection:**

Grounding/ Earthing: Three step protection starts with Stable, Low resistance/low impedance grounding system to bond all electrically conductive surface together. The mechanical frame structure of the PV yard, Inverters, and other control equipment will be grounded properly using existing Earth Pits available at site or new earth pit will be constructed.

b. The Second step of protection comes from a properly installed surge protective device or SPD (Surge Protective Device) which reduces the magnitude of random high energy, short duration electrical power anomalies. These occurrence are typically caused by atmospheric phenomena (such as lightning strike) utility switching, inductive load switching and internally generated over voltages.

SPDs are provided in Junction boxes & grid Interfacing panels to safe guard all the devices in the solar system.

Finally a well-designed lightning protection system will be installed to safeguard total facilities from direct lightning strikes. In this case we are not providing any external lightning since sufficient protection available in the site.

**AMC FOR SOLAR PLANT:** Solar AMC services include a Solar plant inspection to find out the problems and their causes, and the use of standard preventive measures to prevent future issues to ensure the system functions efficiently for many years. This service is provided at a required time throughout 3 year.

22

**DESKTOP PC**

| Features  | Specifications   |
|-----------|--|
| Processor | Latest X86 Processor 14th Generation Intel Core i7-14700T (33 MB cache, 20 cores, 28 threads, up to 5.00 GHz turbo or higher |
| Chipset   | Intel Q670 Chipset or better   |
| Graphics  | Intel Integrated Graphics 700 Series or higher   |

|                             |   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
|-----------------------------|---|---------------|--|--------------|--|-------------------|--|-----------------------------|---|--------------------|--|----------------|--|------------------------|--|---------------------|-----------------------------|-----------------|--------------------------------|--------------|-------------------------------------|-------------------------|---------------------------------|-----------------|-----------------------------|------------------|--|----------------------|---|-------------|--|----------------|---|-----------------|---------------------|
|                             | <table border="1"> <tr> <td><b>Memory</b></td> <td>1 x 16 GB DDR5 RAM 4000 MHz expandable up to 64 GB with min 2 DIMM Slots or higher</td> </tr> <tr> <td><b>Ports</b></td> <td>6 External USB: (Minimum 3 USB 3.2 Gen 1 Type-A port, 1 USB 3.2 Gen 2 Type-C port), 1 Universal Audio Jack, 1 Audio Line out, 1 DisplayPort 1.4 ports, 1 HDMI Ports, 1 RJ-45 port 10/100/1000 Mbps or higher</td> </tr> <tr> <td><b>Hard Drive</b></td> <td>512 GB M.2 PCIe NV Me SSD + 1 TB SATA 7200 RPM or higher</td> </tr> <tr> <td><b>Network Connectivity</b></td> <td>10/100/1000 Gigabit Ethernet and 802.11ac Wi-Fi + Bluetooth 5</td> </tr> <tr> <td><b>Form Factor</b></td> <td>Mini PC (Less than 1.5 L Volume) with Intrusion Switch</td> </tr> <tr> <td><b>Monitor</b></td> <td>Monitor, Mounting Stand, Keyboard &amp; Mouse to be of Same OEM Make. 27" FHD (1920 x 1080 at 60 Hz) or higher 16:09 aspect ratio, Height Adjustable Screen with Tilt, Pivot &amp; Swivel Capability &amp; Integrated Microphone, 4 MP Camera + IR Camera &amp; 5W Speaker or Higher, TC 9.0 &amp; Energy Star Compliant</td> </tr> <tr> <td><b>Mounting Option</b></td> <td>OEM to Supply Stand to Mount Mini PC behind the Monitor. The Screen should retain Height Adjustability with the Mini PC Mounted.</td> </tr> <tr> <td><b>Power Supply</b></td> <td>65W Power Adapter or higher</td> </tr> <tr> <td><b>Keyboard</b></td> <td>USB Keyboard (same make as pc)</td> </tr> <tr> <td><b>Mouse</b></td> <td>USB optical mouse (same make as pc)</td> </tr> <tr> <td><b>Operating System</b></td> <td>Windows 11 Pro 64 Bit or better</td> </tr> <tr> <td><b>Security</b></td> <td>Discrete TPM 2.0 (Hardware)</td> </tr> <tr> <td><b>MS Office</b></td> <td>Pre-Installed MS Office with 1 Years Subscription.</td> </tr> <tr> <td><b>Certification</b></td> <td>Energy star 6.0, EPEAT India Certified for Desktop &amp; TCO 9.0 for Monitor, MIL STD 810 G/H Test passed, ISO 9001:2008, ISO 14001, ISO 27001 certification for OEM or better.</td> </tr> <tr> <td><b>BIOS</b></td> <td>Configuration Tool to Enable these features in a single Tool power on password, set up password , USB port disable with life cycle management tool</td> </tr> <tr> <td><b>Support</b></td> <td>Drivers should be available for download form OEM site for at least 3 years form the date of the purchases order. (Drive cab to be available in support site)</td> </tr> <tr> <td><b>Warranty</b></td> <td>3Yr Onsite Warranty</td> </tr> </table> | <b>Memory</b> | 1 x 16 GB DDR5 RAM 4000 MHz expandable up to 64 GB with min 2 DIMM Slots or higher | <b>Ports</b> | 6 External USB: (Minimum 3 USB 3.2 Gen 1 Type-A port, 1 USB 3.2 Gen 2 Type-C port), 1 Universal Audio Jack, 1 Audio Line out, 1 DisplayPort 1.4 ports, 1 HDMI Ports, 1 RJ-45 port 10/100/1000 Mbps or higher | <b>Hard Drive</b> | 512 GB M.2 PCIe NV Me SSD + 1 TB SATA 7200 RPM or higher | <b>Network Connectivity</b> | 10/100/1000 Gigabit Ethernet and 802.11ac Wi-Fi + Bluetooth 5 | <b>Form Factor</b> | Mini PC (Less than 1.5 L Volume) with Intrusion Switch | <b>Monitor</b> | Monitor, Mounting Stand, Keyboard & Mouse to be of Same OEM Make. 27" FHD (1920 x 1080 at 60 Hz) or higher 16:09 aspect ratio, Height Adjustable Screen with Tilt, Pivot & Swivel Capability & Integrated Microphone, 4 MP Camera + IR Camera & 5W Speaker or Higher, TC 9.0 & Energy Star Compliant | <b>Mounting Option</b> | OEM to Supply Stand to Mount Mini PC behind the Monitor. The Screen should retain Height Adjustability with the Mini PC Mounted. | <b>Power Supply</b> | 65W Power Adapter or higher | <b>Keyboard</b> | USB Keyboard (same make as pc) | <b>Mouse</b> | USB optical mouse (same make as pc) | <b>Operating System</b> | Windows 11 Pro 64 Bit or better | <b>Security</b> | Discrete TPM 2.0 (Hardware) | <b>MS Office</b> | Pre-Installed MS Office with 1 Years Subscription. | <b>Certification</b> | Energy star 6.0, EPEAT India Certified for Desktop & TCO 9.0 for Monitor, MIL STD 810 G/H Test passed, ISO 9001:2008, ISO 14001, ISO 27001 certification for OEM or better. | <b>BIOS</b> | Configuration Tool to Enable these features in a single Tool power on password, set up password , USB port disable with life cycle management tool | <b>Support</b> | Drivers should be available for download form OEM site for at least 3 years form the date of the purchases order. (Drive cab to be available in support site) | <b>Warranty</b> | 3Yr Onsite Warranty |
| <b>Memory</b>               | 1 x 16 GB DDR5 RAM 4000 MHz expandable up to 64 GB with min 2 DIMM Slots or higher  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Ports</b>                | 6 External USB: (Minimum 3 USB 3.2 Gen 1 Type-A port, 1 USB 3.2 Gen 2 Type-C port), 1 Universal Audio Jack, 1 Audio Line out, 1 DisplayPort 1.4 ports, 1 HDMI Ports, 1 RJ-45 port 10/100/1000 Mbps or higher  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Hard Drive</b>           | 512 GB M.2 PCIe NV Me SSD + 1 TB SATA 7200 RPM or higher  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Network Connectivity</b> | 10/100/1000 Gigabit Ethernet and 802.11ac Wi-Fi + Bluetooth 5   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Form Factor</b>          | Mini PC (Less than 1.5 L Volume) with Intrusion Switch  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Monitor</b>              | Monitor, Mounting Stand, Keyboard & Mouse to be of Same OEM Make. 27" FHD (1920 x 1080 at 60 Hz) or higher 16:09 aspect ratio, Height Adjustable Screen with Tilt, Pivot & Swivel Capability & Integrated Microphone, 4 MP Camera + IR Camera & 5W Speaker or Higher, TC 9.0 & Energy Star Compliant  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Mounting Option</b>      | OEM to Supply Stand to Mount Mini PC behind the Monitor. The Screen should retain Height Adjustability with the Mini PC Mounted.  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Power Supply</b>         | 65W Power Adapter or higher   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Keyboard</b>             | USB Keyboard (same make as pc)  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Mouse</b>                | USB optical mouse (same make as pc)   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Operating System</b>     | Windows 11 Pro 64 Bit or better   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Security</b>             | Discrete TPM 2.0 (Hardware)   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>MS Office</b>            | Pre-Installed MS Office with 1 Years Subscription.  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Certification</b>        | Energy star 6.0, EPEAT India Certified for Desktop & TCO 9.0 for Monitor, MIL STD 810 G/H Test passed, ISO 9001:2008, ISO 14001, ISO 27001 certification for OEM or better.   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>BIOS</b>                 | Configuration Tool to Enable these features in a single Tool power on password, set up password , USB port disable with life cycle management tool  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Support</b>              | Drivers should be available for download form OEM site for at least 3 years form the date of the purchases order. (Drive cab to be available in support site)   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| <b>Warranty</b>             | 3Yr Onsite Warranty   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| 23                          | <b>2 KVA Servo Stabilizer</b> <ul style="list-style-type: none"> <li>● Capacity: 2 KVA</li> <li>● General Technology: Variac with Buck-Boost Transformer</li> <li>● Control Type: Micro Processor</li> <li>● Operating Env: Temp. 0-45° C, Humidity Up to 95% non-condensing</li> <li>● Input Voltage: 50V AC to 280V AC</li> <li>● Output Voltage: 220 +/- 1% Volt</li> <li>● Frequency Range: 50 ± 3% Hz</li> <li>● Efficiency: Better than 96%</li> <li>● Duty Cycle: Continues</li> <li>● Over Load Capacity: Up to 150% for 5 to 10mins</li> <li>● Display Panel: Input/ Output/ Overload</li> <li>● Metering: Digital (LED / LCD)</li> <li>● Protection Features: Over/ under voltage/ over load cut-off, short circuit protection and output protection through MCB Construction: MS sheet body with powder coated.</li> </ul>   |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |
| 24                          | <b>Monitoring, Evaluation, Analytics and Assessments</b>  |               |  |              |  |                   |  |                             |   |                    |  |                |  |                        |  |                     |                             |                 |                                |              |                                     |                         |                                 |                 |                             |                  |  |                      |   |             |  |                |   |                 |                     |

**Student Assessment system:**

- a) Bidder should provide on an average 50 Student Assessment Tools (Clickers) and a receiver per Virtual Classroom for assessing student involvement and performance in the real time.
- b) Platform should include a comprehensive analytics solution. The solution should enable data analysis at student, section, grade, school, block, district, and state levels. Separate intuitive Dashboards should be made available for decision makers at the set levels. The analysis should derive different aspects of teaching and student learning such as in which subjects and topics an individual student is lagging behind his/her peers, comparison of results between schools, conceptual understanding of students in particular block/district etc. for facilitating in instructional method changes or to help class teachers to give dedicated focus on any particular students.
- c) Studio expert and class teacher should have the ability to poll the class on their understanding of concepts by asking true or false questions, multiple choice or multiple answer questions, and yes or no questions every session.
- d) Teacher analysis tools need to be included to manage assessment results and help plan future student instruction.
- e) The school should also have access to the individual record of each and every student's answer in the Teacher Tools section of application which helps to monitor class progress and understanding.
- f) The assessment tools(clickers) need to be mapped to student roll numbers throughout the academic year, and this identification number shall be registered to the student in computer-based database.

**Assessment devices:**

- Bidder should provide on an average 50 Digital Assessment devices and a receiver per school for assessing student involvement and performance during LIVE classes.
- Student digital assessment sets and analytics application should be active within 30 days from the program launch date.
- These devices should be color coded for easier identification, batch management and color house competitions among groups of students. Text on the tools should be inscribed in regional language and English language.
- Student should be able to answer objective questions through keys and non-objective questions through voice.
- When the studio teacher or class teacher enables the voice command in the digital assessment RF tool students should be able to answer to non-objective questions.
- Bidder should ensure these student assessment tools register 'raise hand' clicks for doubts for detecting hard spots for students in a classroom.
- The dynamic mapping of student devices with the student roll numbers should be enabled during sessions, and this student unique ids/roll number should be registered to the student in computer-based database. Student devices will be rotated in the Virtual Classrooms with students of different grades. The data should be captured in the real- time, session-wise and should be linked to student database.

**Student Analytics System at Schools**

- Remote Teacher and Class Teacher should have the ability to poll the class on their understanding of concepts by asking true or false questions, single choice/multiple choice or multiple answer questions, and yes or no questions every session.
- The Analytics System should support concurrent gathering and analysis of the data from all connected Virtual Classrooms for generating immediate response to studio teacher for decision making.
- Remote Teacher and Class Teacher should be able to see Real-time student participation during the session and based on 'hand raise' indicators from students using the assessment devices to indicate a hard spot, they should be able to identify the area of difficulty in the lesson through

|    |  |
|----|--|
|    | <p>an AI (Artificial Intelligence) supported mechanism.</p> <ul style="list-style-type: none"> <li>The remote studio teacher and class teacher should receive anonymized and summarized real-time engagement reports (e.g., participation trends) on their dashboard, enabling them to adjust LIVE teaching strategies, such as pausing for questions or initiating discussions</li> </ul> <p><u>Analytics for class teachers in the dashboard after the LIVE session:</u></p> <ul style="list-style-type: none"> <li>The school should also have access to the individual record of each and every student's answer in the Teacher Tools section of the application which should help in monitoring class progress and understanding.</li> <li>Class Teacher should be able to see student wise participation and performance for a particular topic on all cognitive rigors in order to make decisions on selecting of group of students and provide appropriate remedial teaching for the students individually.</li> <li>Teacher should be provided with details on the improvement made by the child with respect to subject/topic on cognitive rigors and on difficulty level and response time.</li> <li>Performance report of student should not just be derived on marks scored but also on deeper analytics based on weighted average of cognitive rigors, accuracy, difficulty level and response time.</li> </ul> <p><u>Integrating results of Ongoing, Formative, and Summative Assessment:</u></p> <ul style="list-style-type: none"> <li>Analyze responses from student assessment tools to identify patterns, such as common incorrect answers, and generate individualized feedback for the class. For instance, if a majority of students struggle with a concept, a pre-loaded mini-lesson/recorded concept video byte should be recommended in the particular classroom.</li> <li>Apart from the automated results of ongoing assessment captured in the virtual classrooms/student app, analytics platform should also allow teachers to feed the results of formative assessment and summative assessment into the artificial intelligence engine to enhance the accuracy of individual student performance reports.</li> </ul> <p><u>Analytics Dashboard</u></p> <ul style="list-style-type: none"> <li>Comprehensive dashboards should be made available for decision makers of the department at multiple levels. Performance reports are to be made available at student/school /district /state levels.</li> <li>The analysis data derived from analytics dashboard should help in planning remedial teaching at school /district /state levels.</li> <li>Reports should also derive different facets of teaching performance and feedback for sessions.</li> </ul> <p><u>Adaptive Remedial Learning for Students through Analytics derived in LIVE classes in classroom and LIVE &amp; recorded classes in student app</u></p> <ul style="list-style-type: none"> <li>The solution should enable analysis of every student at topic level and concept level in every subject - based on MCQ answers given using assessment devices and student app (LIVE &amp; recorded sessions).</li> <li>The analytics system should derive reports with different aspects of student learning performance such as in which subjects and topics an individual student is lagging behind, comparison of results between schools, conceptual understanding of students in particular district, etc.</li> <li>The student analytics system should integrate gauging different aspects of cognitive rigor of students such as Memory, Understanding, Knowledge Application, and HOTS (Higher Order Thinking Skills). The application should derive various details of student performance such as level of knowledge gained, speed of answering, difficulty level mastered, and analytical skills.</li> </ul> <p>At school level, the informational data derived from the student analytics system should help in facilitating overall instructional method changes or to help class teachers to give dedicated focus on specific students who need extra support</p> |
| 25 | <p><b>Earthing + Cabling &amp; Installation + Integration + Testing + Training</b></p> <p>Electrical networking for all the components in the Classroom and earthing as per the specification below.</p> <ul style="list-style-type: none"> <li>Plate Earthing as per IS:3043 with copper Earth plate of size 600mm x 600mm x 3.0mm by embodying 4feet below the ground level with 25 mm dia.</li> </ul>   |

|    |   |
|----|---|
|    | <ul style="list-style-type: none"> <li>G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple ,wire meshed funnel, alternate layers of salt and coke/charcoal, testing of earth resistance as required.</li> </ul>   |
| 26 | <p><b><u>Impact Assessment</u></b><br/>The selected bidder has to carry out the impact assessment (Baseline, Midline and Endline survey) by the third party for all school with the help of the technology driven digital Assessment devices.</p> <p><b><u>Scope:</u></b></p> <ul style="list-style-type: none"> <li>The baseline survey shall be carry out at the start of the project to measure the learning levels of the students.</li> <li>The Midline survey shall be carry out at the mid of the project to measure the learning levels of the students.</li> <li>The endline survey shall be carry out at the end of the project to measure the learning levels of the students.</li> <li>Bidder should carry out the Student's Digital Assessment through RAFT devices for assessing student involvement, performance and for carrying out the impact assessment.</li> <li>The dynamic mapping of student devices with the student roll numbers should be enabled during sessions, and this student unique ids/roll number should be registered to the student in computer-based database.</li> <li>Bidder shall submit the individual detailed report for Baseline, midline and endline respectively.</li> </ul> |
| 27 | <p><b><u>Training of Teachers of Virtual Classroom</u></b><br/>Building the Capacity of the Teachers in a cofrehensive manner.</p> <ul style="list-style-type: none"> <li>Basic IT usage of all the virtual classroom's components.</li> <li>Teaching them how to connect with the studio and Other Virtual Classrooms.</li> <li>Introduction of Multimedia Content and teach the usage of it.</li> <li>Training shall be provided to a batch of 25 teachers</li> </ul>   |

#### **D. Centralized Application, Digital Content and Assessment**

| S.No. | Items with Minimum Specifications   |
|-------|---|
| 1     | <p><b><u>CENTRALIZED APPLICATIONS</u></b></p> <p>a) <b><u>Project Monitoring Dashboard</u></b><br/>The Bidder should provide an online project monitoring dashboard to monitor LIVE delivery of the classes, equipment health, manpower for instructional services, complaints, status etc. The reports generated from the monitoring tool will be used to analyze the outcome of the project.</p> <p><b>The Project Monitoring Dashboard should be geo-mapped and record the following:</b></p> <ul style="list-style-type: none"> <li>A summarized class run status report for the entire State on any given day should be made available. This report should be detailed with studio session and virtual classroom status data</li> <li>The school locations should be indicated by markers by using latitude and longitude of the school on the State/District/Block map. The map should show the class run status and other respective status represented by different colours in real-time.</li> <li>When a class was run using the virtual classroom facility, system should automatically update the status (Studio Session/Digital Class) and this data should be available online. If the status is not available, then status should be shown as Class Not Run for that Classroom.</li> <li>Information regarding subject wise delivery of LIVE classes from studio(s).</li> <li>Real time class run status should be available online about the number of classrooms working/ not working, issues at virtual classrooms.</li> <li>Category wise and class wise beneficiaries.</li> <li>Various types of reports generation from the dashboard- School wise, district wise, State wide for program officials</li> <li>The monitoring tool should be able to generate reports regarding the outcome reflecting shortcomings, achievement as well as suggestions for improvement.</li> <li>Complaints &amp; resolved issues from virtual classroom should be tracked in the online system.</li> <li>The school wise number of teachers trained.</li> </ul> |

- Data captured on the dashboard should be regularly archived and made available for at least a year.
- The monitoring tool should generate reports on the outcome of the project reflecting achievements, shortcomings, as well as suggestions for improvement.

b) **MOBILE APP BASED LEARNING MANAGEMENT SYSTEM**

A mobile app-based Learning management system should be made available for teachers and students. It should enable organizing recorded sessions created on the virtual classroom platform. It should run on public cloud as well as on intranet.

The platform should be an independent solution to host and distribute various types of content centrally and at school level and it should provide built-in capability for teaching and learning with major functions such as: -

**Features in Teacher App:**

- a) Uploading Content for learning and reference files should include:
- The platform should allow within the application uploading and access of Portable Document Files, Word files, PowerPoint presentations.
  - The platform should allow uploading and access of video files - it must be able to store the file in web friendly custom resolution and single format as part of the application.
  - The platform should allow upload and access within the application of Audio files.
  - The platform should allow adding web links to various resources online - including Diksha portal.
  - The platform should allow uploading of multiple-choice questions, feedback questions, and other formats in the Question Bank.
  - The platform should enable auto-recording of LIVE Classes at cloud and should be available for later access to students who have missed to watch it live.
- b) The platform should enable scheduling and conducting LIVE & Interactive sessions in the app (mobile app and desktop app) by teachers.
- c) The platform should allow teachers to ask analysis-based questions during the sessions or embedded within the content.
- d) The platform should enable teachers to create assignments.
- e) The platform should allow setting quiz-based check points to assess learning. This should be enabled even for the recorded sessions.
- f) At specific intervals during a LIVE session, teacher should be able to allow two-way Question & Answer spots. This function should be enabled even in a recorded session for students who are taking the session online. Any centrally assigned teachers could participate as moderators to take up Q&A spots and interact with online students.
- g) The teachers and institutions should be able to take complete control of content - make content visible to select Class/Section and Generate Tests.
- h) The school should have complete access to allow or withdraw the content to specific group of students on the basis of courses, subjects, topics etc.

**Features in Student App:**

- a) Consume Content in a Sequential and structured Order, Watch LIVE sessions, Watch Recorded Lecture Videos online or download and use it offline.
- b) Student learning should be captured through MCQs and analyzed automatically. The platform gives student reports.
- c) Student learning should be captured during LIVE sessions as well as recorded sessions. At every session MCQs should be embedded at intervals and student responses should be synced and uploaded whenever internet gets available.
- d) The platform should allow students to attend live classes. Attendance of students should be recorded automatically.
- e) Self-analytics for students, Speed and accuracy analysis, Strength and weakness analysis, completing status etc.

- f) Student should be able to upload answers to assignments in various formats – word/ pdf/ scanned photograph.
- g) Students should be able to ask doubts by posting images or post a doubt.
- h) The Bidder should manage the Hosting Environment, Server Space, and Connectivity required for centrally hosting the LMS.
- c) **Student Information System**  
An application to store and track student details including grades, attendance records, and participation and performance in the regular classroom including results of Formative Assessment and Summative Assessment. Class Teacher should be able to enter the data using mobile app or desktop application. SIS should also link individual students with their unique student ID which is available with the department. The same unique IDs should be linked to the student digital assessment devices for unification of attendance, participation, and performance data across the platforms.
- d) **Complaint Management with Request Tracking System (RTS) for Schools**  
Complaint Management System should be made available for all associated hardware, Software, and services. The system should accept complaints from Virtual Classrooms which should be tracked from initiation to closure. These should be updated in the real-time for quick resolution of issues. Intuitive interfaces to be provided for different user-roles for easy access and management. At any point of time, if school faces any technical issues, they should be able to raise a ticket using the RTS – Request Tracking System. This should be a mobile app or website application in the laptop / desktop). Status of the ticket should be up to date until the issue is resolved.
- 7 When the admin login is successful, dashboard page for school or district or state should depict the summary of the Tickets raised so far.
  - 8 Schools should be able to login using a Username and Password allotted to their school
  - 9 Every ticket should include following details:
    - 9.1 Issue type
    - 9.2 Issue Category
    - 9.3 Issue Sub Category
    - 9.4 Mandatory Image Upload to envision the issue
    - 9.5 Description of the issue
  - 10 Once the ticket is raised, status should be always visible
- e) **Asset Management System**  
To simplify tracking multiple locations, conditions, and maintenance requirements of assets of the project, a comprehensive Asset Management System should be provided and linked to the Program Monitoring Dashboard. It should manage the status of hardware installation, performance, and maintenance during the project period.
- The purpose of an IT asset management solution is to:**
- Effectively help manage the assets supplied under this project
  - Improve visibility of assets.
  - Ensure optimum utilization of assets in schools and studios
  - Reduce IT and software costs.
  - Ensure compliance with regulatory requirements
- Asset Management System should be cloud hosted with dashboards accessible over various devices. Schools should be able to regularly make data-entry of the status for each equipment.
- Asset Management (User, User Type, Program, Location, Material, Status, Asset Type)
  - Asset Transactions (Program, Material, Transaction Number, Transaction Date, Make/Model, Serial Number, Status, Institution ID, Institution Name)
  - Asset Tracking (Classroom, Material Name, Recent Service (Date), Service Type, Warranty Terms, Replacement, Status, Since)
  - Asset Performance Management- Minimize unplanned repair work, manage risk, reduce equipment failure extend asset life
  - Life Cycle Monitoring - Deploy, Operate & Optimize, and Maintain & Improve processes
- Note: During the agreement period, if any hardware/software need replacement due to complete

|   |  |
|---|--|
|   | <p>breakdown (non-repairable) then in such case bidder has to ensure replacement with the updated version of Hardware/Software at free of cost. In case of theft, substitute equipment manageable to run the class should be provided by the vendor till the item was found or any other alternate arrangements are made by the school</p> <p>f) <b>Help Desk Setup</b><br/>Helpdesk should comprise of helpdesk tools, policies, and helpdesk personnel. Manpower deployed at the helpdesk should log calls regarding the queries/complaints of Hardware users (Schools). This Helpdesk tool should have a facility which allows user to log ticket and call through the app provided by the Bidder. User should be able to log ticket using any of these options. Bidder should also manage the inventory of all hardware supplied and installed by them.<br/>A Help Desk coordinator should monitor the Help Desk Operations. The Help Desk Agents should also carry-out project related back-end work. The Help Desk set up should be fully integrated with online project monitoring tool for real-time monitoring. The system should have a common toll-free number facility with a minimum up time of 95%.</p>  |
| 2 | <p><b><u>DIGITAL e-CONTENT DEVELOPMENT FOR LIVE TEACHING</u></b></p> <p><b>The digital multimedia content is to be developed as follows:</b></p> <ol style="list-style-type: none"> <li>Content should be developed as per the State Board, ICSE and CBSE syllabus.</li> <li>The characters and background used in the content should mostly cover State’s cultural and geographical look and feel (in addition to Indian attire) except where the situation otherwise demands.</li> <li>Digital Content should include 2D and 3D animation-based content mapped as per board of education prescribed syllabus.</li> <li>Content should be both in raster and vector graphics format so as to use low bandwidth for transmission.</li> <li>Content should be embedded with multiple choice questions, survey questions, and feedback questions to ask students. Responses should get synced in analytics system.</li> <li>Each module should consist of content for around 40 minutes long LIVE sessions.</li> <li>Content modules used in studios should not have voiceover as the studio teacher will be narrating it. However, if the content can have an enhanced effect through instrumental music or background sound, that may be made available.</li> <li>Content should also contain concepts of theory, lab experiments, and practical demonstrations.</li> <li>The digital content provided should run on Windows, Ubuntu, and Android.</li> <li>Content by Govt of India NCERT/NIOS should be modified and made suitable to the end client.</li> <li>All the software and content updates should be done frequently.</li> </ol> <p><b>Specific Requirements:</b></p> <ol style="list-style-type: none"> <li><u>Languages, Scope:</u><br/>Digital content provided for teaching should be in English, Hindi, Regional Languages (as required) for Class 6 to 12. The content should cover core subjects such as: Mathematics, English, Science, Geography and Computer Education. Dedicated manpower for instructional services for each medium should be assigned for the creation of vast digital content repository for live and recorded classes on Virtual Classrooms and app-based learning.</li> <li><u>Scriptwriting:</u><br/>Scripts need to be minutely detailed. Content developers need to address every issue and nothing can be assumed to be the responsibility of another member of the team. The script should serve to inform the Quality Assurance team to ensure that it meets the program requirements as well as the production team who will use it as a blueprint to produce the final product.<br/>For each session, the script should specify: <ul style="list-style-type: none"> <li>Text (exact dialogue)</li> <li>Visual appearance and layout of all the elements on each screen</li> </ul> </li> </ol> |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• Media specifications</li> <li>• Graphics, Animations, Audio</li> <li>• Close-ups</li> </ul> <p><b><u>The script should have detailed plan for video, animation, text and for audio/voiceover, and also specify:</u></b></p> <ul style="list-style-type: none"> <li>• Interaction logic (feedback, branching or pop-up screens)</li> <li>• Content flow, Screenshots</li> </ul> <p><u>The QA team should look specifically at the following aspects:</u></p> <ul style="list-style-type: none"> <li>• Presentation (clarity of audio, fluency, pronunciation, etc.)</li> <li>• Content accuracy</li> <li>• Content treatment (has the content been dealt with in an appropriate way?)</li> <li>• Learner engagement (will lessons stimulate learning?)</li> <li>• Visual appearance (hooks, graphics, etc.)</li> <li>• General strength and weaknesses of lessons</li> </ul> <p><u>License on using digital content and question banks:</u></p> <ul style="list-style-type: none"> <li>• For the schools selected under the contract, the bidder should grant the perpetual license to use digital content and question banks provided as part of the project.</li> <li>• The digital content developed under the project can be used in any number of Government/Government Aided Schools in the respective state even those which are not under the scope of the current project.</li> </ul> <p><b>4) Question Banks, Assessment, and Analytics system at schools for ongoing student performance analytics</b></p> <p><b><u>Integrated MCO Question Bank to use within Digital Content:</u></b></p> <ul style="list-style-type: none"> <li>• Multiple Choice Questions should be mapped with the state board curriculum and should be available in English/Hindi/Regional Language. Each of these questions should be mapped with different levels of learning in cognitive topology, mapped with difficulty level.</li> <li>• Teachers who are selected to conduct Online Classes from any school should be able to generate their own questions and should be provided with a feature to enter these in the CMDS application.</li> </ul> |
| 3 | <p><b><u>English Learning Software for Smart Classroom</u></b></p> <ul style="list-style-type: none"> <li>• <b>Purpose:</b> Comprehensive English Language Skills Programme for School Students</li> <li>• <b>Target Audience:</b> School students for Class 1 to 12</li> <li>• <b>Content: 30 chapters</b> per grade, incorporating individual and group activities, focusing on all four language skills (<b>Listening, Speaking, Reading, and Writing</b>)</li> <li>• <b>Curriculum Alignment:</b> Mapped to the Common European Framework of Reference for Languages (CEFR) with specific "Can Do" statements to define learning outcomes.</li> <li>• <b>Additional Resources:</b> CEFR mapping booklet should be included in the Teacher kit.</li> </ul> <p>The key features of the software which is designed to enhance English language skills for school students are as follows.</p> <ul style="list-style-type: none"> <li>• <b>Teachers Dashboard</b> - where they can access all the features and to manage classes and assignments.</li> <li>• Within the software teachers can access all the classes from 1-12.</li> <li>• <b>Chapters</b> – In the software, teachers will have 30 chapters in each class. Additionally, <b>TOFEL</b> content will be available from <b>class 3-9</b> and each class will have <b>22 chapters</b>.</li> <li>• <b>Attendance Dashboard Feature</b> - This feature in the software should allow the teachers to quickly and accurately mark student's presence or absence.</li> <li>• <b>Chapter Activities Feature</b>– Each Chapters will have individual and group activities, focusing on all four language skills (<b>Listening, Speaking, Reading, and Writing</b>). These activities will include concept videos followed by the LSRW activities.</li> </ul>  |

|   |   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• <b>Automatic group creation feature:</b> This eliminates the need for manual group assignments, saving valuable instructional time and streamlining classroom organization.</li> <li>• <b>Teacher Grading feature</b> - Teacher can then assign her grades to each group.</li> <li>• <b>Peer-to-Peer grading feature</b> – This encourages students to critically evaluate their own work and that of their peers, promoting self-reflection and providing valuable feedback for improvement.</li> <li>• <b>Assignments Feature</b> - The software shall includes features like giving assignments to students, track student progress.</li> <li>• <b>Adding Students Feature</b> - Teachers can add learners one by one or can do bulk uploads within the software.</li> <li>• <b>Feedback</b> - Provide feedback, allowing teachers to monitor individual and class-level performance.</li> <li>• <b>Content Presentation:</b> High-quality multimedia content, including videos, animations, and interactive exercises.</li> <li>• It shall work on the Interactive Flat Panel provided in the classroom.</li> </ul> <p><b>Assessment and Progress Tracking:</b></p> <ul style="list-style-type: none"> <li>○ Placement tests to assess students' initial proficiency levels</li> <li>○ Pre-, mid-, and post-assessments to measure learning outcomes</li> <li>○ Real-time attendance tracking and reporting</li> <li>○ Detailed reports on student and teacher progress.</li> </ul> <p><b>Offline Mode:</b> Offline functionality should be made available. It shall run in offline mode also.</p> <p><b><u>Content Structure</u></b></p> <ul style="list-style-type: none"> <li>• <b>Four Skills Approach:</b> Each chapter includes activities targeting Listening, Speaking, Reading, and Writing skills.</li> <li>• <b>Grammar and Vocabulary:</b> Graded grammar instruction and vocabulary building exercises integrated into each chapter.</li> <li>• <b>Group Activities:</b> Emphasis on collaborative learning through group discussions, role-plays, and presentations</li> </ul> <p><b><u>Benefits</u></b></p> <ul style="list-style-type: none"> <li>• <b>Enhanced Language Proficiency:</b> Comprehensive curriculum aligned with CEFR standards ensures systematic development of English language skills.</li> <li>• <b>Interactive Learning:</b> Engaging multimedia content and activities promote active participation and improve learning outcomes.</li> <li>• <b>Focus on Communication:</b> Emphasis on speaking and listening activities builds confidence and fluency in real-life situations.</li> <li>• <b>Personalized Learning:</b> Placement tests and progress tracking enable tailored instruction and targeted support.</li> <li>• <b>Teacher Empowerment:</b> TTT program and support resources equip teachers to deliver the curriculum effectively.</li> </ul> |
| 4 | <p><b><u>3D Virtual Lab Simulations for Smart Classroom</u></b></p> <p>The 3D interactive simulations for science lab experiments aligned with the State/CBSE board shall having the following components for effective learning outcomes delivery.</p> <ol style="list-style-type: none"> <li>1. <b>Aim and Apparatus:</b> A 3D video should introduce the experiment's aim and essential equipment. This video should also illustrate the experimental setup required to experiment.</li> <li>2. <b>Theory:</b> A 3D video should explain the underlying scientific concepts behind that particular experiment.</li> <li>3. <b>Virtual Lab Environment:</b> The DIY experiment should be a virtual 3D lab simulation that guides students through selecting materials, conducting experiments, and forming conclusions with real-time instructions and observation tools.</li> <li>4. <b>Step-by-Step Guide:</b> These instructions should enhance the learning experience, ensuring the smooth execution of experiments with clear instructions for a seamless virtual experiment experience.</li> </ol>   |

|   |   |
|---|---|
|   | <ol style="list-style-type: none"> <li>5. <b>Academic Keywords:</b> Important terms and phrases in the experiment should be highlighted upon clicking a pop-up with a definition, along with the related video(s) for a deeper understanding of the selected academic keyword should be served.</li> <li>6. <b>Molecular Level Visualisation:</b> 3D molecular visualisation should help in understanding interactions and changes in reactants, thus enhancing clarity and comprehension of how the product(s) is formed.</li> <li>7. <b>Interactive Validating Questions:</b> A gamified approach should be inculcated in conducting experiments with Question-Based Interaction during experiments, enhancing user engagement.</li> <li>8. <b>Remedial Actions:</b> The remedial feedback should give the user insight into how the action performed is wrong without giving a direct answer or action to that step.</li> <li>9. <b>Observation Table:</b> Students should be able to replicate the authentic practice of noting observations in an observation table, mirroring the procedures followed in a physical lab setup.</li> <li>10. <b>Lab Manual:</b> Virtual Lab experiments should offer a detailed lab manual with content organized into various steps or stages of the experiment.</li> <li>11. <b>Viva Questions:</b> This section should contain important questions from the viewpoint of Viva voice. Students should be able to practice these questions to prepare for their school viva</li> <li>12. <b>Performance Report:</b> The evaluation should have questions allowing users to assess their understanding through a user-friendly interface with instant feedback on correct and incorrect answers.</li> <li>13. <b>Retake Flexibility:</b> User should be able to retake the evaluation test multiple times.</li> <li>14. <b>Dashboard and Analytics:</b> The dashboard and analytics section should encompass key metrics such as active users, percentage of completion, time spent, average session duration, and other engagement metrics, providing a comprehensive overview of user interaction and performance.</li> <li>15. The experiments should be available in both English and Hindi mediums.</li> <li>16. 300+ curriculum-aligned Virtual Lab Experiments for class 1 to 12. The content should be compatible with the Interactive flat panel in the proposed solution.</li> </ol> |
| 5 | <p><b><u>Interactive Teacher Led e-Learning Digital Content for Smart Classroom</u></b></p> <p>The 3D interactive content should be aligned with the State/CBSE board, which shall empower teachers and students with interactive teaching-learning content, fostering a unified and enriched educational experience.</p> <p><b>The content for following subjects and classes should be available</b></p> <ul style="list-style-type: none"> <li>● Class 1 - 10: Science, Mathematics and Social Studies</li> <li>● Class 11 - 12: Physics, Chemistry, Biology and Mathematics</li> </ul> <p>The content should be made available both in English and Hindi. The interactive content should have the following content elements.</p> <ol style="list-style-type: none"> <li>1. <b>Interactive Pre-built Lessons:</b> Curriculum-aligned Interactive lessons that can be directly used by the teachers for effective and engaging classroom teaching. These standardised prebuilt lessons save teachers significant time and bring us closer to unified teaching.</li> <li>2. <b>Labelled 3D Models:</b> labelled 3D models as learning tools that effectively illustrate and connect key concepts.</li> <li>3. <b>3D Immersive Videos:</b> Utilise immersive videos to provide an engaging and comprehensive learning experience.</li> <li>4. <b>Practice Lessons:</b> This should contain practice lessons featuring 2D and 3D interactive quizzes and more, all based on the selected chapter and topics.</li> <li>5. <b>Textbook questions:</b> Questions should be classified based on varying difficulty levels (Easy, Moderate, and Hard), incorporating Previous Year Questions and essential questions as per the</li> </ol>   |

|  |  |
|--|--|
|  | <p>State board's curriculum. This should empower teachers to filter question types and difficulty levels for customised assessments.</p> <ol style="list-style-type: none"> <li>6. <b>Images and Illustrations:</b> Detailed and well-illustrated visual representation of the studied concept.</li> <li>7. <b>Important &amp; High-weightage Tags:</b> All the topics with high weightage in the exam and important for the upcoming exams should be tagged as “Important”.</li> <li>8. <b>Captivating Visual for Storylines:</b> The content should be designed keeping in mind the compelling and interesting narratives or storylines of the textbook.</li> <li>9. <b>3D Models for Better Visualisation:</b> The content should have immersive 3D models which transform complex subjects into engaging and tangible experiences.</li> <li>10. <b>3D Animated Videos for Deeper Understanding:</b> The content should consist of 3D immersive videos which make complex subjects easier to grasp by showing them in a visually exciting way.</li> <li>11. <b>Interactive Flashcard-based Activities:</b> The content should have flashcard-based activities, providing an interactive platform that enhances the memorization of various correlations. Each flashcard should engage learners in actively recalling and reinforcing connections, contributing to a more effective and engaging learning experience.</li> <li>12. <b>Interactive Quizzes:</b> Questions that should be posed between chapters are reimaged into diverse interactive quiz formats, including drag-and-drop, connecting the bubbles, and correcting the sequence. The objective of this transformation should be two-fold - to elevate the cognitive engagement of learners by requiring thoughtful interactions, and to bolster their confidence for continued learning. The platform should have a question bank with a minimum of 5 lakh questions in English and Hindi, including hints and step-by-step solutions, covering Grades 1 to 12 for Maths, Science and Social Science subjects.</li> <li>13. <b>Back-of-the-Chapter Questions:</b> The content should have the conventional back-of-the-chapter questions which are transformed into interactive formats, including Drag and Drop, Connecting the Bubbles, Matrix Match Type, Puzzles, and more.</li> <li>14. <b>Theorem and Derivations:</b> Teachers should be able to provide interactive learning experiences for high-scoring questions that often revolve around derivations in school exams, to improve students' application of the concepts.</li> <li>15. <b>Class Analytics:</b> Teachers should be able to check class activity details such as Time Spent, Number of Assets Used, Question Attempt Analysis, and Slide-wise Teacher Activity Graph and Details.</li> <li>16. <b>Online Sync Facility and Dashboard Analytics:</b> Principals and administrators should be able to view analytics reinforcing the commitment to quality education.</li> <li>17. The content should have followings: <ol style="list-style-type: none"> <li>1. 5000+ prebuilt interactive lessons.</li> <li>2. 4000+ 3D Immersive Videos either in English or Hindi.</li> <li>3. 12,000+ Labelled 3D Models with Curriculum Tagging</li> <li>4. 5,000+ Interactive Quizzes and</li> <li>5. 8000+ Curriculum aligned 2D Animations and Images</li> </ol> </li> <li>18. The platform should have all the questions with Hint and complete solution from the prescribed text book of State Board for Maths and Science (for class 6 to 12) and should also have ample questions from other NCERT author books. The questions should have tagging with Concept, Difficulty level and learning outcome as prescribed by NCF.</li> <li>19. The platform should have search engine covering academic/board based content on 3D Models, 3D Images, 3D Videos, and 3D Simulations from a minimum repository of 30,000 assets.</li> <li>20. The user should be able to navigate the application in a book like flow i.e. table of chapters and associated topics. Each topic should have multiple 3D learning videos and questions.</li> <li>21. The application should be able to function with and without internet availability.</li> <li>22. All the content should be made available in offline mode also.</li> </ol> <p>The Platform and its teaching-learning resources should be user-friendly, allowing teachers to easily navigate through the book's table of contents format at a chapter and topic level. The content should be compatible with the Interactive flat panel in the proposed solution.</p> |
|--|--|

## Manpower Details for Virtual Classroom Solution

### a. Centralized Manpower

| Designation            | Description   |
|------------------------|---|
| <b>Project Manager</b> | <p><b><u>Qualification:</u></b> MBA / PGDM from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognized by the Government as equivalent thereto.</p> <p><b><u>Minimum Experience:</u></b> 5 years in Broadcasting/IT/Telecom sector</p> <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• The Project Manager heads the entire Project and is responsible for successfully implementing the Project according to the Project Plan. Manages the risk, quality and progress of the project to organizational standards, and ensures the project will complete on time.</li> <li>• Project Manager is the execution head and the single point of contact for the entire project.</li> <li>• Project Manager is required to regularly communicate with key stakeholders to ensure project outcomes are met.</li> <li>• Timely submission of all the Reports to EdCIL as required.</li> <li>• Timely project updates to EdCIL as required.</li> </ul>  |
| <b>Program Manager</b> | <p><b><u>Qualification:</u></b> Any Master's degree or Bachelor's degree in Engineering or B. Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognized by the Government as equivalent thereto.</p> <p><b><u>Minimum Experience:</u></b> 3 years in Broadcasting/IT/Telecom sector.</p> <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• Program Manager is responsible for planning and implementing education strategies for the program.</li> <li>• Determine the syllabus and session plan for the classes to be run all throughout the State - in coordination with the EDCIL and end client.</li> <li>• Establish a routine schedule of delivery of LIVE sessions from the studio as per approved time-table and session plan.</li> <li>• Supervising and giving directions to Interaction Centre In- Charges.</li> <li>• Supervises and provides direction to Service Provider's Academic and Multimedia Teams through coordinators.</li> <li>• Formulates and recommends changes in multimedia and delivery based on analytics and feedback from Interaction Centre In-Charges.</li> <li>• Assists the Project Manager in reviewing the program, evaluating and reporting on a continuous basis.</li> <li>• The position ensures compliance requirements are met, adheres to program guidelines, and develop, manages and monitors special topic programs.</li> </ul> |
| <b>Studio Engineer</b> | <p><b><u>Qualification:</u></b> Any Master's degree or Bachelor's degree in Engineering or B. Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p>   |

|                  |  |
|------------------|--|
|                  | <p><b><u>Minimum Experience:</u></b> Two-year in Broadcasting/IT/Telecom sector.</p> <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• Responsible for the Operation of the Studio by supervising and directing other studio staff.</li> <li>• Coordinate with Program Manager on program schedule.</li> <li>• Make sure that programmes are broadcast on time and to the highest level of quality.</li> <li>• Servicing and testing equipment.</li> <li>• Minimising loss of service when equipment fails by quickly identifying and implementing alternative methods of service provision.</li> </ul> <p>Interpreting and implementing instructions and requests from Program manager on need basis for additional sessions.</p>  |
| Camera Man       | <p><b><u>Qualification:</u></b> Any graduation Degree or diploma in mass media from a recognized college/University, or any other equivalent/ recognized qualification notified by the Central Government.</p> <p><b><u>Minimum Experience:</u></b> One-year as a cameraman.</p> <p><b><u>Job Description</u></b></p> <ul style="list-style-type: none"> <li>• Assemble, prepare, and set up equipment prior to LIVE Delivery of sessions, which may include tripods, monitors, lighting, cables and leads and headphones.</li> <li>• Practise the camera moves required for any pre-arranged shots for special sessions.</li> <li>• Find solutions to technical or other practical problems</li> <li>• Repair and maintain equipment</li> </ul>   |
| Studio Assistant | <p><b><u>Qualification:</u></b> Any graduation Degree or diploma in mass media from a recognized college/University, or any other equivalent/ recognized qualification notified by the Central Government.</p> <p><b><u>Minimum Experience:</u></b> One-year as a studio assistant.</p> <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• Helping Studio Engineer and Cameraman to ensure that cameras and associated equipment are rigged and ready for the LIVE delivery</li> <li>• Record keeping, printing, scanning</li> <li>• Up-keeping studio space</li> </ul>  |
| Academic Manager | <p><b><u>Qualification:</u></b> Any Master's degree or Bachelor's degree in Engineering or B.Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b><u>Minimum Experience:</u></b> Five-year as academic manager.</p> <p><b><u>Job Description:</u></b><br/>Academic Manager reports to Program Manager and in coordination with Content Delivery Expert - Leads and Multimedia Coordinator devises session plans</p> <ul style="list-style-type: none"> <li>• Organize training sessions for assigned Content Deliver Experts</li> <li>• Observe LIVE delivery of every teacher and hold individual teacher feedback sessions. Based on the observations continue/replace services of respective content delivery experts.</li> <li>• Ensure all teachers fulfil their contractual duties, and are prepared for each assigned session.</li> <li>• Establish regular field visits for observing LIVE sessions from classroom perspective and report needs of any modifications in delivery method/multimedia to Program Manager.</li> <li>• Coordinate with District Interaction Centre In-Charges.</li> <li>• Provide recommendation to respective schools on varying their lesson plans to help students</li> </ul> |

|   |  |
|---|--|
|   | <p>score better.</p> <ul style="list-style-type: none"> <li>As per the Program Manager's direction, arranging any Special Sessions such as memory techniques, motivational</li> <li>classes, interviews with achievers, toppers, scientists etc.</li> </ul>  |
| <p><b>Content Delivery Expert - Lead (For each Subject)</b></p> | <p><b>Qualification:</b> Any Master's degree in the relevant subject from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b>Minimum Experience:</b> Three-year as a content delivery expert.</p> <p><b>Job Description:</b></p> <ul style="list-style-type: none"> <li>Manage the team of Delivery Experts</li> <li>Coordinate with Teachers.</li> <li>Coordinate with Multimedia Coordinator</li> <li>Effectively review subject delivery and provide feedback to Academic Manager</li> <li>Study the analytics and recommend delivery/multimedia modifications to academic manager</li> </ul>  |
| <p><b>Content Delivery Experts</b></p>                          | <p><b>Qualification:</b> Any Bachelor's degree from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b>Minimum Experience:</b> One-year as a content delivery expert.</p> <p><b>Job Description:</b></p> <ul style="list-style-type: none"> <li>Deliver the content on par with the defined standards; engage and motivate students; make learning participative.</li> <li>Developing weekly session plan based on the topics assigned.</li> <li>Look into questions being asked by students.</li> <li>Prepare for sessions as per session plan and add personalized effective inputs for immediate concept understanding.</li> </ul>   |
| <p><b>Project coordinator and Analysts</b></p>                  | <p><b>Qualification:</b> Any Master's degree or Bachelor's degree in Engineering or B.Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b>Minimum Experience:</b> Three-year as a Project coordinator and Analysts.</p> <p><b>Job Description:</b></p> <ul style="list-style-type: none"> <li>Analyse the data being collected through various data capture and monitoring channels</li> <li>Generate reports for the review of Program Manager/Academic Manager/Multimedia Coordinator/Content Delivery Expert–Leads on program's ongoing impact</li> <li>Prepare summaries of data for Block Level/District Level Education Officers on need basis</li> <li>Any other reports requested by EDCIL</li> </ul> <p>Providing ongoing information about the program status and impact to the Information Team</p> |
| <p><b>Manager Operations</b></p>                                | <p><b>Qualification:</b> A Bachelor's degree in Engineering or B.Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b>Minimum Experience:</b> One-year experience in operation of studio management.</p> <p><b>Job Description:</b></p> <ul style="list-style-type: none"> <li>The Operations Manager works with the Project Manager to perform Operations &amp; Management of Studios, Interactive center and Virtual Classroom infrastructure and AMC as per SLA.</li> <li>Plan, prioritise, and co-ordinate the development of assigned tasks during every milestone and ensures timetables</li> <li>Manage vendor relationships.</li> </ul>   |

|                                    |  |
|------------------------------------|--|
|                                    | <ul style="list-style-type: none"> <li>• Manage field stock requirements.</li> <li>• Responsible for Manpower Management and Training</li> <li>• Ensure and coordinate prompt and appropriate help desk and Tech-support</li> <li>• Establishes school visits in the region to monitor overall school operations, record keeping, and to undertake teacher observations</li> <li>• Coordinates with Interaction Centre – In Charge</li> <li>• Record Management and reporting to Project Manager</li> </ul>  |
| <b>Quality Control– Audit Team</b> | <p><b><u>Qualification:</u></b> Any Bachelor’s degree from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b><u>Minimum Experience:</u></b> Two-year experience in Quality Control.</p> <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• The team reports directly to Project Manager.</li> <li>• Checks program quality at various stages of the project</li> <li>• Keep check on the usage verification of the program</li> <li>• Regularly visit classrooms for internal audit and quality check.</li> <li>• Provide Feedback study from user department/EDCIL, teachers, students for the improvement in the operations.</li> </ul>  |
| <b>Helpdesk/Tech Support</b>       | <p><b><u>Qualification:</u></b> Any Bachelor’s degree or diploma from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b><u>Minimum Experience:</u></b> Not required.</p> <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• Helpdesk serves as a single point of contact for all project related incidents and service requests.</li> <li>• The Helpdesk agents are mapped to handle requests from specific schools. They shall also handle any project related back-end work.</li> <li>• They shall provide the support for all kinds of disaster management at the local centres.</li> <li>• Solve all First level issues through phone calls and second level issues to be forwarded to operations team to follow up.</li> <li>• Regularly monitor online project management system and reports any cases where schools are not utilizing the infrastructure.</li> <li>• Generate infrastructure health status summary for assigned schools on need basis.</li> </ul> |
| <b>Information Team</b>            | <p><b><u>Qualification:</u></b> Any Bachelor’s degree or diploma from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.</p> <p><b><u>Minimum Experience:</u></b> Not required.</p> <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• Preparing stakeholder communication plan<br/>Exchange of regular project-specific general information to project staff at different hierarchy level</li> <li>• Receive feedback from stakeholders on restricted/public forums and responding to it constructively</li> <li>• Design a dedicated website for the project and manage content</li> <li>• Preparing public information drafts</li> <li>• Correlate communication with project milestone events, activities, and results.</li> <li>• Community involvement in social media channels like face book and X (as applicable)</li> </ul>   |
|                                    | <p><b><u>Qualification:</u></b> Diploma in Multimedia/Animation from a University established by Law in India</p>  |

|  |   |
|--|---|
| <p><b>Multimedia Coordinator</b></p>       | <p>or a Foreign University approved by the Central Government from time to time, or a qualification recognized by the Government as equivalent thereto.<br/> <b>Minimum Experience:</b> 3 Years as a multimedia coordinator.<br/> <b>Job Description:</b></p> <ul style="list-style-type: none"> <li>• Collect feedback on multimedia from the committee</li> <li>• Provide the feedback on multimedia content developed to Service Providers' multimedia team</li> <li>• Coordinate during verification process of final animation content by senior subject matter experts of committee</li> </ul>  |
| <p><b>Software Support</b></p>             | <p><b>Qualification:</b> A Bachelor's degree in Engineering or B.Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognized by the Government as equivalent thereto.<br/> <b>Minimum Experience:</b> Three-year experience in Broadcasting/IT/Telecom sector.<br/> <b>Job Description:</b></p> <ul style="list-style-type: none"> <li>• Logging and resolving various software related issues</li> <li>• Escalation and reproduction of technical issues for the development team</li> <li>• QA tasks and technical documentation</li> <li>• Administration of databases.</li> <li>• System Monitoring.</li> </ul>  |
| <p><b>Interaction Centre In charge</b></p> | <p><b>Qualification:</b> Any Master's degree or Bachelor's degree in Engineering or B.Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognised by the Government as equivalent thereto.<br/> <b>Minimum Experience:</b> Two-year experience as a teacher.<br/> <b>Job Description:</b></p> <ul style="list-style-type: none"> <li>• Provides services as one of the Online Teachers i.e. answers LIVE questions by students on an assigned subject along with the govt. teacher assigned by the department/end client</li> <li>• Trains the other online teachers assigned at the respective IC</li> <li>• Coordinates with other interaction centres for any kind of reports required at local level</li> <li>• Up-keeping of Q&amp;A equipment</li> </ul> |

**b. School Level Manpower:**

| Designation                   | Description  | Minimum Manpower                           |
|-------------------------------|--|--|
| <p>School Level Volunteer</p> | <p><b>Qualification:</b> Any Bachelor's degree from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognized by the Government as equivalent thereto.<br/> <b>Minimum Experience:</b> One-year experience as school level volunteer.</p> | <p>As per EdCIL/end client requirement</p> |

|                    |   |                                     |
|--------------------|---|-------------------------------------|
|                    | <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• School Level Volunteer ensures successful operation of Virtual Classrooms on a day-to-day basis. They also help in resolution of simple incidents and service requests.</li> <li>• They help teachers in handling equipment</li> <li>• Help students using Clickers</li> <li>• Keeping class run status updated</li> <li>• Coordination with the Nodal Officer &amp; helpdesk</li> </ul> |                                     |
| Nodal Officer      | <p><b><u>Qualification:</u></b> Any Bachelor's degree from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognized by the Government as equivalent thereto.</p>  | As per EdCIL/end client requirement |
|                    | <p><b><u>Minimum Experience:</u></b> Two-years' experience as Nodal officer.</p>  |                                     |
|                    | <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• Nodal Officer will be on the field and handles any incidents and service requests to help make the Virtual Education system meet SLA availability requirements.</li> <li>• Nodal Officer shall also train school teachers to use the Virtual Classroom setup on need basis.</li> </ul>   |                                     |
| Technical Engineer | <p><b><u>Qualification:</u></b> Any Bachelor's degree in Engineering or B.Tech from a University established by Law in India or a Foreign University approved by the Central Government from time to time, or a qualification recognized by the Government as equivalent thereto.</p>   | As per EdCIL/end client requirement |
|                    | <p><b><u>Minimum Experience:</u></b> 2 years of experience in EdTech solution</p>   |                                     |
|                    | <p><b><u>Job Description:</u></b></p> <ul style="list-style-type: none"> <li>• To set up, install, commission equipment and installation of Virtual Classroom centres</li> <li>• To provide hands on experience to Master Trainers who in turn train school staff/teachers and Nodal officers to operate the classrooms after the installations.</li> <li>• To look into issues and visit schools to rectify when issues are complex in nature.</li> </ul>              |                                     |

**Annexure XX**  
**TENDER CHECKLIST**

| S. No. | Description   | Yes/No with Page No. |
|--------|---|----------------------|
| 1.     | BID SECURITY(EMD)<br>Whether the bidder has attached the Bid Security as per format of the Bid Security form?   |                      |
| 2.     | Amount of Bid Security (EMD) as per bid requirement or not?   |                      |
| 3.     | Form in which Bid security (EMD) enclosed (Bank Guarantee/Demand Draft/NEFT or RTGS in EdCIL Account).  |                      |
| 4.     | Date of issue of Demand Draft / NEFT or RTGS for EMD  |                      |
| 5.     | Bid validity 180 days beyond the last date of tender opening or not?  |                      |
| 6.     | Legal Status/ Constitution of firm (any document & partnership deed etc.)   |                      |
| 7.     | Whether the bidder has quoted for all the items in the financial bid?   |                      |
| 8.     | Whether price as per Financial Bid quoted or not?   |                      |
| 9.     | Whether Project Timeline as per bid agreed or not?  |                      |
| 10.    | Payment terms as per bid agreed or not?   |                      |
| 11.    | Undertaking as per Annexure – III or not?   |                      |
| 12.    | A brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the above said work is attached or not? |                      |
| 13.    | Letter of financial proposal signed and enclosed with the financial bid offer   |                      |
| 14.    | Signed copy of Pre-contract integrity pact  |                      |
| 15.    | Letter of Bid submission  |                      |
| 16.    | Signed copy of the tender document submitted  |                      |
| 17.    | Power of Attorney   |                      |
| 18.    | Declaration Sheet with all the balance of required credentials  |                      |
| 19.    | Valid registration certificate issued by NSIC/MSME or other appropriate government authorities (For MSMES and start-ups only)   |                      |

**Annexure XXI**  
**Pre-Bid Query Format**

Queries should be submitted in .XLS format.

| RFP Description |             |          |                   |                      |
|-----------------|-------------|----------|-------------------|----------------------|
| RFP No.         |             |          |                   |                      |
| Organization    |             |          |                   |                      |
| Address         |             |          |                   |                      |
| Contact Person  |             |          |                   |                      |
| Contact No.     |             |          |                   |                      |
| Mail Id         |             |          |                   |                      |
| S.No.           | Section No. | Page No. | Clause as per RFP | Clarification Sought |
|                 |             |          |                   |                      |
|                 |             |          |                   |                      |
|                 |             |          |                   |                      |
|                 |             |          |                   |                      |

**Annexure XXII**  
**Land Border Declaration**

**(On Bidder's Letter head)**

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. (Where applicable, evidence of valid registration by the Competent Authority shall be attached.)

Place: \_\_\_\_\_

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

Signature of Bidder: \_\_\_\_\_

Name of Signatory: \_\_\_\_\_

**Annexure XXIII**  
**MAF to be submitted**

**A. Main Studio Setup**

| Sl.No. | Component                                     |
|--------|---|
| 1      | Digital Video Camera                          |
| 2      | Video Switcher                                |
| 3      | Hard Disk based Recorder                      |
| 4      | Teleprompter                                  |
| 5      | Microphone: Cordless                          |
| 6      | Multi-touch Interactive Panel with 14" Laptop |
| 7      | 85" Interactive flat panel                    |
| 8      | Transmission Server                           |
| 9      | Smart Podium                                  |
| 10     | Online UPS (10KVA)                            |
| 11     | Generator (10KVA)                             |

**B. Regional Studio Setup**

| S. No | Component                        |
|-------|----------------------------------|
| 1     | Digital Video Camera             |
| 2     | All In One PC                    |
| 3     | PTZ Camera- 20X                  |
| 4     | PTZ Camera- 12X                  |
| 5     | 55 inches Professional Display   |
| 6     | Transmission Server              |
| 7     | Laptop with HDMI output          |
| 8     | Air Conditioner-1.5 Ton          |
| 9     | Digital Podium                   |
| 10    | Online UPS (5KVA)                |
| 11    | Batteries for Back up for 2 Hour |

**C. Virtual Classroom**

| Sl.No. | Component   |
|--------|---|
| 1      | Projector with ceiling mount                            |
| 2      | Laptop  |
| 3      | Audio system  |
| 4      | 75" Interactive flat panel                              |
| 5      | 65" Interactive flat panel                              |
| 6      | OPS PC  |
| 7      | Virtual Classroom Application Software                  |
| 8      | HD Camera   |
| 9      | Mic System  |
| 10     | Student Digital Assessment Sets (50 tools + 1 receiver) |
| 11     | Communication Equipment (2-Way)                         |
| 12     | 1 KVA UPS   |
| 13     | Solar power Hybrid UPS along with Solar Panel           |
| 14     | 2 KVA Servo Stabilizer                                  |

**Annexure XXIV**  
**Proposed Make and Model**

**1) Main Studio Setup**

| S. No | Component  | Make | Model |
|-------|--|------|-------|
| 1     | Digital Video Camera   |      |       |
| 2     | Video Switcher   |      |       |
| 3     | Audio mixer  |      |       |
| 4     | Camera Tripod  |      |       |
| 5     | Hard Disk based Recorder   |      |       |
| 6     | Digital SD/HD-SDI video distribution   |      |       |
| 7     | Teleprompter   |      |       |
| 8     | Microphone: Cordless   |      |       |
| 9     | Wired Mic with Table mic stand   |      |       |
| 10    | Audio Monitor  |      |       |
| 11    | Digital Pad  |      |       |
| 12    | Multi-touch Interactive Panel with 14" Laptop  |      |       |
| 13    | 85" Interactive flat panel   |      |       |
| 14    | OPS PC   |      |       |
| 15    | Transmission Server  |      |       |
| 16    | Laptop with HDMI output  |      |       |
| 17    | Satellite Receiving Antenna, Satellite Modem (Compatible with EDUSAT Network) and LNB  |      |       |
| 18    | LED Lights with ceiling mount movable Grid and mounting clamps                         |      |       |
| 19    | Video light  |      |       |
| 20    | Editing Setup  |      |       |
| 21    | Technical Table for Studio   |      |       |
| 22    | Studio Room Table for Studio   |      |       |
| 23    | Executive Chair for Studio   |      |       |
| 24    | Wooden Almira for Studio   |      |       |
| 25    | Sofa (3+2) for Studio  |      |       |
| 26    | Earthing + Cabling & Installation + Integration + Testing+ Accessories for integration |      |       |
| 27    | Acoustic, Fabric Above Acoustics, Green Screen (Chroma key) & Light board 7 '*4'       |      |       |
| 28    | Air Conditioner- 2 Ton   |      |       |
| 29    | Smart Podium   |      |       |
| 30    | Online UPS (10KVA)   |      |       |
| 31    | Batteries for Back up for 1 Hour   |      |       |
| 32    | Generator (10KVA)  |      |       |
| 33    | Training of Teachers at Studio (Batch of 10 Teachers)                                  |      |       |

**2) Regional Studio Setup**

| S. No | Component            | Make | Model |
|-------|----------------------|------|-------|
| 1     | Digital Video Camera |      |       |
| 2     | Camera Tripod        |      |       |
| 3     | Microphone           |      |       |
| 4     | Audio Mixer          |      |       |
| 5     | All In One PC        |      |       |

|    |  |  |  |
|----|--|--|--|
| 6  | PTZ Camera- 20X  |  |  |
| 7  | PTZ Camera- 12X  |  |  |
| 8  | 55 inches Professional Display   |  |  |
| 9  | Transmission Server  |  |  |
| 10 | Laptop with HDMI output  |  |  |
| 11 | LED Lights with ceiling mount movable Grid and mounting clamps                         |  |  |
| 12 | Earthing + Cabling & Installation + Integration + Testing+ Accessories for integration |  |  |
| 13 | Acoustic, Fabric Above Acoustics, Green Screen(Chroma key)                             |  |  |
| 14 | Air Conditioner-1.5 Ton  |  |  |
| 15 | Digital Podium   |  |  |
| 16 | Online UPS (5KVA)  |  |  |
| 17 | Batteries for Back up for 2 Hour   |  |  |

### C. Virtual Classroom with Digital Assessment

| S. No | Component  | Make | Model |
|-------|--|------|-------|
| 1     | Projector with ceiling mount   |      |       |
| 2     | Projector Screen   |      |       |
| 3     | Laptop-Basic   |      |       |
| 4     | Audio System for Projector Based Classroom                           |      |       |
| 5     | Audio System for IFP based Classroom                                 |      |       |
| 6     | Server   |      |       |
| 7     | 75" Interactive flat panel   |      |       |
| 8     | 65" Interactive flat panel   |      |       |
| 9     | OPS PC   |      |       |
| 10    | Protective Casing for the Interactive Flat Panel                     |      |       |
| 11    | Virtual Classroom Application Software                               |      |       |
| 12    | 4K Camera  |      |       |
| 13    | HD Camera  |      |       |
| 14    | Microphone   |      |       |
| 15    | Student Digital Assessment Sets (50 tools + 1 receiver)              |      |       |
| 16    | e-Podium   |      |       |
| 17    | Communication Equipment (2-Way)                                      |      |       |
| 18    | Wi-Fi router and accessories like cables, Extension box, Connectors  |      |       |
| 19    | 1 KVA Online UPS   |      |       |
| 20    | Battery for UPS  |      |       |
| 21    | Solar power Hybrid UPS along with Solar Panel (1 KVA)                |      |       |
| 22    | Desktop PC   |      |       |
| 23    | 2 KVA Servo Stabilizer   |      |       |
| 24    | Monitoring, Evaluation, analytics and assessments                    |      |       |
| 25    | Earthing + Cabling & Installation + Integration + Testing + Training |      |       |
| 26    | Impact Assessment  |      |       |
| 27    | Training of Teachers of Virtual Classroom                            |      |       |

## **PART-II: FINANCIAL BID**

### Instructions to Bidders

1. Financial Bid shall be submitted with full price details.

Financial Bid shall contain only the prices duly filled in as per the format given in Schedule of Rates provided in the tender document. Price bid should not have any Commercial and/or Technical stipulation in addition to, what is already given in Part I – Technical bid.

Financial Bid Standard Form-1 shall be used for the preparation of the price quote according to the instructions provided.

2. The changes displayed in the corrigendum/addendum to the bid documents, particularly with the financial bid should be attached with the **Financial Bid Submission Form**, in the same packet, duly signed and stamped by the authorized signatory of the Bidder firm.
3. The financial bid form-1 along with financial bid submission form should be filled in all respect and uploaded in **.PDF** format (only) duly signed and sealed by the authorized representative. In case, the financial bid documents are not complete in all respect the same should be treated as incomplete at financial bid stage and shall be considered non-responsive.
4. In case, the Bidder/s does not quote for all the items, the Bid shall be treated as incomplete and shall be rejected summarily.
5. The bid shall be evaluated on total Price for each solution as shown in financial bid.
6. The prices must be quoted in the Performa given in Commercial Bid, failing which the Bid would be treated as unresponsive. Any discount or any other offers affecting the package price must be mentioned in Financial Bid only. Discount or any other offers affecting the Package price mentioned at any other place of the bid other than Financial Bid will not be considered.
7. Price quoted by the bidder is including all transportation and installation etc. cost (if any).
8. The bidder should quote for all components of the solution(s) in accordance to the pre-qualification and technical qualification criteria.

**FINANCIAL BID SUBMISSION FORM**

To:  
**Chief General Manager (DES),  
EdCIL (India) Limited,  
EdCIL House, 18A, Sector- 16A,  
NOIDA- 201 301 (U.P)**

**Subject:** Submission of the Financial bid for Selection of System Integrator for Entering into Rate Contract for design, supply & installation of Virtual Classroom solutions

Dated: \_\_\_\_/\_\_\_\_/2025

Dear Sir,

We, the undersigned, offer to provide services for “Rate Contract for design, supply & installation of Virtual Classroom solution” in accordance with your request for proposal dated \_\_/\_\_/2025.

All the prices mentioned in our bid are in accordance with the terms as specified in the RFP documents. All the prices and other terms and conditions of this Bid are valid for a period of 180 calendar days from the date of opening of the Bid.

All the taxes are quoted separately under relevant sections. Any miscalculation of taxes would be on our own account. Please note that all amounts shall be the same as in Form-1

Our Financial Bid shall be binding upon by us subject to the modifications resulting from Contract negotiations, if any, up to expiration of the validity period of the Proposal.

Yours sincerely,

Authorized Signature {In full and initials}:Name  
and Title of Signatory:

In the capacity of:

Address:

E-mail:

## SUMMARY OF FINANCIAL BID

**Subject:** Rate Contract for design, supply & installation of Virtual Classroom solution

### FORM 1

Name of the Owner Individual/ Firm: .....

### Virtual Classroom Solution

| A. Main Studio Setup |  |       |           |         |             |       |
|----------------------|--|-------|-----------|---------|-------------|-------|
| S. No                | Component  | Units | Unit Cost | GST (%) | GST (Value) | Total |
| 1                    | Digital Video Camera   | 1     |           |         |             |       |
| 2                    | Video Switcher   | 1     |           |         |             |       |
| 3                    | Audio mixer  | 1     |           |         |             |       |
| 4                    | Camera Tripod  | 1     |           |         |             |       |
| 5                    | Hardisk based Recorder   | 1     |           |         |             |       |
| 6                    | Digital SD/HD-SDI video distribution   | 1     |           |         |             |       |
| 7                    | Teleprompter   | 1     |           |         |             |       |
| 8                    | Microphone: Cordless   | 1     |           |         |             |       |
| 9                    | Wired Mic with Table mic stand   | 1     |           |         |             |       |
| 10                   | Audio Monitor  | 1     |           |         |             |       |
| 11                   | Digital Pad  | 1     |           |         |             |       |
| 12                   | Multi-touch Interactive Panel with 14" Laptop  | 1     |           |         |             |       |
| 13                   | 85" Interactive flat panel   | 1     |           |         |             |       |
| 14                   | OPS PC   | 1     |           |         |             |       |
| 15                   | Transmission Server  | 1     |           |         |             |       |
| 16                   | Laptop with HDMI output  | 1     |           |         |             |       |
| 17                   | Satellite Receiving Antenna, Satellite Modem (Compatible with EDUSAT Network) and LNB  | 1     |           |         |             |       |
| 18                   | LED Lights with ceiling mount movable Grid and mounting clamps                         | 1     |           |         |             |       |
| 19                   | Video light  | 1     |           |         |             |       |
| 20                   | Editing Setup  | 1     |           |         |             |       |
| 21                   | Technical Table for Studio   | 1     |           |         |             |       |
| 22                   | Studio Room Table for Studio   | 1     |           |         |             |       |
| 23                   | Executive Chair for Studio   | 1     |           |         |             |       |
| 24                   | Wooden Almira for Studio   | 1     |           |         |             |       |
| 25                   | Sofa (3+2) for Studio  | 1     |           |         |             |       |
| 26                   | Earthing + Cabling & Installation + Integration + Testing+ Accessories for integration | 1     |           |         |             |       |
| 27                   | Acoustic, Fabric Above Acoustics, Green Screen (Chroma key) & Light board 7 '*4'       | 1     |           |         |             |       |
| 28                   | Air Conditioner- 2 Ton   | 1     |           |         |             |       |
| 29                   | Smart Podium   | 1     |           |         |             |       |

|   |  |   |  |  |  |  |
|---|--|---|--|--|--|--|
| 30  | Online UPS (10KVA)   | 1 |  |  |  |  |
| 31  | Batteries for Back up for 1 Hour   | 1 |  |  |  |  |
| 32  | Generator (10KVA)  | 1 |  |  |  |  |
| 33  | Training of Teachers at Studio (Batch of 10 Teachers)                                  |   |  |  |  |  |
| <b>B. Regional Studio Setup</b>                     |  |   |  |  |  |  |
| 1   | Digital Video Camera   | 1 |  |  |  |  |
| 2   | Camera Tripod  | 1 |  |  |  |  |
| 3   | Microphone   | 1 |  |  |  |  |
| 4   | Audio Mixer  | 1 |  |  |  |  |
| 5   | All In One PC  | 1 |  |  |  |  |
| 6   | PTZ Camera- 20X  | 1 |  |  |  |  |
| 7   | PTZ Camera- 12X  | 1 |  |  |  |  |
| 8   | 55 inches Professional Display   | 1 |  |  |  |  |
| 9   | Transmission Server  | 1 |  |  |  |  |
| 10  | Laptop with HDMI output  | 1 |  |  |  |  |
| 11  | LED Lights with ceiling mount movable Grid and mounting clamps                         | 1 |  |  |  |  |
| 12  | Earthing + Cabling & Installation + Integration + Testing+ Accessories for integration | 1 |  |  |  |  |
| 13  | Acoustic, Fabric Above Acoustics, Green Screen(Chroma key)                             | 1 |  |  |  |  |
| 14  | Air Conditioner-1.5 Ton  | 1 |  |  |  |  |
| 15  | Digital Podium   | 1 |  |  |  |  |
| 16  | Online UPS (5KVA)  | 1 |  |  |  |  |
| 17  | Batteries for Back up for 2 Hour   | 1 |  |  |  |  |
| <b>C. Virtual Classroom with Digital Assessment</b> |  |   |  |  |  |  |
| 1   | Projector with ceiling mount   | 1 |  |  |  |  |
| 2   | Projector Screen   | 1 |  |  |  |  |
| 3   | Laptop-Basic   | 1 |  |  |  |  |
| 4   | Audio System for Projector Based Classroom   | 1 |  |  |  |  |
| 5   | Audio System for IFP based Classroom   | 1 |  |  |  |  |
| 6   | Server   | 1 |  |  |  |  |
| 7   | 75" Interactive flat panel   | 1 |  |  |  |  |
| 8   | 65" Interactive flat panel   | 1 |  |  |  |  |
| 9   | OPS PC   | 1 |  |  |  |  |
| 10  | Protective Casing for the Interactive Flat Panel                                       | 1 |  |  |  |  |
| 11  | Virtual Classroom Application Software   | 1 |  |  |  |  |
| 12  | 4K Camera  | 1 |  |  |  |  |
| 13  | HD Camera  | 1 |  |  |  |  |
| 14  | Microphone   | 1 |  |  |  |  |
| 15  | Student Digital Assessment Sets (50 tools + 1 receiver)                                | 1 |  |  |  |  |
| 16  | e-Podium   | 1 |  |  |  |  |
| 17  | Communication Equipment (2-Way)  | 1 |  |  |  |  |
| 18  | Wi-Fi router and accessories like cables, Extension box, Connectors                    | 1 |  |  |  |  |
| 19  | 1 KVA Online UPS   | 1 |  |  |  |  |
| 20  | Battery for UPS  | 1 |  |  |  |  |

|  |  |   |  |  |  |  |
|--|--|---|--|--|--|--|
| 21   | Solar power Hybrid UPS along with Solar Panel (1 KVA)  | 1 |  |  |  |  |
| 22   | Desktop PC   | 1 |  |  |  |  |
| 23   | 2 KVA Servo Stabilizer   | 1 |  |  |  |  |
| 24   | Monitoring, Evaluation, analytics and assessments  | 1 |  |  |  |  |
| 25   | Earthing + Cabling & Installation + Integration + Testing + Training                                   | 1 |  |  |  |  |
| 26   | Impact Assessment  | 1 |  |  |  |  |
| 27   | Training of Teachers of Virtual Classroom  | 1 |  |  |  |  |
| <b>D. Application Digital Content and Assessment</b> |  |   |  |  |  |  |
| 1  | Centralized application (all with perpetual license) up to 250 schools                                 | 1 |  |  |  |  |
| 2  | Centralized application (all with perpetual license) up to 500 schools                                 | 1 |  |  |  |  |
| 3  | Centralized application (all with perpetual license) up to 1000 schools                                | 1 |  |  |  |  |
| 4  | Digital e-Content development for LIVE teaching (Per session of minimum 40 mins)                       | 1 |  |  |  |  |
| 5  | English Learning Software  | 1 |  |  |  |  |
| 6  | 3D Virtual Lab Simulations   | 1 |  |  |  |  |
| 7  | Interactive Teacher Led e-Learning Digital Content Licences for Smart Classroom                        | 1 |  |  |  |  |
| 8  | Question Banks, Assessment, and Analytics systems at schools for ongoing student performance analytics | 1 |  |  |  |  |
| <b>E. School Level - Running costs per year</b>      |  |   |  |  |  |  |
| 1  | Studio Connectivity (leased line of minimum Bandwidth 10 mbps)   | 1 |  |  |  |  |
| 2  | Internet Connectivity per school (Minimum Bandwidth 4 mbps)  | 1 |  |  |  |  |
| 3  | Satellite Connectivity per studio (Minimum Bandwidth 2 Mbps)   | 1 |  |  |  |  |
| <b>F. Manpower - Running costs per year</b>          |  |   |  |  |  |  |
| 1  | Project Manager  | 1 |  |  |  |  |
| 2  | Program Manager  | 1 |  |  |  |  |
| 3  | Studio Engineer  | 1 |  |  |  |  |
| 4  | Camera Man   | 1 |  |  |  |  |
| 5  | Studio Assistant   | 1 |  |  |  |  |
| 6  | Academic Manager   | 1 |  |  |  |  |
| 7  | Content Delivery Expert - Lead (For each Subject)  | 1 |  |  |  |  |
| 8  | Project coordinator and Analysts   | 1 |  |  |  |  |
| 9  | Manager Operations   | 1 |  |  |  |  |
| 10   | Quality Control – Audit Team   | 1 |  |  |  |  |
| 11   | Helpdesk/Tech Support  | 1 |  |  |  |  |
| 12   | Information Team   | 1 |  |  |  |  |
| 13   | Multimedia Coordinator   | 1 |  |  |  |  |
| 14   | Software Support   | 1 |  |  |  |  |
| 15   | Interaction Centre In charge   | 1 |  |  |  |  |
| 16   | School Level Volunteer (one for every school)  | 1 |  |  |  |  |

|  |   |   |  |  |  |  |
|--|---|---|--|--|--|--|
| 17   | Nodal Officer (one for every 20 school)                               | 1 |  |  |  |  |
| 18   | Technical Engineer  | 1 |  |  |  |  |
| <b>G. AMC Charges</b>  |   |   |  |  |  |  |
| 1.   | AMC Cost for complete solution (A+B+C+D+E+F) for 2 <sup>nd</sup> year |   |  |  |  |  |
| 2.   | AMC Cost for complete solution (A+B+C+D+E+F) for 3 <sup>rd</sup> year |   |  |  |  |  |
| 3.   | AMC Cost for complete solution (A+B+C+D+E+F) for 4 <sup>th</sup> year |   |  |  |  |  |
| 4.   | AMC Cost for complete solution (A+B+C+D+E+F) for 5 <sup>th</sup> year |   |  |  |  |  |
| <b>Total Cost for Solution (Incl. taxes) (A+B+C+D+E+F+G)</b> |   |   |  |  |  |  |

Total Cost for Solution (incl. Taxes) (In Words) \_\_\_\_\_

**Note:**

- The above prices shall be inclusive of all taxes, delivery charges and installation charges at the school level including one year of onsite comprehensive warranty.
- Detailed School List will be provided to the Successful Bidder.
- Applicable deduction on payment will be made for TDS/GST.
- Validity of Offer: The offer should remain valid at least for a period of 180 days to be reckoned from the date of bid opening.
- AMC cost for any year should not be less than the preceding year. In case of the same the bid will not be considered for evaluation.
- All other incidental charges relating to transportation of equipments at the site are included in the above prices.
- No amount towards TA / DA and lodging, boarding or incidental to execution of the project shall be paid.

Place:

Date:

Signature and Stamp of the Bidder

Name:

Designation: