



## **Request for Proposal (RFP)**

**For Selection of Agency for Implementation of Virtual Classrooms with Digital Assessment in Government and Government Aided Schools Across Odisha under ICT & Digital Initiatives Scheme for OSEPA, School & Mass Education Department, Govt. of Odisha**

**RFP Enquire No: OCAC-SEGP-INFRA-0056-2024/24001, Dated 05/01/2024**

### **Odisha Computer Application Centre**

**(Technical Directorate of E&IT Department, Government of Odisha), N-1/7-D, Acharya Vihar, PO- RRL, Bhubaneswar – 751013  
EPBX: 0674 -2567280 / 2567064 /2567295 / 2567283**

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# 1. DISCLAIMER

The information contained in this RFP document or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by Odisha Computer Application Centre (OCAC) or any of their employees is provided to Bidder(s) on the terms and conditions set out in this RFP Document 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 OCAC to the 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 technical and financial offers pursuant to this RFP (the "Bid"). This RFP includes statements, which reflect various assumptions and assessments arrived at by the bidder in relation to the Project. Such assumptions, assessments, and statements do not purport to contain all the information that each Bidder may require. The assumptions, assessments, statements, and information contained in this RFP, may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations, studies and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this RFP and obtains independent advice from appropriate sources.

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

OCAC, makes 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 in this Bid Stage. OCAC 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.

OCAC 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 OCAC is bound to select a Bidder or to appoint the Preferred Bidder, as the case may be, for the Project and reserves the right to reject all or any of the Bidders or Bids without assigning any reason whatsoever.

OCAC reserves all the rights to cancel, terminate, change or modify this selection process and/or requirements of bidding stated in the RFP, at any time without assigning any reason or providing any notice and without accepting any liability for the same.

## 2. Important Dates & Information

Information	Details
Bid Inviting Authority	Odisha Computer Application Centre (OCAC) (Technical Directorate of I.T. Dept., Govt. of Odisha)
Correspondence Address	The General Manager (Admin), Odisha Computer Application Centre (OCAC), (Technical Directorate of I.T. Dept., Govt. of Odisha), N-1/7-D, Acharya Vihar, P.O.- RRL, Bhubaneswar – 751013
Project Name	Implementation of Virtual Classrooms with Digital Assessment in Government and Government Aided Schools across Odisha under 'ICT and Digital Initiatives' Scheme for OSEPA, School & Mass Education Department.
RFP Reference No. and Date	RFP Enquire No: <b>OCAC-SEGP-INFRA-0056-2024/24001, Dated 05/01/2024</b>
Place of Execution	Across state of Odisha
Non-Refundable RFP Document Fee	₹22,400/- (Rupees Twenty-Two Thousand Four Hundred Only), (Inclusive of 12% GST) in the form of Demand Draft drawn from any Scheduled Bank in favour of "Odisha Computer Application Centre", payable at Bhubaneswar or paid online through OCAC e-Tender Portal, <b>i.e., <a href="https://enivida.odisha.gov.in">https://enivida.odisha.gov.in</a></b>
Earnest Money Deposit (EMD)	Earnest Money Deposit (EMD) of ₹3,00,00,000/- (Rupees Three Crores) in the form of Demand Draft/Bank Guarantee from any Government, Nationalized, and Schedule Commercial Bank. The EMD of successful Bidder is liable to be forfeited if the Bidder revokes any terms of the tender within the validity period. EMDs given by unsuccessful Bidders will be refunded after placing of work order to the successful Bidder.
Availability of Bid Document in the website (www.ocac.in, www.odisha.gov.in& <a href="https://enivida.odisha.gov.in">https://enivida.odisha.gov.in</a> )	05-01-2024 To <b>20-01-2024 at 03:00 PM</b>
Last Date and Time for Submission of Bid Document	20-01-2024 by 03:00 PM
Date and Time of opening of Pre- Qualification Bids	20-01-2024 by 04:00 PM
Date and Time of opening of Technical Bids & Presentation	To be informed
Opening of Financial Bid (FB)	To be informed

### 3. Fact Sheet

This Fact Sheet comprising important factual data of the tender is for quick reference of the Bidder.

Clause Reference	Topic
The Proposal	Odisha Computer Application Centre (OCAC) invites RFP for the selection of agency for Implementation of Virtual Classrooms with Digital Assessment in Government and Government Aided Schools across Odisha under 'ICT and Digital Initiatives' Scheme for OSEPA, S&ME Department.
RFP Document Fee	₹22,400/- (Rupees Twenty-Two Thousand Four Hundred Only), (Inclusive of 12% GST) must be submitted along with the proposal. The RFP document fee must be in favor of Odisha Computer Application Centre from any Scheduled Bank payable at Bhubaneswar or paid online through <a href="https://enivida.odisha.gov.in/">https://enivida.odisha.gov.in/</a> .
Earnest Money Deposit (EMD)	Earnest Money Deposit (EMD) of <b>₹3,00,00,000/-</b> (Rupees Three Crores) in the form of Demand Draft/Bank Guarantee from any Government, Nationalized, and Schedule Commercial Bank. The EMD of successful Bidder is liable to be forfeited if the Bidder revokes any terms of the tender within the validity period. EMDs given by unsuccessful Bidders will be refunded after placing of work order to the successful Bidder.
Performance Bank Guarantee (PBG)	Performance Bank Guarantee (PBG) @ <b>3%</b> of the cost of project from any Government, Nationalized, and Scheduled Commercial Bank in the prescribed format in favour of the Odisha Computer Application Centre shall be submitted by the successful bidder within 30 days of issue of work order.
Scope of Work	Selected bidder is expected to deliver the services listed in Scope of Work as mentioned in this RFP.
Language	Bid must be prepared by the bidder in English language only
Currency	The bidder should quote in Indian Rupees only. The Total Price inclusive of taxes and duties will be considered for evaluation.
Validity Period	Proposals/bids must remain valid minimum for 180 days from the last date of bid submission.
Bid to be submitted on or before last date of submission at:	The proposal must be submitted through eNivida. Physical DD/BG to be submitted to:  <i>The General Manager (Admn.) Odisha Computer Application Centre (OCAC) OCAC Building, Plot No.-N-1/7-D, Acharya Vihar Square, RRL Post Office, Bhubaneswar-751013 (INDIA)</i>

## 4. Invitation for Bids

Odisha Computer Application Centre (OCAC) invites bids from eligible bidders who have the necessary eligibility and qualifications for Implementation, Operations, and Maintenance of 'Virtual Classrooms with Digital Assessment' as per the "Scope of Work" described in this RFP. The selected bidder shall be responsible for implementing the project and providing the operations and maintenance support for 5 years from the date of go-live of the project.

The Bid document has been published in the official website of OCAC ([www.ocac.in](http://www.ocac.in)), OCAC e-Tender Portal <https://enivida.odisha.gov.in> and official website of Govt. of Odisha ([www.odisha.gov.in](http://www.odisha.gov.in)). The tender advertisement has also been published in leading newspapers for wide circulation. Bidders are requested to go through the Bid document carefully and participate in the bidding process with all necessary details as required.

This RFP is issued by OCAC, which is the sole point of contact during the selection process. The Nodal Officer responsible for entire process is General Manager (Admin).

## 5. Background Information

Odisha School Education Programme Authority (OSEPA), School & Mass Education Department, Government of Odisha wishes to implement education technologies in schools to integrate the best practices in schooling experience. The State is looking to deploy a comprehensive education technology solution under 'ICT and Digital Initiatives' to enable disadvantaged children (geographically and financially) to have access to high quality centrally managed learning opportunities. The objective is to make students receive holistic educational inputs in their own schools through the medium of technology.

Under the project, the state wishes to establish remote teaching infrastructure which includes broadcasting studios and virtual classrooms in the connected schools. The objective is to make the students learn the concepts faster and in efficient ways with the help of engaging digital contents taught by studio experts. The system should enable assessments and record these, whether in the school at Virtual Classrooms or beyond the school on Mobile App. This will help the OSEPA to have the data required for issuing remedial teaching. OSEPA intends to use the facility also for teacher training, extra-curricular courses, and for other skill development. In addition, OSEPA aims to setup dedicated resource team to provide regular holistic learning programs on the virtual classroom setup.

Odisha Computer Application Centre (OCAC) has been designated as the state level Nodal Agency for finalizing the procurement process. In the above context, on behalf of OSEPA S&ME Department, Government of Odisha. OCAC seeks proposals from eligible bidders for implementing the Virtual Classrooms with Digital Assessment solution including the required Hardware, Software, and Services in the Government and Government Aided Schools as follows:

	<b>Virtual Classrooms with Digital Assessment</b>
No. of Schools	5370
Major components	Main Studios (4 nos.) and zonal level Regional Studios (8 nos.) for remote interactive teaching using Two-way Satellite Connectivity; Digital Content in Odia & English languages as teacher support resource; Virtual Classroom with Interactive Flat Panel, Student Digital Assessment Devices, and Performance Analytics Dashboards; All the required central infrastructure and applications.

This RFP is issued by OCAC, which is the sole point of contact during selection process. The officer responsible for entire process is General Manager (Admin). The purpose of this RFP is to provide interested Bidder with information to enable them to prepare and submit a proposal for Implementation, Operations and Maintenance of Virtual Classrooms with Digital Assessment.

## 6. Basic Information

In order to provide high quality educational support to students of even the remote locations of the State, OCAC, Odisha wishes to establish Virtual Classrooms with Digital Assessment at 5370 Schools. The services from the selected Bidder will cover supply, installation, connectivity, commissioning, and operations & management activities. The selected Bidder has to provide end-to-end solution and instructional services.

### Creating infrastructure for Remote Education in Schools:

#### A. Satellite based connectivity

Majority of rural regions in Odisha lack internet connectivity and most schools do not have high speed connections. The absence or poor connectivity is propagating existing disadvantages for rural schools. Meanwhile, satellite connectivity reaches even the most remote regions and is a reliable connection with high uptime. So two-way satellite connectivity is selected as primary connectivity for the project.

#### B. Broadcasting Studios

For delivering remote education, department would like to setup a dedicated network of studio infrastructure. Under this tender, 04 studios will be setup as Main Studios. Further, 8 Regional Studios will be setup in four zones for conducting live sessions, content development, and recording. Bidder has to connect all the Main Studios and Regional Studios for parallel program management with required Satellite bandwidth.

#### C. Virtual Classrooms with Digital Assessment

Virtual Classrooms platform should enable remote live and interactive learning at rural schools operated over the Two-Way Satellite Network. This Platform with digital assessment capability in 5370 Government/Government Aided Schools should help



students to learn from state level experts in the virtual classroom as well as beyond school in a mobile app.

School teachers also should be able to deliver LIVE classes from their homes using their personal computer or mobile app. OCAC/Department should get access to comprehensive reports of student performance. The bidder should provide all the required application software for conducting and managing the program.

#### **D. Digital Content for Remote Classroom Learning**

Under the project, Department envisions creating digital content in Odia and English media for class 6 to 12. This digital content will be used in live delivery from the studios as well as for teaching in the classroom.

#### **E. Mobile App based Learning Management System for Beyond the School Learning**

Bidder has to provide an app based Learning Management System which will be used as a repository for accessing recorded sessions in the school or beyond. School teachers should also be able to conduct online sessions from desktop or mobile app for their respective students. Students should be able to access LIVE and recorded sessions from a mobile app from anywhere. Using the same app, students should also be able to have live video interaction with the teacher. Approximately 10 Lakh students are estimated to be using the app regularly.

#### **F. Centralized Applications & Dashboards**

The bidder has to provide end-to-end application software required at the studios and Virtual Classrooms for content management and distribution, student assessment, student individualized analytics, classroom analytics, multilevel analytics, program monitoring software, asset management, complaint management, student information system, and dashboards for monitoring and report management.

Note: ***The list of schools and studio site locations will be intimated at the time of the award of the project.***

## **7. Pre-Qualification/Eligibility Criteria**

Following table describes the pre-qualification criteria. A bidder participating in the bidding process shall possess the following minimum pre-qualification/ eligibility. Any bidder failing to meet the stated criteria shall be summarily rejected and will not be considered for Technical Evaluation.

<b>Sl. No.</b>	<b>PQ Criteria</b>	<b>Eligibility Criteria</b>	<b>Required Details</b>
1	<b>RFP Document Fee</b>	Non-refundable Tender Cost of INR 22,400/- in e-procurement through online payment.	Payment Receipt

2	<b>EMD</b>	Earnest Money Deposit (EMD) of ₹3,00,00,000/- (Rupees Three Crores) in the form of Demand Draft/Bank Guarantee from any Government, Nationalized, and Schedule Commercial Bank. The EMD of Successful Bidder is liable to be forfeited if the Bidder revokes any terms of the tender within the validity period. EMDs given by unsuccessful Bidders will be refunded after placing of work order to the successful Bidder.	<ul style="list-style-type: none"> <li>• Scanned copy of DD/Bank Guarantee to be uploaded online</li> <li>• The DD/Bank Guarantee in original should be posted/ couriered/submitted in person to the concerned official before the close of time for bid submission.</li> <li>• EMD is mandatory for all the bidders including PSUs.</li> </ul>
3	<b>Legal Entity</b>	<ul style="list-style-type: none"> <li>• <b>Prime / Lead Bidder:</b> <ol style="list-style-type: none"> <li>a) The bidder should be either a company/LLP registered in India under Indian Companies Act 1956/2013.</li> <li>b) In case no consortium partner is taken by prime bidder, then the prime bidder should be a legal VSAT service provider in India.</li> </ol> </li> <li>• <b>Consortium:</b> <ol style="list-style-type: none"> <li>a) Maximum two consortium partners are allowed with the Prime Bidder.</li> <li>b) One Consortium partner or its subsidiary must be a legal VSAT or VSAT-VNO licensed service provider in India.</li> </ol> </li> </ul>	<p>Prime bidder &amp; consortium partners should submit following documents:</p> <ul style="list-style-type: none"> <li>• Valid copy of certificate of incorporation and registration certificates.</li> <li>• Copy of GST registration.</li> <li>• Copies of relevant Certificates of registration for Income Tax / PAN Number from the respective Government Department.</li> <li>• In case of consortium, please <b>submit consortium agreement with responsibility details of members.</b></li> <li>• In case of VSAT VNO license holder as consortium partner, the <b>VNO license</b> along with a <b>consent from the proposed VSAT service providers</b> to provide services for this project for entire contract period should be submitted along with pre-qualification bid.</li> </ul>
4	<b>Quality Certification</b>	The Prime bidder/ any of its consortium member must possess a valid ISO 9001- 2015 and ISO 27001 Certification.	Certificates to be uploaded.
5	<b>Turnover &amp; Net Worth</b>	<b>Turnover &amp; Net Worth:</b> The prime bidder/lead bidder should have positive net worth and an average annual turnover of ₹600.00 Crores for last three financial years as on 31/03/2023.	<ul style="list-style-type: none"> <li>– Audited Balance Sheets</li> <li>– Valid CA Certificate.</li> </ul> <p>For the last 3 financial years as on 31/03/2023.</p>

6	<b>Technical Capability</b>	<p>The prime bidder or any of its consortium partner must have successfully undertaken at least the following numbers of similar assignments of value specified herein:</p> <ul style="list-style-type: none"> <li>- at least one Project of worth minimum 40 crores or</li> <li>- at least two Projects of worth minimum 20 crores</li> </ul> <p>In Virtual Classroom/Digital Classrooms/E-Classrooms which should include Hardware, Connectivity, and Services as part of the project for Govt./ PSU/ Central Ministry/ State Govt. in India in last 10 years.</p>	<p>Satisfactory Work completion certificates from the client +Copy of the Work Order/PO/ Agreement</p> <p style="text-align: center;">OR</p> <p>Copy of Work Order/ PO/ Agreement + Go-LIVE Certificate from the client for ongoing projects.</p>
7	<b>Technical Capability</b>	<p>The prime bidder or any of its consortium partner should have implemented in India, two-way interactive communication setup using satellite connectivity at least in 500 (minimum 250 in XC band connectivity + minimum 250 in KU band connectivity) schools/colleges/sites/nodes using XC Band VSAT and KU Band VSAT (which should include Hardware, Connectivity, Software and Services).</p> <p>These implementations should have been executed for any Govt./ PSU/ Central Ministry/ Any State Govt. in India in the last 10 years.</p>	<p>Satisfactory work completion certificates from the client + Copy of the Work Order/ Purchase order/Agreement</p> <p style="text-align: center;">OR</p> <p>Copy of Work Order + Phase Completion Certificate from the client for ongoing projects.</p>
8	<b>Technical Capability</b>	<p>The prime bidder or any of its consortium partner should have implemented student analytics solution in minimum 500 schools.</p> <p>These implementations should have been executed for any Govt./PSU/Central Ministry/Any State Govt. in India in the last 10 years.</p>	<p>Satisfactory Work completion certificates from the client +Copy of the Work Order</p> <p style="text-align: center;">OR</p> <p>Copy of Work Order + Phase Completion Certificate from the client for ongoing projects.</p>
9	<b>Technical Capability</b>	<p>The prime bidder or any of its consortium partner should have experience of supply Digital content under Virtual Classroom/ Digital Classrooms/Smart classroom / E-Classrooms for at least 500 Schools/colleges/institutions under any Govt./PSU/Central Ministry/Any State Govt. in India in the last 10 years.</p>	<p>Satisfactory Work completion / Go live certificates from the client +Copy of the Work Order OR</p> <p>Copy of Work Order + Phase Completion Certificate from the client for ongoing projects.</p>
10	<b>Blacklisting</b>	<p>The prime bidder or any of its consortium partner should not be blacklisted with any of the government projects.</p>	<p>Bidder should submit an undertaking. In case of consortium, both the prime/lead bidder and its consortium partners should submit the undertaking.</p>

11	<b>OEM Authorization</b>	The prime bidder or any of its consortium partner must attach Manufactures Authorization certificate specific to this tender from OEMs for providing comprehensive support and services of the OEM's product covered under the RFP.	OEM MAF- Bidder is free to quote multiple OEM for each product (Maximum Three OEMs for each product) complying technical specification given in this RFP.OCAC reserves right to select any product in case multiple products are quoted by the bidder
12	<b>Compliance</b>	<ul style="list-style-type: none"> <li>The prime bidder or any of its consortium partner has to submit Compliance Certificate along with technical brochures covering all technical specifications.</li> <li>The OEM should submit the compliance confirmation for each parameter in their letterhead along with the Manufacturer's Authorization form. If there is any deviation, the deviation with justification should be spelt out on the OEM letter head.</li> <li>The Prime Bidder or its Subsidiary or its Consortium partner or consortium partner's subsidiary should possess a valid VSAT license or VSAT-VNO license on the date of submission of bid.</li> <li>The prime bidder or any of its consortium partner should have an experience of operating a network on XC Band and KU Band.</li> </ul>	<p>Compliance Certificate and Brochures should be uploaded.</p> <p>The sole bidder/any consortium member has to submit Compliance Certificate along with technical brochures covering all technical specifications.</p> <p>The OEM should submit the compliance confirmation for each parameter in their letterhead along with the Manufacturer's Authorization form. If there is any deviation, the deviation with justification should be spelt out on the OEM letter head.</p> <p>In case of VSAT VNO license holder, the VNO license along with a consent from the proposed VSAT service providers to provide services for this project for entire contract period should be submitted along with pre-qualification bid.</p>

**Note:**

- In the absence of any of the above, the offer will be treated as non-responsive and summarily rejected.
- Relevant documents in support of the above criteria must be enclosed along with Technical Bid documents failing which the bid will be liable to be rejected.
- Financial and Technical experience for individual company shall only be considered. Subsidiary/Group/Holding company Financial and Technical experience not allowed.
- Bidder must compulsorily submit MAFs from OEMs for following equipment:  
Digital Video Camera, Multi-touch Interactive Panel, Laptop, Professional Display, Interactive panel Transmission Server, UPS, Servo Stabilizer, Server, 75" Touch Screen IFPD, MFP Printer, Virtual Classroom Application Software, HD Camera, Mic System, Student Digital Assessment Sets, Wi-Fi router.
- Bidders who meet pre-qualification criteria might be called for LIVE demonstration to be technically qualified. Following components of the solution must be demonstrated:
  - Two-way interactive satellite class delivery and internet based class delivery on mobile.
  - Usage of student digital assessment devices and their successful working.

- Digital Content demonstration – in English or Odia medium with embedded questions.
- Mobile Application demonstration - Bidder should demonstrate working model of teacher app and student app
  - o LIVE teacher and student login through mobile app
  - o Student should receive LIVE class
  - o Student video interaction with expert
  - o LIVE Multiple Choice Question based assessment
  - o MCQ based assessment in recorded sessions with interposed frames
  - o Question & Answer during recorded sessions with interposed frames
- Even though it is the responsibility of the service provider to provide the manage service for entire project, the following network bandwidth monitoring features may optionally be demonstrated.
  - Auto scan of various client videos seen on the screen.
  - Remote bandwidth activation at different bit rate.
  - Simultaneous near real time video of various remote client for teachers to be able to access attentiveness of students on the remote end.

In case of unsuccessful demonstration, Bidder is subject to disqualification.

- If the tender calling authority determines that the product being proposed by any bidder shall not meet the requirement of RFP or there is a possibility that solution will not be executed properly, tender evaluation authority may also choose to visit the factory or development center of the bidder before qualifying the bid in the technical evaluation stage.
- All Bidders shall submit an undertaking in their letterhead confirming that they are proposing a solution which is ready for demonstration and should confirm their readiness to demonstrate their proposed solution within 7 working days of receiving the intimation from OCAC.
- Department can inspect and examine the materials and workmanship of the goods/ equipment/machineries during manufacturing process.

## 8. Instruction to Bidder

### A. General

- While every effort has been made to provide comprehensive and accurate background information and requirements and specifications, Bidders must form their own conclusions about the solution needed to meet the requirements. Bidders and recipients of this RFP may consult their own legal advisers with regard to this RFP.
- Only the Prime/Lead bidder can participate in the bid.
- The bidders are advised to upload or submit their online bid minimum **4 hours before last time stipulated for submission of bid** so that any technical issue faced by them can be intimated to OCAC for resolution.
- Bidders have to mandatorily fill up the Checklist provided in the bid document.
- OEM/OEM origin in a country sharing a land boundary with India cannot participate in this bid. OEM declaration on their letter head with proof of establishment to be Submitted
- in case of VSAT-VNO license holders, the VSAT-VNO license should be submitted along with the consent letter from the VSAT service provider in its letterhead stating that, it will provide the services through the VNO license holder for entire contract period of this project.
- All information supplied by Bidders may be treated as contractually binding on the Bidders, on successful award of the assignment by OCAC on the basis of this RFP.
- 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 OCAC. Any notification of preferred bidder status by OCAC shall not give rise to any enforceable rights by the Bidder. OCAC may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of the OCAC.
- This RFP supersedes and replaces any previous public documentation & communications, and Bidders should place no reliance on such communications.

### B. Availability of RFP Document

- The availability of bidding documents shall be commenced from the date as mentioned in Notice Inviting Bids (NIB). The complete bidding document can be downloaded from the official website of OCAC ([www.ocac.in](http://www.ocac.in)), e-Tender Portal of OCAC (<https://enivida.odisha.gov.in>) and Official website of Govt. of Odisha ([www.odisha.gov.in](http://www.odisha.gov.in)). The prospective bidders are requested download the bidding document from the websites and follow the bidding steps as prescribed.
- The Bid Notice is also published in leading newspapers (Odia & English) for wide Circulation.

### **C. Compliant Proposals/ Completeness of Response**

- Bidders are advised to study all instructions, forms, terms, requirements, and other information in the RFP documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
- Failure to comply with the requirements set out in this RFP may render the Proposal non-compliant and the Proposal may be rejected. Bidders must include all documentation specified in this RFP.
- Follow the format and respond to each element in the order as set out in this RFP. Comply with all requirements as set out within this RFP. Period of Validity of Bids
- Bids submitted by the bidders shall remain valid for a period of 180 Days from the date of submission of RFP.
- Prior to the expiry of the period of validity of Bids, the procuring entity, in exceptional circumstances, may request the bidders to extend the bid validity period for an additional specified period. A bidder may refuse the request and such refusal shall be treated as withdrawal of Bid and in such circumstances bid security shall not be forfeited.
- Bidders who agree to an extension of the period of validity of their bids shall extend or get extended the period of validity of bid securities submitted by them or submit new bid securities to cover the extended period of validity of their bids. A bidder whose bid security is not extended, or that has not submitted a new bid security, is considered to have refused the request to extend the period of validity of its Bid.

### **D. Right to Accept Any Proposal and to Reject Any or All Proposal(s)**

- OCAC reserves the right to accept or reject any proposal at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for such action.
- OCAC makes no commitments, explicitly or implied, that this process will result in a business transaction with anyone.
- The submission of RFP does not constitute an offer by OCAC. The bidder's participation in this process may result in selecting the bidder to engage towards execution of the contract.

### **E. Format and Signing of Bids**

- All the Bids submitted by the bidders must be submitted with the checklist.
- Each page of the bidding document shall be kept with the office seal and signature by the authorized representative from the Bidder.

### **F. Cost & Language of Bidding**

- The bidder shall be responsible for all costs incurred in connection with participation in the bid process, including site visits 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 OCAC to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process. OCAC will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

- The Proposal should be filled by the Bidder in English language only. 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. For purposes of interpretation of the Proposal, the English translation shall govern.

#### **G. Alternative/ Multiple Bids**

- Each bidder shall submit only one Proposal. The bidder who submits more than one proposal will not be qualified.

#### **H. RFP Document Fees**

- The bidders are required to pay the RFP Document Fee of ₹22,400/- (inclusive of 12% GST), online through e-Tender Portal (<https://enivida.odisha.gov.in/>). Proposals received without or with inadequate RFP Document fees shall be rejected.

#### **I. Earnest Money Deposit (EMD)/BID Security**

- Bidders shall pay EMD of ₹3 Crores in the form of Demand Draft/Bank Guarantee issued by one of the Government, Nationalized, and Schedule Commercial Bank in India drawn in favor of CEO, OCAC, Technical Directorate of E & IT, Odisha, Bhubaneswar, Odisha. Bid Security / EMD should be valid for a period of 180 (One Eighty) days from tender due date. EMD will be refunded to unsuccessful applicant agencies within 30 (Thirty) days of the completion of selection process. The bid / proposal submitted without EMD mentioned above, will be summarily rejected.

#### **J. Responses to Pre-Bid Queries and Issue of Corrigendum**

- The Nodal Officer mentioned in the RFP document will endeavor to provide timely response to all queries. However, OCAC makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does OCAC undertake to answer all the queries that have been posed by the applicants. The responses to the queries from all applicants will be published on OCAC website.
- At any time prior to the last date for receipt of RFP, OCAC may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective applicant, modify the RFP Document by a corrigendum.
- The Corrigendum (if any) & clarifications to the queries from all bidders will be posted on [www.ocac.in](http://www.ocac.in) and [www.odisha.gov.in](http://www.odisha.gov.in).
- Any such corrigendum shall be deemed to be incorporated into this RFP.
- In order to provide prospective applicants reasonable time for taking the corrigendum into account, OCAC may, at its discretion, extend the last date for the receipt of Proposals



## **K. Submission of Proposals**

### **I. Instruction to Bidders for Online Bid Submission**

- e-Nivida is a complete process of e-Tendering, from publishing of Tenders online, inviting online bids, evaluation and award of contract using the system. The instructions given below are meant to assist the bidders in registering on e-Nivida Portal and submitting their bid online on the portal. More information useful for submitting online bids on the e-Nivida Portal may be obtained at: <https://enivida.odisha.gov.in>.

### **II. Guidelines for Registration**

- Bidders are required to enroll themselves on the e-Nivida Portal <https://enivida.odisha.gov.in> or click on the link “Bidder Enrolment” available on the home page by paying Registration Fees of
- ₹5,600/- inclusive of Applicable GST.
- As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.
- Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify/ TCS / nCode/ eMudhra etc.), with their profile.
- Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
- The scanned copies of all original documents should be uploaded in pdf format on e-Tender portal.
- After completion of registration payment, bidders need to send their acknowledgement copy on our help desk mail id [odishaenivida@gmail.com](mailto:odishaenivida@gmail.com) for activation of the account.

### **III. Searching for Tender Documents**

- There are various search options built in the e-Tender Portal, to facilitate bidders to search active Tenders by several parameters.
- Once the bidders have selected the Tenders they are interested in, then they can pay the Tender fee and processing fee (NOT REFUNDABLE) by net-banking /Debit / Credit card then you may download the required documents / Tender schedules, Bid documents etc. Once you pay both fee Tenders will be moved to the respective ‘requested’ Tab. This would enable the e- Tender Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the Tender document.

#### **IV. Preparation of Bids**

- Bidder should take into account any corrigendum published on the Tender document before submitting their bids.
- Please go through the Tender advertisement and the Tender document carefully to understand the documents required to be submitted as part of the bid.
- Bidder, in advance, should get ready the bid documents to be submitted as indicated in the Tender document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100dpi with Color option which helps in reducing size of the scan.
- To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GST, Annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” available to them to upload such documents.
- These documents may be directly submitted from the “My Documents” area while submitting a bid and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process. Already uploaded documents in this section will be displayed. Click “New” to upload new documents.

#### **V. Submission of Bids**

- Bid document is to be submitted through ONLINE mode only in e-Nivida Portal. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- The bidder has to digitally sign and upload the required bid documents one by one as indicated in the Tender document as a token of acceptance of the terms and conditions laid down by Department.
- Bidder has to select the payment option as per the Tender document to pay the Tender fee / Tender Processing fee & EMD as applicable and enter details of the instrument.
- In case of BG, bidder should prepare the BG as per the instructions specified in the Tender document. The BG in original should be posted/couriered/given in person to the concerned official before the Online Opening of Financial Bid. In case of non-receipt of BG amount in original by the said time, the uploaded bid will be summarily rejected.
- 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 price bid has been given as a standard BOM format with the Tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOM file, open it and complete the yellow Colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without

changing the filename. If the BOM file is found to be modified by the bidder, the bid will be rejected.

- The server time (which is displayed on the bidders' dashboard) 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.
- The uploaded bid documents become readable only after the Tender opening by the authorized bid openers.
- Upon the successful and timely submission of bid click "Complete" (i.e. after Clicking "Submit" in the portal), the portal will give a successful Tender submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
- The Tender summary has to be printed and kept as an acknowledgement of the submission of the Tender. This acknowledgement may be used as an entry pass for any bid opening meetings.

#### **VI. Clarifications on using e-Nivida Portal**

- Any queries relating to the Tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a Tender or the relevant contact person indicated in the Tender.
- Any queries relating to the process of online bid submission or queries relating to e-Tender Portal in general may be directed to the Helpdesk Support. Please contact e-Nivida Helpdesk. Phone No.:011-49606060, Mail id: odishaenivida@gmail.com.

#### **VII. Submission of Manufacturer's Authorization Form**

- Bidder must submit the duly signed MAF at the time of bid submission in the Prequalification Proposal as per the prescribed format (Annexure-8). The MAF should be submitted in OEM's letter head mentioning required details.

#### **L. Deadline for Submission of Bids**

- Bidder must ensure to submit their response on or before the deadline date as mentioned in "Important Dates & Information" section of this RFP.
- Normally, the date of submission and opening of Bids will not be extended. In exceptional circumstances or when the bidding document are required to be substantially modified as a result of discussions in pre-bid meeting/conference or otherwise and the time with the prospective bidders for preparation of Bids appears insufficient, the date may be extended by the procuring entity. In such case the publicity of extended time and date shall be given in the manner, as was given at the time of issuing the original Bidding Document.
- It shall be ensured that after issue of corrigendum, reasonable time is available to the bidders for preparation and submission of their Bids. If the last date of submission or opening of Bids is a non- working day, the Bids shall be received or opened on the next working day.
- Venue for Submission of Bids

Response to Bid, in its complete form in all respects as specified in the RFP, must

be submitted to OCAC at the address specified below:

Address to	General Manager(Admin), Odisha Computer Application Centre N-1/7-D, Acharya Vihar Square, PO: RRL Bhubaneswar –751002, Odisha
Telephone	0674-2567280/ 2567064/ 2567295
Fax	0674-2567842
Email id	gm.ocac@odisha.gov.in, gm_ocac@ocac.in

#### **M. Withdrawal, Substitution, and Modification of Bids**

- If permitted by OCAC, a Bidder may withdraw its Bid or re-submit its Bid as per the instructions/ procedure prescribed by OCAC.
- No proposal may be modified / withdrawn in the interval between the last date of submission of proposals/tender and the expiration of the validity period specified in the tender documents by the tendering authority.

#### **N. Opening of Bids**

- The Bids shall be opened by the Proposal Evaluation Committee in the presence of the bidders or their authorized representatives who choose to be present.
- The committee may co-opt experienced persons in the committee to conduct the process of Bid opening.
- The committee shall prepare a list of the bidders or their representatives attending the opening of Bids and obtain their signatures on the same. The list shall also contain the representative's name and telephone number and corresponding bidders' names and addresses. The authority letters, if any, brought by the representatives shall be attached to the list. The list shall be signed by all the members of Bid opening committee with date and time of opening of the Bids.
- The committee shall conduct a preliminary scrutiny of the opened technical Bids to assess the prima-facie responsiveness and ensure that the: -
- Bid is accompanied by bidding document fee, bid security or bid securing declaration, and processing fee (if applicable).
- Bid is valid for the period, specified in the bidding document. Bid is unconditional and the bidder has agreed to give the required performance security and other conditions, as specified in the bidding document are fulfilled.
- Any other information which the committee may consider appropriate.
- No Bid shall be rejected at the time of Bid opening except the Bids not accompanied with the proof of payment or instrument of the required price of bidding document, processing fee and bid security.
- The Financial Bid cover shall be kept unopened and shall be opened later on the date and time intimated to the bidders who qualify in the evaluation of technical Bids.

## **9. Bid Evaluation**

## A. Evaluation & Tabulation of Pre-Qualification Bid

- Determination of Responsiveness: The designated committee of OCAC shall determine the responsiveness of a Bid on the basis of bidding document and the provisions of pre-qualification/ eligibility criteria of the bidding document.
- A responsive Bid is one that meets the requirements of the bidding document without any material deviation, reservation, or omission where: -
  1. "Deviation" is a departure from the requirements specified in the bidding document.
  2. "Reservation" is the setting of limiting conditions or with holding from complete acceptance of the requirements specified in the bidding document; and
  3. "Omission" is the failure to submit part or all the information or documentation required in the bidding document.
- A material deviation, reservation, or omission is one that, if accepted, shall: -
  1. affect in any substantial way the scope, quality, or performance of the subject matter of procurement specified in the bidding documents; or
  2. limits in any substantial way, inconsistent with the bidding documents, the procuring entity's rights or the bidder's obligations under the proposed contract, OR
  3. if rectified, shall unfairly affect the competitive position of other bidders presenting responsive Bids.
- The designated committee of OCAC shall examine the technical aspects of the Bid in particular, to confirm that all requirements of bidding document have been met without any material deviation, reservation or omission.
- Fulfillment of eligibility criteria: All the criteria mentioned in **Pre-Qualification/Eligibility Criteria** are mandatory. The bidder must comply with all the components mentioned in the eligibility criteria.
- All supporting documents as per document checklist.

## B. Evaluation & Tabulation of Technical Bids

Only those bidders who qualify in Pre-Qualification as per above will be considered for Technical Bid Evaluation. During the process of evaluation of the Technical Proposals, the Tender Committee may seek additional information and clarifications from any or all the bidders. This clarification will be sought through email communications/request a personal visit of the authorized representatives of the bidder. The bidder is expected to provide the clarifications or additional information within the stipulated time as indicated in the communication. If the bidder fails to provide the clarification or additional information, the information provided in the technical proposal only will be used for evaluation. Only the bidders, who score a Technical score of more than 70 (Seventy) marks, will qualify for the evaluation in the commercial bid.

The technical competency will be evaluated as per below mentioned criteria:

Sl. No.	Description	Evaluation Criteria & Marks	Marks	Maximum Marks
1	The bidder/consortium partner should have implemented similar project in at least 500 schools/colleges (institutions) with 2-way interactive Virtual Classroom setup using XC Band or KU Band VSAT connectivity.	2001 institutions or more	<b>20</b>	<b>20</b>
		1001 to 2000 institutions	<b>17</b>	
		Up to 1000 institutions	<b>14</b>	

2	<p>The bidder/consortium partner must have successfully undertaken at least the following numbers of similar assignments of value specified herein:</p> <ul style="list-style-type: none"> <li>- at least one Project of worth minimum 40 crores or</li> <li>- at least two Projects of worth minimum 20 crores</li> </ul> <p>In Virtual Classroom/ Digital Classrooms/E-Classrooms which must include Hardware, Connectivity, and Services as part of the project for Govt./ PSU/ Central Ministry/ State Govt. in India in last 10 years.</p> <p><i>(Scoring will be done on pro-rata basis which means if bidder provides 3 projects of 40 crores or 2 projects of 40 crores + 2 projects of 20 crores can secure full marks)</i></p>	--at least three Projects of worth minimum 40 crores or	20	20
		--at least Six Projects of worth minimum 20 crores		
		--at least two Projects of worth minimum 40 crores or	15	
		--at least four Projects of worth minimum 20 crores		
		--at least one Project of worth minimum 40 crores or	10	
--at least two Projects of worth minimum 20 crores				
3	Assessment Device for Virtual Class Evaluation	1000 – 5000 numbers of assessment device installations :	07	10
		Above 5000 number of assessment device installations :	10	
4	VSAT License for HTS , Certification of VSAT Service provider <i>(VSAT-VNO should provide the associated VSAT service provider's HST license for Odisha state)</i>	1. Valid VSAT license for High Throughput Satellite (HTS) in Odisha for Prime Bidder/Consortium Partner: 06 Marks	6	10
		2. ISO 27001 for Satellite connectivity provider: 02 Marks	2	
		3. TEC Certificate or TL9000 Certificate for VSAT: 02 Marks	2	
5	Technical Presentation (at OCAC premises)	a) Understanding of the project with the solution proposed.	40	40
	b) Work-plan and methodology submitted along with the technical proposal.			
	c) Proposed Mechanism of Monitoring, Ticketing			

		& Customized report generation.		
		d)Implementation, Operation & Maintenance Support plan with team structure.		
<b>Total</b>			<b>100</b>	

**Note:**

- To qualify the technical evaluation stage, the bidder must score a minimum of 70 marks. OCAC will open the Financial Bids of those Bidders who have achieved minimum score of 70 marks in technical evaluation.
- OCAC reserves the right to check/validate the authenticity of the information provided in the Pre-qualification and Technical Evaluation criteria and the requisite support must be provided by the Bidder. In case any bidder or OEM does not provide a valid information, such bid will be treated as irresponsive bid and OCAC authority /School Education Department reserves the right to decision to reject it.

**C. Evaluation & Tabulation of Financial Bids**

- Quality Cost Based System (QCBS) will be followed: Technically qualified proposal will be given weightage of 70% and financial proposal weightage will be given to 30%. The price proposal of only those agencies who qualify technically that is who score minimum 70 out of 100 marks will be opened.

**Normalized Technical Score of the firm (Tn) = (Tf / Th) \* 100**

- Tf: Technical score of the firm
- Th: Highest Technical score

**Normalized Financial Score of the firm (Fn) = (Qi / Qf) \* 100**

- Qf: Quoted price of the firm
- Qi: Lowest Quoted price

**Final normalized score (Sf) = Tn \* 0.7 + Fn \* 0.3**

- The financial bids/cover of the bidders who qualify in pre-qualification/eligibility criteria shall be opened at the notified time, date and place by the members of the designated Procurement Committee in the presence of the bidders or their representatives who choose to be present.
- The financial bid cover letter should be submitted in appropriate format as per Annexure-7 .
- The process of opening of financial bids/covers shall be similar to that of technical bids.
- The names of the bidders, the rates given by them and conditions put, if any, shall be read out and recorded.
- Prices quoted in the Bid must be firm and final and shall not be subject to any modifications, on any account whatsoever except applicable tax rates. The Bid Prices shall be indicated in Indian Rupees (INR) only.

- The bid price will include all taxes and levies and mentioned separately.
- Any conditional bid would be rejected.

#### **D. Correction of Arithmetic Errors in Financial Bids**

The Proposal evaluation committee shall correct arithmetical errors in substantially responsive Bids, on the following basis, namely: -

- If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Proposal Evaluation Committee there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
- If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to clause (a) and (b) above.

### **10. Exclusion of Bids /Disqualification**

**The procuring entity shall exclude/ disqualify a Bid, if: -**

- The information submitted, concerning the qualifications of the bidder, was false or constituted a misrepresentation; or
- The demonstration of their proposed solution was not satisfactory and/or if the tender calling authority's visit to the factory or development center of the bidder determines Bidder shall not be able to execute the project satisfactorily as per the requirements of the RFP.
- The demonstration of their proposed solution was not satisfactory/ or not meeting the technical requirements and/or the required objectives and/or during the tender calling authority's visit to the bidders manufacturing facility/software development facility determines the Bidder lacks the required infrastructure or competence or capability to execute the project satisfactorily as per the requirements of the RFP.
- The information submitted, concerning the qualifications of the bidder, was materially inaccurate or incomplete or misrepresented; and
- The bidder is not qualified as per pre-qualification/eligibility criteria mentioned in the bidding document.
- The Bid materially departs from the requirements specified in the bidding document or it contains false information.
- The bidder, submitting the Bid, his agent or any one acting on his behalf, gave or agreed to give, to any officer or employee of the procuring entity or other governmental authority a gratification in any form, or any other thing of value, so as to unduly influence the procurement process;
- A bidder, in the opinion of the procuring entity, has a conflict of interest materially affecting fair competition.

**Bid shall be excluded/ disqualified as soon as the cause for its exclusion / disqualification is discovered.**

**Every decision of a procuring entity to exclude a Bid shall be for reasons to be recorded in**



**writing and shall be: -**

- Communicated to the concerned bidder in writing.
- Published on the State Public Procurement Portal, if applicable.

## **11. Lack of Competition**

- A situation may arise where, if after evaluation of Bids, the proposal evaluation committee may end-up with one responsive Bid only. In such situation, the Proposal Evaluation Committee would check as to whether while floating the Bid all necessary requirements to encourage competition like standard bid conditions, industry friendly specifications, wide publicity, sufficient time for formulation of Bids, etc. were fulfilled. If not, the tender would be re-floated after rectifying deficiencies.
- The Proposal Evaluation Committee shall prepare a justification note for approval by the next higher authority of the procuring entity, with the concurrence of the account's member.
- In case of dissent by any member of Proposal Evaluation Committee, the next higher authority in delegation of financial powers shall decide as to whether to sanction the single Bid or re-invite Bids after recording reasons.

## **12. Acceptance of the successful bid and award of Project**

- **Award Criteria:** OCAC will award the Project to the successful bidder whose proposal has been determined to be substantially responsive and has been determined as the most responsive bids as per the process outlined above.
- **Purchaser's Procurement Rights:** Without incurring any liability, whatsoever to the affected bidder or bidders, the Purchaser reserves the right to: -
  - a) Amend, modify, or cancel this tender and to reject any or all proposals without assigning any reason.
  - b) Change any of the scheduled dates stated in this tender.
  - c) Reject proposals that fail to meet the tender requirements.
  - d) Increase or decrease the quantity of the items at the time of placement of order.
  - e) Increase or decrease no. of resources supplied under this project.
  - f) Make typographical correction or correct computational errors to proposals.
  - g) The department reserves the right to place additional orders if any, for similar requirements at the discovered price as per the RFP Condition.
  - h) Request bidders to clarify their proposal.
- **Notification of Award:** Prior to the expiry of the validity period, OCAC will notify the successful bidder in writing or by fax or email, that its proposal has been accepted. In case the tendering process / public procurement process has not been completed within the stipulated period, OCAC may like to request the bidders to extend the validity period of the bid. The notification of award will constitute the formation of the contract. Upon the successful bidder's furnishing of Performance Bank Guarantee, OCAC will notify each unsuccessful bidder and return their EMD within 15 days.
- **Issuance of Purchase Order:** The OCAC shall reserve the right to negotiate with the bidder(s) whose proposal has been ranked best value bid on the basis of Technical and Commercial Evaluation to the proposed Project, as per the guidance provided by CVC. On this basis the Purchase order would be issued.

- **Acceptance of Bidder:** The bidder has to give its acceptance within 7 days of Issuance of Purchase Order. In case OCAC has not received the acceptance or the selected bidder will refuse to accept the Purchase Order, OCAC may intimate the next competitive bidder to award the Purchase Order.
- **Performance Guarantee:** The OCAC will require the Agency to provide a Performance Bank Guarantee, within 30 days from the Notification of award, for a value equivalent to 3% of the total cost of ownership i.e. total order value excluding taxes. The Performance Guarantee should be valid till Entire Project Period of 5 years 3 months (63 months). The Performance Guarantee shall be kept valid till completion of the project and support period. The Agency shall be responsible for extending the validity date and claim period of the Performance Guarantee as and when it is due on account of non-completion of the project and support period. In case the Agency fails to submit performance guarantee within the time stipulated, the OCAC at its discretion may cancel the order placed on the Agency after giving prior written notice to rectify the same. OCAC shall invoke the performance guarantee in case the selected Bidder fails to discharge their contractual obligations during the period or OCAC incurs any damages due to Bidder's negligence in carrying out the project implementation as per the agreed terms & conditions.
- **Signing of Contract :**After the OCAC notifies the successful bidder that its proposal has been accepted, OCAC shall enter into a contract within thirty (30) days of the award of the contract or within such extended period, as may be specified by the Authorized Representative of OCAC, incorporating all clauses and the proposal of the bidder with the successful bidder.
- **Failure to Agree with the Terms and Conditions of the RFP :** Failure of the successful bidder to agree with the Terms & Conditions of the RFP and the Proposal submitted by the successful bidder, despite the deviations submitted by the Bidder are adequately considered and mutually agreed, shall constitute sufficient grounds for the annulment of the award, in which event OCAC may award the Project to the next best value bidder or call for new proposals from the interested bidders. In such a case, the OCAC shall invoke the PBG or the EMD as the case may be, of the most responsive bidder

### 13. Confidentiality

- Notwithstanding anything contained in this bidding document but subject to the provisions of any other law for the time being in force providing for disclosure of information, a procuring entity shall not disclose any information if such disclosure, in its opinion, is likely to:-
  - Impede enforcement of any law.
  - Affect the security or strategic interests of India.
  - Affect the intellectual property rights or legitimate commercial interests of bidders.
  - Affect the legitimate commercial interests of the procuring entity in situations that may include when the procurement relates to a project in which the procuring entity is to make a competitive bid, or the intellectual property rights of the procuring entity.
- The procuring entity shall treat all communications with bidders related to the procurement process in such manner as to avoid their disclosure to competing bidders or to any other person not authorized to have access to such information.
- The procuring entity may impose on bidders and sub-contractors, if there are any for fulfilling the terms of the procurement contract, conditions aimed at protecting

information, the disclosure of which violates (a) above.

- In addition to the restrictions specified above, the procuring entity, while procuring a subject matter of such nature which requires the procuring entity to maintain confidentiality, may impose condition for protecting confidentiality of such information.

## 14. Scope of Work

### A. As part of the Virtual Classrooms with Digital Assessment solution, Bidder has to setup following infrastructure:

- a. Establishing 04 Main Broadcasting Studio setup at Bhubaneswar/Cuttack with necessary up linking hub to satellite communication. The necessary civil works related to studio setup, if any, will be taken care by the department. Here up linking hub means proposed VSAT Service Provider's shared hub anywhere in India.
- b. Eight Regional Studios in four zonal headquarters.
- c. Virtual Classrooms in 5370 Schools. (List of schools and studio site locations will be intimated at the time of the award of the project)
- d. Digital Student Assessment sets for conducting student assessment.
- e. Mobile App based Learning Management System for learning post school hours.

#### Following instructional services need to be integrated for a duration of five years:

- a. Bidder has to conduct studio operations and class delivery as per an approved program schedule. The sessions should be live broadcasted and also to be recorded. Bidder has to ensure that every live session is available on satellite and internet network.
- b. Bidder should ensure that apart from academic programs, special sessions for motivation and skill building should be regularly arranged and integrated in the time table. Sessions like Career Guidance, Communication Skills, Health & Nutrition, Sports & Fitness by experts, Soft Skills, Environmental Protection, Teacher Training etc. should be arranged.
- c. Bidder should provide Digital Content and assessment question banks required for academic session delivery.
- d. Bidder should provide student digital assessment and analytics Services.
- e. Bidder should provide Teaching Services from the Main studios (aided with digital content) - as per the syllabus prescribed by Board of Secondary Education(BSE) and Council of Higher Secondary Education (CHSE), Odisha in Odia medium and Central Board of Secondary Education (CBSE) syllabus.
- f. Bidder should involve department selected Government Teachers in LMS Content Development and Modification activities at Regional Studios.
- g. Bidder should host centralized applications at the State Data Center provided by OCAC. In addition to that, Bidder has to ensure backup hosting services on cloud.
- h. Bidder should provide Mobile app based Learning Management System with Teacher App and Student App
- i. Bidder should provide following applications along with centralized applications:
  1. Project Monitoring Dashboard
  2. Student Digital Analytics System
  3. Complaint Management System
  4. Asset Management System

- j. Bidder should enable Adaptive Remedial Learning for students derived through the usage of entire platform (Student assessment devices, Mobile App, Formative & Summative Assessment). Artificial Intelligence based analytics engine should identify the gaps in student learning and suggest relevant micro remedial modules in the student app. Once student watches these modules it should suggest further tests to reanalyze the progress and should suggest the causes/triggers to teacher – for giving personal attention to the individual student.
- k. Bidder should provide the required satellite Connectivity at the studios and at 5370 schools.
- l. In case of existing smart classroom//ICT Lab/e-library availability in the selected schools, bidder may have to extend connectivity from server to access the content.
- m. Bidder should provide required internet connectivity at the Main Studios and at the Regional Studios.
- n. Bidder should provide manpower for instructional services and support for project duration (five years).
- o. Bidder should provide a Centralized LIVE dashboard for Virtual Classrooms platform usage monitoring.

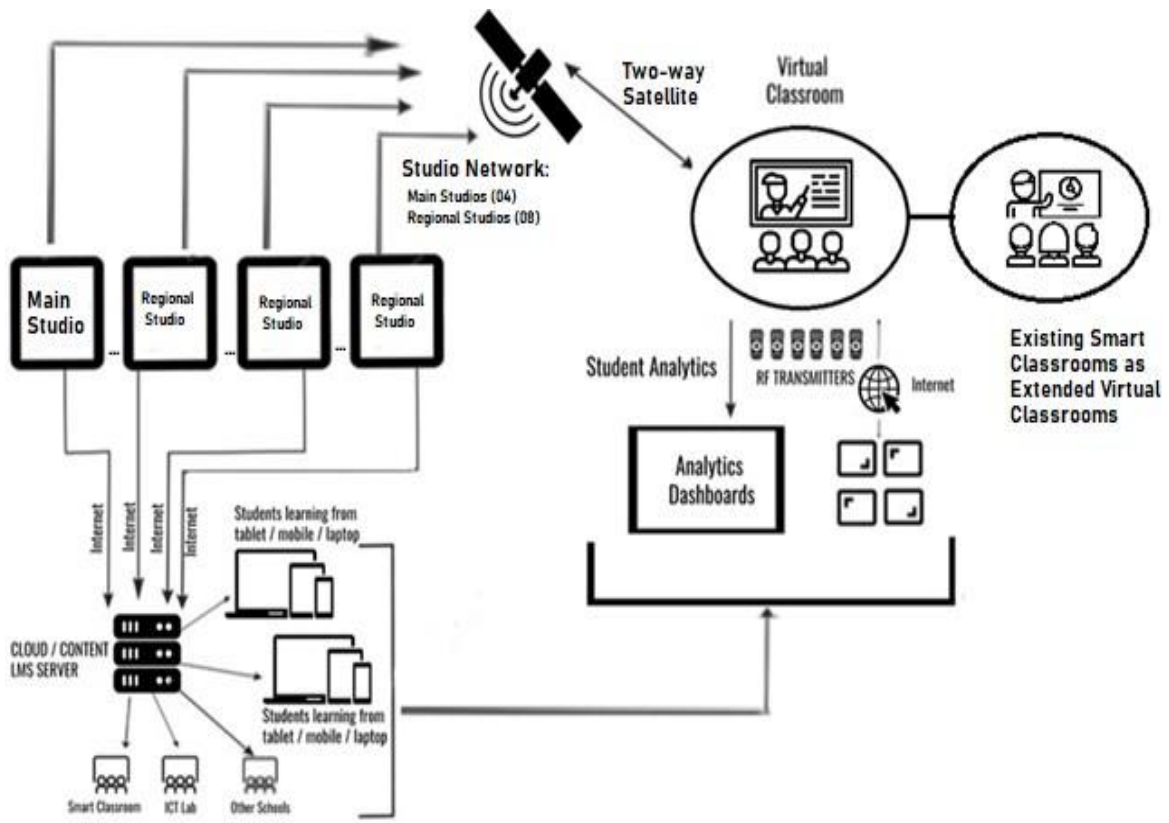
## **B. Connectivity Requirements:**

Most schools do not have network connectivity. The Bidder should ensure sufficient Satellite Bandwidth to conduct seamless parallel sessions from studios. The bidder should provide latest satellite technology having High Throughput Satellite (HTS) Technology.

The Bidder through its VSAT service provider should provide minimum 20 Mbps Satellite Bandwidth to run live classes, interactions, and data for real-time student learning analytics and any information exchange.

- Satellite connectivity provider should be ISO certified with current active base of 50,000 installations in India and should be a Class A - ISP.
- Satellite connectivity provider should be a unified license holder in India with authorization for CUG VSAT and NLD license.
- Satellite Connectivity Provider must provide an undertaking to the bidder on providing satellite bandwidth, services, and technical support as required in the tender for the project period.

Apart from working using Satellite, the solution should also work on State Wide Area Network (SWAN). Any school in the State with existing smart classroom infrastructure or ICT Lab or e-Library or digital devices like tablets, laptops, desktops should be allowed to access these virtual classroom sessions. These schools should be allowed to connect to the two-way interactive LIVE sessions and to access recorded digital content on Learning Management System using existing SWAN network.



**Solution Architecture**

## C. VIRTUAL CLASSROOM WITH DIGITAL ASSESSMENT PLATFORM FEATURES

The bidder should make following components and features available under the project:

### **I. CONTENT MANAGEMENT & DISTRIBUTION SYSTEM APPLICATION AT STUDIO AND VIRTUAL CLASSROOMS**

- Bidder should enable interactive live sessions from 'Main Studios' in Bhubaneswar/Cuttack and from Zonal 'Regional studios'. Platform should enable parallel teaching and any virtual classroom should be able to connect to any studio. The platform should have the capability to securely multi cast LIVE sessions to connected virtual classrooms.
- Entire application should run on satellite based connectivity as well as on intranet and internet based network.
- Virtual Classroom application in each school should be linked with the server system which should have secured access to Learning Management System, Asset Management System, and other Dashboards (Monitoring, Analytics).
- Platform should enable to transform any Virtual Classroom into a 'Teaching End'. The VC application in all the classrooms should have necessary features. Teacher should be able to connect to any school/student, if online, to interact with them.
- Teacher should be able to mute/unmute any class or student app while having full control over the system by not allowing the students to unmute/disable the camera by themselves. The platform should have a real-time assessment tracking system for every student through student digital assessment sets. It should be a comprehensive student analytics system.
- Platform should support concurrent multiple interactions. Students should be able to connect and ask questions with digital teachers.
- Student digital assessment analysis at student, school, district, and state levels.
- CMDS application should integrate a question-answer facility where teachers can be connected from any school.
- LIVE sessions from studios should have the feature to use digital content as a tool for teaching from the Studio/ other teaching end. They should be able to use the content as teaching aid. Teacher video, audio, and animation or PPT and teacher notes should be synced at the virtual classroom.
- Teacher should be able to control the flow of the content i.e. move forward, backward, skip the portion and also directly jump to any sub section while delivery of the sessions.
- Any school should be able to take up live sessions using the application.
- The platform should integrate beyond the school education features with Teacher App for teaching and a Student App for receiving lessons.
- The platform should be scalable.
- Platform should have a facility for recording LIVE sessions at the studios and virtual classrooms. (In studios content editing facility available.)
- If classroom teachers like to refer specific sessions beyond 30 days, there should be an option to bookmark/ save sessions.
- The session after delivery from the teaching end should be available as a recorded class in the Virtual Classrooms as well as in the learning management system. In the student app students should have access to these recorded classes.
- The solution should support receiving digital written queries at the studio sent from schools using interactive panel.
- At the school level, during interaction with studio expert, multi-window view should be enabled with classroom view, studio teacher view, and interacting studio view.
- CMDS should act as a standalone application which can work offline in the school

environment for accessing content locally when the content has been already downloaded.

## **II. DIGITAL CONTENT**

- i. Digital Content should include 2D and 3D animation based content mapped as per board of education prescribed syllabus.
- ii. Content should be both in raster and vector graphics format so as to use low bandwidth for transmission.
- iii. Content should be embedded with multiple choice questions, survey questions, and feedback questions to ask students. Responses should get synced in analytics system.
- iv. Each module should consist of content for around 40 minutes long sessions.
- v. 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.
- vi. Content should also contain concepts of theory, lab experiments, and practical demonstrations.
- vii. The digital content provided should run on Windows, Ubuntu, and Android.
- viii. Languages, Scope:

Digital content provided for teaching should be in English, Odia as required for Class 6 to 12. The content should cover core subjects: 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.

- ix. Scriptwriting:

Scripts need to be minutely detailed. Authors 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.

For each session, the script should specify:

- Text (exact dialogue)
- Visual appearance and layout of all the elements on each screen
- Media specifications
- Graphics, Animations, Audio
- Close-ups

The script should have detailed plan for video, animation, text and for audio/voiceover, and also specify:

- Interaction logic (feedback, branching or pop-up screen s)
- Content flow, Screenshots

The QA team should look specifically at the following aspects:

- Presentation (clarity of audio, fluency, pronunciation, etc.)
- Content accuracy
- Content treatment (has the content been dealt with in an appropriate way?)
- Learner engagement (will lessons stimulate learning?)
- Visual appearance (hooks, graphics, etc.)
- General strength sand weaknesses of lessons

Integrated MCQ Question Bank to use within Digital Content:

- Multiple Choice Questions should be mapped with the Odisha state board curriculum and should be available in Odia and English. Each of these questions should be mapped with different levels of learning in cognitive topology, mapped with difficulty

level.

- MCQs are needed for Odisha State Board Curriculum and for CBSE.
- 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.

License on using digital content and question banks:

- 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.
- The digital content developed under the project can be used in any number of Government/Government Aided Schools in Odisha even those which are not under the scope of the current project.
- Department reserves the right to use the multimedia content in other existing digital classroom projects or smart classrooms projects/ICT Labs even when those have minimum computing facility like Desktop / smart board.
- Department reserves the right to deploy the recorded content for student/teacher consumption in Odisha, through mobile apps and/or other portals for online or offline usage.

**III. STUDENT DIGITAL ANALYTICS SYSTEM**

Assessment devices:

- Bidder should provide on an average 50 Student 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 Odia and English language.
- 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.

LIVE Analytics:

- Studio/Teaching end expert 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.
- Studio 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 an AI (Artificial Intelligence) supported mechanism. AI should be able to provide
- customized database feedback, Predictive analysis etc.

Analytics for class teachers in the dashboard after the LIVE session:

- 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.

- 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.
- 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.
- 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. (Mainly emphasizing four objectives under the rigor - Memory, Understanding, Application, and Higher Order Thinking Skills (HOTS). HOTS covers the top of the pyramid of the cognitive rigor. Additionally, time to be allotted to the Questions and the Difficulty level of questions (with dynamic adjustments based on student inputs) should be considered.)

#### Integrating results of Ongoing, Formative, and Summative Assessment:

- 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.

#### Analytics Dashboard

- 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.
- The analysis data derived from analytics dashboard should help in planning remedial teaching at school /district /state levels.
- Reports should also derive different facets of teaching performance and feedback for sessions. (The Analytics Dashboard is a representation of decision-making based on the data collected from students' assessment tools. As per OSEPA requirements, the bidder should be able to generate various reports from time to time during the project duration. Bidders may demonstrate their existing reports during the demonstration.)

#### Adaptive Remedial Learning for Students through Analytics derived in LIVE classes in classroom and LIVE & recorded classes in student app

- 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 & recorded sessions).
- 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.
- 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. The performance report should be based on the weighted average (AI-driven) of at least these four parameters: Cognitive Rigor (mainly objectives - Memory, Understanding, Application, and Higher Order Thinking Skills) along with the difficulty level of the question, time taken to solve (response time), and accuracy (to avoid random selection). The analysis should focus on the cumulative

weighted score rather than just the score obtained in the test.

- 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.

#### **IV. MOBILE APP BASED LEARNING MANAGEMENT SYSTEM**

- i. 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. Approximately 20,000 teacher accounts are required.
- ii. 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 provision of e-content is under the scope of the Bidder. Total project duration is for 5 years. The Bidder has to estimate the storage requirement accordingly.
  - 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 student 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.

## V. OTHER CENTRALIZED APPLICATIONS & DASHBOARDS

### PROJECT MONITORING DASHBOARD

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.

The Project Monitoring Dashboard should be geo-mapped and record the following:

- 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
- 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.
- **Virtual Classroom Status:** 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.
- Information regarding subject wise delivery of LIVE classes from studio(s).
- Real time class run status should be available online about the number of classrooms working/ not working, issues at virtual classrooms.
- Category wise and class wise beneficiaries.
- Various types of reports generation from the dashboard- School wise, district wise, State wide for program officials
- The monitoring tool should be able to generate reports regarding the outcome reflecting shortcomings, achievement as well as suggestions for improvement.
- Complaints & resolved issues from virtual classroom should be tracked in the online system.
- The school wise number of teachers trained.
- **Archived Data:** 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.

Monitoring system is to be provided at OSEPA/OCAC and S&ME Department and should be linked to Vidya Sameeksha Kendra. Bidder should also develop an interface to integrate the relevant data on State Government Dashboard.

#### 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.

#### 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.

- a) When the admin login is successful, dashboard page for school or district or state should depict the summary of the Tickets raised so far.
- b) Schools should be able to login using a Username and Password allotted to their school
- c) Every ticket should include following details:
  1. Issue type
  2. Issue Category
  3. Issue Sub Category
  4. Mandatory Image Upload to envision the issue
  5. Description of the issue
- d) Once the ticket is raised, status should be always visible

#### 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 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

#### Help Desk Setup

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.

Helpdesk tool, if required should be developed/integrated by successful Bidder in consultancy with OCAC, Odisha. Bidder should also manage the inventory of all hardware supplied and installed by them.

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%.

## **VI. MANPOWER FOR INSTRUCTIONAL SERVICES**

- i. Successful Bidder should assign experienced teachers to deliver classes from the central studios. Compensation of these teachers will be the responsibility of the Bidder. Bidder should ensure involvement of Government academic teachers at content modification and up-gradation as per direction of the OSEPA. Any honorarium to Government teachers will be the

responsibility of the department.

- ii. Successful Bidder should assign dedicated academic manpower for core subjects like Mathematics, Science, English, Geography, Computer Education for Class 6 to 12 as well as resource persons for value addition programs such as Remedial Teaching, Advanced Learning Sessions, Multiple Intelligence Programs for holistic development of students, Communicative English for students, Awareness for Competitive Test, Psychometric Analysis (Annual program with 150 Questions spread throughout the academic year to gauge Intelligence Quotient (IQ), Emotional Quotient (EQ), Social Quotient (SQ), Adversity Quotient (AQ)).
- iii. A dedicated team for assessment should be assigned to create analysis reports from the insights generated by artificial intelligence engine. The big data thus gathered should be usable to create remedial teaching plans, advanced learning sessions, and as inputs for other holistic student development programs.
- iv. Successful bidder should deploy sufficient resource persons (project staff for core subjects and other programs and external resource persons as required) to cater to the program needs in parallel from Main studios as per their respective scheduled time table.
- v. Successful Bidder should deploy sufficient, qualified, & trained technical manpower to operate and maintain Studios for a period of five years after the completion of the setup. All the required manpower for the entire project's operations should be provided by the bidder.
- vi. Successful Bidder should also utilize available studios to conduct various co-curricular activities that increase student's interest in sports, culture, and personality development. The successful Bidder has to schedule regular sessions (at least fortnightly) on any of the following: multiple intelligence, moral intelligence, and emotional intelligence building through programs such as language learning exercises, speed math, Instructions for science Do-It-Yourself experiments, showing curated children's movies, training for Olympiads - from State studios or national level teaching ends. OCAC/S&ME Department will suggest special programs to conduct.
- vii. Electricity Consumption (as per the requirement):
  - Ideally Virtual Classroom would run 4-6 hours per day for each school day. Agency (successful bidder) should provide an electricity sub-meter for managing power consumption in virtual classroom.
  - The electricity bill for the virtual classroom shall be paid by the agency to the school. Any variation in the monthly electricity consumption to be borne by the Agency. Agency shall maintain the monthly payment receipts and produce for verification as needed by the department
- viii. Training of Teachers and other Staff

The Bidder needs to train teachers at schools on usage of Virtual Classrooms. The training should include training on hardware and software operations and on the usage of multimedia content. Technical training should also be provided to the selected people of the S&ME department for the operations of Studios at Bhubaneswar and in other location as mentioned in the RFP as directed by the department time to time during the project duration.

### Qualification of Trainers

- The Trainers must have relevant experience in the concerned subject and should have full knowledge of Virtual Classrooms setup and its usage.
- Qualification of subject experts should be Post Graduate/Graduate.

Note: OSEPA shall assign an Academic Committee with expert resource persons and academicians for the Verification and Approval of Time Table, Content Creation, and Assessment processes.

## **VII. INSTRUCTIONAL AND SUPPORT MANPOWER REQUIRED (INDICATIVE LIST)**

Designation & No.of Manpower	Description
Project Manager (1)	<p>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.</p> <p>Project Manager is the execution head and the single point of contact for the entire project.</p> <p>Project Manager is required to regularly communicate with key stakeholders to ensure project outcomes are met.</p> <p>Timely submission of all the Reports to OCAC, Odisha as required.</p> <p>Timely project updates to OCAC, Odisha as required.</p> <p>Candidate must be BE/BTECH/MBA having an experience of minimum 5 years with minimum 2-years' experience in Education Technology solutions.</p>
Regional Managers (8)	<p>Schools and studios will be mapped into four zones. Day to day activities at these zones will be overseen by respective regional managers.</p>
Program Manager (1)	<p>Program Manager will be responsible for planning and implementing education strategies for the program.</p> <p>Determine the syllabus and session plan for the classes to be run all throughout the State - in coordination with the OCAC, Odisha.</p> <p>Establish a routine schedule of delivery of LIVE sessions from the Studio/Teaching Ends as per the approved time-table and session plan.</p> <p>Supervising and giving directions to Regional Studio In-Charges.</p> <p>Supervises and provides direction to Service Provider's Academic and Multimedia Teams through coordinators.</p> <p>Formulates and recommends changes in multimedia and delivery based on analytics and feedback from Interaction Centre In-Charges.</p> <p>Assists the Project Manager in reviewing the program, evaluating and reporting on a continuous basis.</p> <p>The position ensures compliance requirements are met, adheres to program guidelines, and develop, manages and monitors special topic programs.</p> <p>Must have a Master's degree with minimum 5 years of experience.</p>
Studio Manager (1)	<p>Studio Manager will be responsible for maintaining the operations of the studios. Supervising the activity in each of the studio and guiding the Studio Engineers wherever required</p> <p>Assists the Project Manager in reviewing, evaluating and reporting on a continuous basis.</p> <p>The position ensures compliance requirements are met, adheres to guidelines, manages and monitors the functioning of the studio.</p>



	<ul style="list-style-type: none"> <li>• Minimum five years of experience in Broadcasting/IT/Telecom.</li> </ul>
<p>Studio Engineer (12)</p>	<ul style="list-style-type: none"> <li>• Responsible for the Operation of the Studio.</li> <li>• One person per each of the studio.</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 with Remote instructions if any.</li> <li>• Support Studio Teacher to take questions and display appropriate dashboard</li> <li>• Servicing and testing equipment.</li> <li>• Minimizing loss of service when equipment fails by quickly identifying and implementing alternative methods of service provision.</li> <li>• Interpreting and implementing instructions and requests from Program manager on need basis for additional sessions.</li> </ul>
<p>Camera Man Main studios (4)</p>	<ul style="list-style-type: none"> <li>• Minimum one-year experience as cameraman</li> <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>• Practice the camera moves required for any pre-arranged shots for special sessions.</li> <li>• Check for any audio noise in the LIVE Room.</li> <li>• Helping Studio Engineer to deliver high quality sessions.</li> </ul>
<p>Content Delivery Experts (30)</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> <li>• Post Graduate/Graduate in specific subject with LIVE teaching experience.</li> </ul>
<p>Helpdesk/Tech Support (7)</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> <li>• Candidate should be any graduate/diploma</li> </ul>
<p>Nodal Instructional Executives (358)</p>	<ul style="list-style-type: none"> <li>• Nodal Instructional Executives are on field personnel who handle any incidents and service requests to help make the Digital Education system meet services availability requirements.</li> <li>• Nodal Instructional Executives shall also train school teachers and students to use the technology set up on need basis.</li> <li>• One Nodal Instructional Executives has to be deployed for every 15 schools on an average.</li> <li>• Candidate should be any graduate/diploma</li> </ul>

<p>Zonal Technical Engineers (4)</p>	<ul style="list-style-type: none"> <li>• To monitor virtual classroom centers.</li> <li>• To provide hands on experience to Master Trainers who entertain school staff/ teachers and Nodal Instructional Executives to operate the classrooms after the installations.</li> <li>• Tolookintoissuesandvisitschoolstorectifywhenissuesarecomplexinnature .</li> <li>• BE/B-TECH with 2 years of experience in Education Technology solution.</li> </ul>
<p>Software Support (2)</p>	<ul style="list-style-type: none"> <li>• Software expert for managing Learning Management System centrally.</li> <li>• Manage Student and teacher Information system and keep updating time to time with required modifications.</li> <li>• Generate project reports and analytics from various tools.</li> </ul>

**VIII. OPERATIONS AND MAINTENANCE:**

The scope of work for the bidder is limited to equipment / component procured as part of Virtual Classroom with Digital Assessment solution. Later if any additional hardware or software is required, all additional hardware and software required would be procured by OCAC and would be maintained by the bidder. However, for monitoring these managed devices if any additional hardware / software / licenses are required then the cost will be borne by OCAC.

- On-site comprehensive maintenance and provisioning of services of all the ICT Infrastructure and their components supplied after successful execution and acceptance by OCAC.
- On-site/On-field support for Operations by qualified and trained personnel for a period of 5 years to ensure high service availability.
- The successful bidder should provide operating and maintenance services for a period of 5 years.
- The successful bidder is required to provide the comprehensive onsite maintenance with part replacement for all the IT and Non IT equipment.
- Fulfilling the requirement of paper and cartridge is under the scope of respective schools.
- The successful bidder shall be responsible to ensure adequate and timely availability of spare parts needed for repairing the equipment/parts.
- To provide this service the selected bidder must have back to back arrangement with the respective OEMs/ OEMs authorized partner.
- The successful bidder has to make necessary arrangements of spares for catering maintenance needs of equipment/parts during entire engagement period at no extra cost to the client.
- Root Cause Analysis of the incidents (Major & Minor) to identify threat sources and proactive measures to prevent recurrence.
- Successful bidder will be responsible to store logs in industry standard solution and format for extraction and sharing with other solutions/agencies.
- The successful bidder shall also provide a detailed process for managing Incident Response (IR) describing each phases of the process – prepare, identify, contain, eradicate, recover and learn from the incidents responded to.
- Develop response plan/ strategy which will describe the prioritization of incidents based on the organizational impact.

## 15. TERMS AND CONDITIONS

### A. Definitions:

For the purpose of clarity, the following words and expressions shall have the meanings hereby assigned to them: -

- a) "Working Day" means all working calendar days except Government declared Holidays and local holidays in schools.
- b) "Contract" means the Agreement entered into between the Purchaser and the Successful Bidder, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- c) "Contract Documents" means the documents listed in the Agreement, including any amendments thereto.
- d) "Contract Price" means the price payable to the Successful Bidder as specified in the Agreement, subject to such additions and adjustments there to or deductions therefrom, as may be made pursuant to the Contract.
- e) "Day" means a calendar day.
- f) "Delivery" means the transfer of the Goods from the selected Bidder to the Purchaser in accordance with the terms and conditions set forth in the Contract.
- g) "Completion" means the fulfillment of the related services by the Successful Bidder in accordance with the terms and conditions set forth in the Contract.
- h) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Successful Bidder is required to supply to the Purchaser under the Contract.
- i) "Purchaser" or "OCAC, Odisha" means the entity purchasing the Goods and related services, as specified in the bidding document.
- j) "Related Services" means the services incidental to the supply of the goods, such as transit insurance, installation, and initial maintenance and other similar obligations of the Successful Bidder under the Contract.
- k) "Sub contract or" means any natural person, private or government entity, or a combination of the above, including its legal successors or permitted assigns, to whom any part of the Goods to be supplied or execution of any part of the related services is subcontracted by the Successful Bidder.
- l) "Successful Bidder" means the person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Successful Bidder.
- m) "The Site," where applicable, means the designated project place(s) named in the document.

### B. General Conditions of the Bid:

- a) Agencies which do not hold a valid Permanent Account Number(PAN)from Income Tax department, Government of India and Good Service Tax Certificate from where their business is located will not be eligible to bid.
- b) Subject to the order of precedence set for thin the Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, & mutually explanatory.

### C. Interpretation:

- c) If the contexts require it, singular means plural and vice versa.
- d) **Entire Agreement:** The Contract constitutes the entire agreement between the Purchaser and the Successful Bidder and supersedes all communications, negotiations and agreements (whether written or oral) of parties with respect

thereto made prior to the date of Contract.

- e) **Amendment:** No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.
- f) **Non-waiver:** Subject to the condition (f) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- g) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.
- h) **Severability:** If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

#### **D. Language:**

- i) The Contract as well as all correspondence and documents relating to the Contract exchanged by the Successful Bidder and the Purchaser, shall be written in English language only. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the special conditions of the contract, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- j) The Successful Bidder shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.

#### **E. Eligible Goods and Related Services:**

- k) For purposes of this Clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as transit insurance, transportation, supply, installation, integration, testing, commissioning, and initial maintenance.
- l) For all articles/goods being bid, which are classified as from major OEMs, the bidder/consortium member should submit a letter by a competent authority of the vendor. All products quoted by the Successful Bidder must be associated with specific make and model numbers, item code and names, and with printed literature describing configuration and functionality. Any deviation from the printed specifications should be clearly mentioned in the offer document by the Bidder/supplier.
- m) The OEM/ Solution Provider of the quoted product must have its own registered or OEM Authorized spares depot in India having adequate inventory of the equipment being quoted for providing the necessary spares within next working day or maximum 48 hours.
- n) Bidder must quote products in accordance with above clause "Eligible goods and related services".

#### **F. Notices:**

- o) Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the contract. The term "in writing" means

communicated in written form with proof of dispatch and receipt.

- p) A Notice shall be effective when delivered or on the Notice's effective date, whichever is later.

#### **G. Governing Law:**

The Contract shall be governed by and interpreted in accordance with the laws of the Country (India), unless otherwise specified in the contract.

#### **H. Scope of Supply:**

- q) Subject to the provisions in the bidding document and contract, the goods and related services to be supplied shall be as specified in the bidding document.
- r) Unless otherwise stipulated in the Contract, the scope of supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining delivery and completion of the goods and related services as if such items were expressly mentioned in the Contract.

#### **I. Delivery & Installation:**

- s) Subject to the conditions of the contract, the delivery of the goods and completion of the related services shall be in accordance with the delivery and completion schedule specified in the bidding document. The details of supply/shipping and other documents to be furnished by the Successful Bidder are specified in the bidding document and/ or contract.
- t) The contract for the supply can be repudiated at any time by the purchase officer, if the supplies are not made to his satisfaction after giving an opportunity to the Bidder of being heard and recording the reasons for repudiation.
- u) The Successful Bidder shall arrange to supply, install, and commission the ordered materials/ system as per specifications within the specified delivery/ completion period at various departments and/or their offices /locations /schools mentioned in the bidding document and/or contract.
- v) Shifting the place of Installation: The end-user will be free to shift the place of installation within the same city /town/ district. The successful Bidder shall provide all assistance, except transportation, in shifting of the equipment. However, if the village/city/town is changed, additional charges of assistance in shifting and providing maintenance services for remaining period would be decided mutually.

#### **J. Successful Bidder's Responsibilities:**

The Successful Bidder shall supply all the goods and related services included in the scope of supply in accordance with the provisions of bidding document and/ or contract.

#### **K. Purchaser's Responsibilities:**

- a) Whenever the supply of goods and related services requires that the Successful Bidder obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Successful Bidder, make its best effort to assist the Successful Bidder in complying with such requirements in a timely and expeditious manner.
- b) The Purchaser shall pay all costs involved in the performance of its responsibilities, in accordance with the general and special conditions of the contract.

#### **L. Contract Price:**

- a) The Contract Price shall be paid as specified in the contract subject to any additions and adjustments thereto, or deductions there from, as may be made

pursuant to the Contract.

- b) Prices charged by the Successful Bidder for the Goods delivered and the Related Services performed under the Contract shall not vary from the prices quoted by the Successful Bidder in its bid, with the exception of any price adjustments authorized in the special conditions of the contract.

#### **M. Recoveries from Successful Bidder:**

- a) Recovery of liquidated damages, short supply, breakage, rejected articles shall be made ordinarily from bills.
- b) The Purchase Officer shall withhold amount to the extent of short supply, broken/ damaged, or for rejected articles unless these are replaced satisfactorily. In case of failure to withhold the amount, it shall be recovered from his dues and performance security deposit available with OCAC, Odisha.
- c) The balance, if any, shall be demanded from the Successful Bidder and when recovery is not possible, the Purchase Officer shall take recourse to law in force.

#### **N. Taxes & Duties:**

- a) The OCAC, Odisha shall be responsible for withholding taxes from the amounts due and payable to the Successful Bidder wherever applicable. The Successful Bidder shall pay for all other taxes, duties or levies in connection with this Contract, Operations, and any other Project Engagement Definition including, but not limited to, property, sales, use, excise duty, value-added, goods and services, consumption and other applicable taxes, duties or levies.
- b) The OCAC, Odisha shall provide the Successful Bidder with the original tax certificate of any withholding taxes paid by the OCAC, Odisha or its nominated agencies on payments under this Contract. The Successful Bidder agrees to reimburse and hold the OCAC, Odisha or any of its nominated agencies harmless from any deficiency (including penalties and interest) relating to taxes that are its responsibility under this paragraph. For purposes of this contract, taxes, duties or levies shall include taxes, duties, levies or GST incurred on transactions between and among OCAC, Odisha and the Successful Bidder.
- c) In the event of any increase or decrease of the rate of taxes and duties due to any statutory notification(s) during the term of the Contract, the consequential effect shall be to the account of the OCAC, Odisha.

#### **O. Performance Security Deposit (PSD)/ Performance Bank Guarantee:**

- a) The Successful Bidder shall, within 30 days of the notification of Contract award, provide a PSD 3% of the ordered project value for the due performance of the Contract in the amounts and currencies specified in the work order. The EMD amount of successful Bidder can be converted as part of the Performance Guarantee. The proceeds of the PSD shall be payable to the Purchaser as compensation for any loss resulting from the Successful Bidder failure to complete its obligations under the Contract.
- b) Form of PSD: Successful Bidder will have to deposit PSD in the form of Bank Guarantee issued by one of the Government, Nationalized, and Commercial Scheduled Bank in India drawn in favor of "CEO, OCAC, Odisha" payable at "Bhubaneswar".
- c) Refund of PSD: PSD shall be refunded after three months of the successful completion of the contract period.
- d) Forfeiture of PSD: PSD shall be forfeited in the following cases: -

- When the Successful Bidder fails to commence supply or stops making the supplies or fail to provide deliverables after partially executing the purchase/ work order.
  - To adjust any dues against the firm from any other contract with OCAC, Odisha.
- e) No interest will be paid by OCAC, Odisha on the amount of EMD and PSD/PBG.
- f) Proper notice will be given to the Successful Bidder with reasonable time before EMD/ PSD is forfeited

**P. Confidential Information:**

- a) The Purchaser and the Successful Bidder shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any drawings, documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract.
- b) The Successful Bidder may furnish to its Subcontractor, if permitted, such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Successful Bidder shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Successful Bidder.
- c) The Purchaser shall not use such documents, data, and other information received from the Successful Bidder for any purposes unrelated to the Contract. Similarly, the Successful Bidder shall not use such documents, data, and other information received from the Purchaser for any purpose other than the design, procurement, or other work and services required for the performance of the Contract.
- d) The obligation of a party under sub-clauses above, however, shall not apply to information that: -
- i. The Purchaser or Successful Bidder need to share with Schools OCAC, Odisha other institutions participating in the Contract; now or hereafter enters the public domain through no fault of that party;
  - ii. can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
- e) The above provisions shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the supply or any part thereof.
- f) The provisions of this clause shall survive completion or termination, for whatever reason, of the Contract.

**Q. Specifications and Standards:**

- a) All articles supplied shall strictly conform to the specifications, trademark laid down in the tender form and wherever articles have been required according to ISI/ISO/other applicable specifications/ certifications/ standards, those articles should conform strictly to those specifications/ certifications/ standards. The supply shall be of best quality and description. The decision of the competent authority/ purchase committee whether the articles supplied conform to the specifications shall be final and binding on the Successful Bidder.
- b) Technical Specifications and Drawings-**
- The Successful Bidder shall ensure that the goods and related services comply

with the technical specifications and other provisions of the Contract.

- The Successful Bidder shall be entitled to disclaim responsibility for any design, data, drawing, specification, or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
  - The goods and related services supplied under this Contract shall conform to the standards mentioned in bidding document and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the Goods.
- c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the bidding document. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with the general conditions of the contract.

#### **R. Packing and Documents:**

- a) The Successful Bidder shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the Goods and the absence of heavy handling facilities at all points in transit.
- b) The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the contract, and in any other instructions ordered by the Purchaser.

#### **S. Transportation:**

- a) The Successful Bidder shall be responsible for the proper packing so as to avoid damage under normal conditions of transport by sea, rail and road or air and delivery of the material in the good condition to the consignee at destination. In the event of any loss, damage, breakage or leakage or any shortage the Bidder shall be liable to make good such loss and shortage found at the checking/inspection of the material by the consignee. No extra cost on such account shall be admissible.
- b) All goods must be sent freight paid through Railways or goods transport. If goods are sent freight to pay, the freight together with departmental charge @5% of the freight will be recovered from the Successful Bidder's bill.

#### **T. Extension in Delivery Period and Liquidated Damages (LD):**

- a) Except as provided under clause "Force Majeure", if the Successful Bidder fails to deliver any or all of the Goods or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct as liquidated damages, a sum equivalent to the percentage specified in (d) below for each week or part



thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the bidding document and/ or contract for the respective goods or service which is delayed. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to clause "Termination".

- b) The time specified for delivery in the tender form shall be deemed to be the essence of the contract and the Successful Bidder shall arrange goods supply and related services within the specified period.
- c) Delivery and installation/ completion period may be extended with or without liquidated damages, if the delay in the supply of goods or service is on account of hindrances beyond the control of the Successful Bidder.
  - The Successful Bidder shall request in writing to the purchaser giving reasons for extending the delivery period of service, if he finds himself unable to complete the supply of goods or service within the stipulated delivery period or is unable to maintain prorata progress in the supply of goods or service delivery. This request shall be submitted as soon as a hindrance in delivery of goods and service occurs or within 15 days from such occurrence but before expiry of stipulated period of completion of delivery of goods and service after which such request shall not be entertained.
  - The purchaser shall examine the justification of causes of hindrance in the delivery of goods and service and the period of delay occurred due to that and recommend the competent authority on the period of extension which should be granted with or without liquidated damages.
  - Normally, extension in delivery period of goods and service in following circumstances may be considered without liquidated damages:
    - When delay has occurred due to delay in supply of drawings, designs, plans etc., if the School or OCAC, Odisha was required to supply them to the supplier of goods or service provider as per terms of the contract.
    - When delay has occurred in supply of materials etc., if these were required to be supplied to the supplier or service provider by the School or OCAC, Odisha as per terms of the contract.
  - If the competent authority agrees to extend the delivery period/ schedule, an amendment to the contract with suitable denial clauses and with or without liquidated damages, as the case may be, shall be issued. The amendment letter shall mention that no extra price or additional cost for any reason, what so ever beyond the contracted cost shall be paid for the delayed supply of goods and service.
  - It shall be at the discretion of the concerned authority to accept or not to accept the supply of goods and/ or services rendered by the contractor after the expiry of the stipulated delivery period, if no formal extension in delivery period has been applied and granted.
  - If School or OCAC, Odisha is in need of the good and/ or service rendered after expiry of the stipulated delivery period, it may accept the services and issue a letter of extension in delivery period with usual liquidated damages and denial clauses to regularize the transaction.
- d) In case of extension in the delivery and/ or installation/ completion/ commissioning

period is granted with full liquidated damages, the recovery shall be made on the basis of following percentages of value of goods and/ or service which the Successful Bidder has failed to supply or complete: -

No.	Condition	LD%*
a.	For the delay equivalent to the prescribed period of delivery, successful installation, and completion of work	0.5%
b.	Delay exceeding twice but not exceeding thrice of the prescribed period of delivery, successful installation, and completion of work	1%
c.	Delay exceeding thrice but not exceeding four times of the prescribed period of delivery, successful installation, and Completion of work	1.5 %

- i. Fraction of a day in reckoning period of delay in supplies, successful installation and completion of work shall be eliminated, if it is less than half a day.
- ii. The maximum amount of liquidated damages shall be 5%.
- iii. \*The percentage refers to the payment due for the associated milestone.

#### **U. Authenticity of Equipment:**

- a) The Successful Bidder shall certify that the supplied goods as per Annexure 14 are brand new, genuine/ authentic, not refurbished, conform to the description and quality as specified in this bidding document and are free from defects in material, workmanship and service.
- b) If during the contract period, the said goods be discovered counterfeit/ unauthentic or not to conform to the description and quality aforesaid or have determined (and the decision of the Purchase Officer in that behalf will be final and conclusive), notwithstanding the fact that the purchaser may have inspected and/ or approved the said goods, the purchaser will be entitled to reject the said goods or such portion thereof as may be discovered not to conform to the said description and quality, on such rejection the goods will be at the Successful Bidder's risk and all the provisions relating to rejection of goods etc, shall apply. The Successful Bidder shall, if so called upon to do, replace the goods etc., or such portion thereof as is rejected by Purchase Officer, otherwise the Successful Bidder shall pay such damage as may arise by the reason of the breach of the condition herein contained. Nothing here in contained shall prejudice any other right of the Purchase Officer in that behalf under this contract or otherwise.
- c) Goods accepted by the purchaser in terms of the contract shall in no way dilute purchaser's right to reject the same no later than two months from the purchase date.

#### **V. Warranty:**

- a) The Bidder must supply all items with onsite warranty for five years.
- b) The purchaser shall give a written notice to the Successful Bidder stating the nature of any defect together with all available evidence thereof, promptly following the discovery thereof. The purchaser shall afford all reasonable opportunity for the Successful Bidder to inspect such defects. Upon receipt of such notice, the Successful Bidder shall expeditiously cause to repair the defective goods or parts thereof or replace the defective goods or parts thereof with brand new genuine/ authentic ones having similar or higher specifications,

at no cost to the Purchaser. Any goods repaired or replaced by the Successful Bidder shall be delivered at the respective location without any additional costs to the purchaser.

- c) If having been notified, the Successful Bidder fails to remedy the defect within the period specified, the purchaser may proceed to take within a reasonable period such remedial action as may be necessary, in addition to other recourses available in terms and conditions of the contract and bidding document.
- d) During the warranty period, the Bidder shall also be responsible to ensure adequate and timely availability of spare parts needed for repairing the supplied goods.

#### **W. Patent Indemnity:**

- a) The Successful Bidder shall, subject to the Purchaser's compliance with sub-clause(b) below, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of: -
  - the installation of the Goods by the Successful Bidder or the use of the Goods in the country where the Site is located; and
  - the sale in any country of the products produced by the Goods.
- b) Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Successful Bidder, pursuant to the Contract.
- c) If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to above, the Purchaser shall promptly give the Successful Bidder a notice thereof, and the Successful Bidder may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- d) If the Successful Bidder fails to notify the Purchaser within thirty (30) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- e) The Purchaser shall, at the Successful Bidder's request, afford all available assistance to the Successful Bidder in conducting such proceedings or claim, and shall be reimbursed by the Successful Bidder for all reasonable expenses incurred in so doing.
- f) The Purchaser shall indemnify and hold harmless the Successful Bidder and its employees, officers, and Subcontractors (if any) from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Successful Bidder may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered

design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

- g) All right, title, and interest in and to, and ownership in, Proprietary Information of Successful Bidder, which is provided to the OCAC, Odisha for the Project including source code of any pre-existing application of the Successful Bidder, shall remain solely with the Successful Bidder. The OCAC, Odisha shall use such Successful Bidder Proprietary Information in connection with the services or to the extent necessary for the Project's normal operational, repair and maintenance purposes related to the services. The OCAC, Odisha shall not resale or redistribute such Proprietary Information of the Successful Bidder.
- h) Transfer the ownership of the Assets (not already with OCAC which shall include the solution and Software including the source code, licenses provided and associated documentation which is the work product of the development efforts involved in the Project) to OCAC, at the appropriate time, with perpetual licenses- in synchronization with the submission of Deliverables thereof by the Implementation Agency - or in accordance with the terms of this RFP.

#### **X. Limitation of Liability:**

Except in cases of gross negligence or willful misconduct: -

- a) neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Successful Bidder to pay liquidated damages to the Purchaser; and
- b) the aggregate liability of the Successful Bidder to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the Contract, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Successful Bidder to indemnify the Purchaser with respect to patent infringement.

## **Y. Change in Laws & Regulations:**

Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or by law having the force of law is enacted, promulgated, abrogated, or changed in State/India, where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/ or the Contract Price, then such Delivery Date and/ or Contract Price shall be correspondingly increased or decreased, to the extent that the Successful Bidder has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced Cost shall not be separately paid or credited, if the same has already been accounted for in the price adjustment provisions where applicable.

## **Z. Force Majeure:**

- a) The Successful Bidder shall not be liable for forfeiture of its PSD, LD, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- b) For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Successful Bidder that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Successful Bidder. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, pandemics, climate crisis, quarantine restrictions, and freight embargoes.
- c) If a Force Majeure situation arises, the Successful Bidder shall promptly notify the OCAC, Odisha in writing of such conditions and cause thereof within 15 days of occurrence of such event. Unless otherwise directed by OCAC, Odisha, the Successful Bidder shall continue to perform its obligations under the contract as far as reasonably practical.
- d) If the performance in whole or part or any obligation under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, both the parties can discuss further action.

## **AA. Change Orders and Contract Amendments:**

- a) The Purchaser may at any time order the Successful Bidder through Notice in accordance with clause "Notices" above, make changes within the general scope of the Contract in any one or more of the following: -
  - drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
  - the method of shipment or packing;
  - the place of delivery; and
  - the related services to be provided by the Successful Bidder.
- b) If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's/ Successful Bidder's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery and Completion Schedule, or both, and the Contract shall accordingly should be amended. Any claims by the Successful Bidder for

adjustment under this clause must be asserted within thirty days from the date of the supplier's/ Successful Bidder's receipt of the Purchaser's change order.

- c) Prices to be charged by the Successful Bidder for any related services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Successful Bidder for similar services.

#### **BB. Settlement of Disputes:**

- a) Any dispute or difference of what so ever nature how so ever arising under, out of, or in connection with this Agreement between the parties shall be resolved through the dispute resolution procedures as set out hereafter.
- b) Each party to a dispute shall select and appoint one senior representative within a period of 30 days from the day on which one party has sent the notice of dispute to the other party to the dispute. The representatives shall meet in Bhubaneswar as and when necessary from time to time and attempt in good faith and use their best endeavors at all times to resolve the dispute and produce written terms of settlement. The meetings of representatives shall be conducted in English.
- c) If the dispute has not been resolved as evidenced by the signing of the written terms of settlement within 30 working days after the receipt of the notice such dispute shall be submitted to arbitration and shall be finally determined in accordance with the provisions of the Indian Arbitration and Conciliation Act, 1996 or any modification or amendment thereof (the "Indian Arbitration Act")
- d) The venue of arbitration shall be Bhubaneswar and the language of the arbitration shall be English and the award shall be made in the English language. The number of arbitrators shall be three. The Contractor shall nominate one arbitrator, the Employer shall nominate another, and the presiding arbitrator shall be jointly appointed by the two arbitrators so appointed by the parties.
- e) If the other party fails to appoint an arbitrator within thirty (30) days from the receipt of the request to do so from the aggrieved party or if the two (2) appointed arbitrators fail to agree on the presiding arbitrator within thirty (30) days from the date of their appointment, the parties shall be free to approach the Secretary, Indian Council of Arbitration, Tansen Marg, New Delhi (without application of the ICA Rules) for appointment of an arbitrator or the presiding arbitrator and his decision shall be final and binding on the parties.
- f) Each of the Parties expressly understands and agrees that the award shall be the sole, exclusive, final and binding remedy between them regarding the Dispute (s) presented to the arbitral tribunal. The parties hereto agree that the arbitral award may be enforced against the Parties or their assets wherever they may be found and that a judgment upon the arbitral award may be entered in any court having jurisdiction.
- g) The existence of any dispute(s) or difference(s) or initiation or continuance of the arbitration proceedings shall not permit the Parties to postpone or delay the performance by the parties to the arbitration of the irrespective obligations pursuant to this Agreement. If court proceedings to stay litigation or compel

arbitration are necessary, the Party who unsuccessfully opposes such proceedings shall pay all associate cost, expenses and attorney's fees, which are reasonably incurred by the other party to the arbitration.

- h) Each Party shall bear its respective costs in relation to any arbitration proceedings.
- i) The provision with respect to arbitration on these clauses shall survive on termination of this Agreement or any takeover of the Project by GoO.

### CC. PROJECT TIMELINES AND PAYMENT TERMS

- a) Payment schedule–Payments to the Bidder, after successful completion of the target milestones (including specified project deliverables), would be made as under:

Deployment Phase			
Sl. No	Description	Deliverables	Payment%
1	<ul style="list-style-type: none"> <li>• Delivery/Verification of Equipment (IT and Non-IT at site). Payment shall be released on pro-rata basis on delivery/verification of minimum 500 sites.</li> </ul>	<ul style="list-style-type: none"> <li>• Original Delivery Challan</li> <li>• Original Invoice (In triplicate)</li> </ul>	80% (pro-rata basis)
2	<ul style="list-style-type: none"> <li>• Installation, Commissioning, and Orientation of Equipments (IT and Non IT at site) on pro rata basis on Installation/verification of minimum 500 sites.</li> </ul>	<ul style="list-style-type: none"> <li>• Installation Certificate from the School</li> </ul>	20% (pro-rata basis)
Post Implementation Phase			
3	Operations & Maintenance (O&M) [Continuous activity for 5 years after Project Go-Live]	<b>Quarterly:</b> Bidder has to submit i. Functionality report from schools every quarter. ii. Quarterly Studio report iii. Manpower attendance involved in the project for total 20 quarters (4 quarters X Five years)	Quarterly payment as per billing

- b) The Bidder's request for payment shall be made to the purchaser in writing, accompanied by invoices describing, as appropriate, the goods delivered and related services performed, and by the required documents submitted pursuant to general conditions of the contract and upon fulfillment of all the obligations stipulated in the Contract. The deployment phase should be completed within 180 working days from the date of signing of the contract.
- c) Due payments shall be made promptly by the purchaser, generally within thirty (30) days after submission of an invoice or request for payment by the Successful Bidder.
- d) The currency or currencies in which payments shall be made to the Successful Bidder under this Contract shall be Indian National Rupees (INR) only.

- e) All remittance charges will be borne by the Successful Bidder.
- f) In case of disputed items, disputed amount shall be withheld and will be paid only after due clarifications are received / settlement of the dispute if any.
- g) Any penalties/ liquidated damages, as applicable, for delay and non-performance, as mentioned in this bidding document, will be deducted from the payments for default from the prescribed milestones.
- h) Report submission for payment during restrictive conditions:
- i) During School Holidays/Closure on account of epidemics/ pandemic/ climate emergency/ other restrictive situations/ Government imposed lockdown or restrictions/ or any other Planned Closure which are not directly or indirectly under the control/scope of the Contractor, Payment shall be made as per the approved BOQ based on the Studio reports/Online reports and related invoices.

During such restrictions the School Reports shall not be required for making the payments. Also, deductions/ penalty shall not be applicable under situations which are not under the control of the contractor.

- i) Functionality of the school means that bidder has to ensure that the equipments are in working condition for the virtual classroom sessions.
- ii) Service Level Requirement: Virtual Classrooms Uptime

Item	Time to resolve after lodging of complaint	Penalty/Damages
<b>Items</b>		
From the date of lodging of complaint within next 72 hours (i.e. up to 4 <sup>th</sup> working day)		No penalty
(A)	For every extra 48 hours(working days)	0.1% of item value
(B)		<ul style="list-style-type: none"> <li>• If the call is not resolved and penalty amount reaches 2% on account of school unable to access the virtual classes, then NOTICE shall be issued.</li> <li>• The tendering authority will be free to initiate action as per tender terms and condition for breach and if such occurrences are repetitive in nature (if three such notices are issued during a year for same item) or if tendering authority feels that Successful Bidder is not performing as per requirement, then tendering authority may get the equipment replaced by the bidder as no extra cost within 30 days of issuing replacement notice.</li> </ul>



The penalty amount will be recovered from the next payment due to the supplier. The Bank Guarantee (for proper maintenance during warranty period) will be returned only after settling The penalty amounts, if any.

Teaching End Uptime	Penalty
95%and above	No Penalty
90%to 95%	0.5% of Monthly Invoice Value of all the affected Schools
85%to 90%	1% of Monthly Invoice Value of all the affected Schools
Below85%	1.5% of Monthly Invoice Value of all the affected Schools

Payment will not be deducted in case of holiday/any scheduled closure of schools by Dept.

**Exclusions:**

- Any approved planned down time of the solution
- Any issues which are outside the scope of the Bidder.

**DD. Acceptance Testing and Certification**

- a. The primary goal of Acceptance Testing and Certification is to ensure that the Project (including all the project components as discussed in the scope of work) meets requirements, standards, specifications and performance, by ensuring that the following are associated with clear, quantifiable metrics for accountability:
  - i. Infrastructure (Hardware and Network) Compliance Review
  - ii. Performance
  - iii. Project Documentation
  
- b. **Infrastructure Compliance Review:** OCAC, Odisha shall perform the Infrastructure Compliance Review to verify the conformity of the Infrastructure (both IT, non IT) supplied by the Successful Bidder against the requirements and specifications provided in the tender and/or as proposed in the proposal submitted by the Successful Bidder. Compliance review shall not absolve the Bidder from ensuring that proposed infrastructure meets the terms of requirements.
- c. **Performance:** Performance is another key requirement for the project and the agency shall review the performance of the deployed solution against certain key parameters.
- d. **Project Documentation:** The Agency shall review the project documents developed by the Successful Bidder including deliverables given in the scope of work and other documents as required.

**EE. EXIT MANAGEMENT-**

- a. Preamble
  - i. The word 'parties' include the tendering authority and the Bidder.
  - ii. This Schedule sets out the provisions, which will apply on expiry or termination of the Project Implementation and Operations and Management.
  - iii. In the case of termination of the Project Implementation and/or Operation and Management due to illegality, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.
  - iv. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

- b. Handover-
  - i. The Bidder shall start the exit management and transition at least three months before the expiry of the Contract.
  - ii. Supplied goods by Bidder at School or OCAC, Odisha shall be the legal properties of School or OCAC, Odisha.
  - iii. Satellite Interactive Terminal (SIT) or any network equipment deployed in schools under services shall also be handed over to school by the Bidder.
- c. Cooperation and Provision of Information during the exit management period-
  - i. The Bidder will allow the School or OCAC, Odisha access to the information reasonably required to define the current mode of operation associated with the provision of the services to enable School or OCAC, Odisha to assess the existing services being delivered.
  - ii. Confidential Information, Security and Data: - On the commencement of the exit management period, the Bidder will promptly supply the Project related data and confidential information to School or OCAC, Odisha or its nominated agencies.
- d. General Obligations of the Bidder-
  - i. The Bidder shall provide all such information as may reasonably be necessary to effect as seam less during hand over as practicable in the circumstances –to School or OCAC, Odisha or its nominated agencies or its replacement operator and which the operator has in its possession or control at any time during the exit management period.
  - ii. The Bidder shall commit adequate resources to comply with its obligations under this Exit Management Clause.

## 16. Detailed Specifications of the items

<b>Main Studio Setup</b>	
<b>Sl. No.</b>	<b>Technical specification of each line items as scope of work</b>
1	<p><b>Digital Video Camera</b></p> <ul style="list-style-type: none"> <li>- Image sensor: 1" MOS/ CMOS Single Chip Image Sensor</li> <li>- Effective Pixels per Sensor: 12 Megapixel or more</li> <li>- Lens: Optical 20x Zoom and 10 x Digital zoom or better</li> <li>- Optical System: F1.6 prism system</li> <li>- Neutral Density filter: Clear, 1/4, 1/16, 1/64</li> <li>- Optical Image stabilizer: Required</li> <li>- Sensitivity: F12 or better</li> <li>- Horizontal Resolution: 2,000 TV lines or more (3840 x2160p mode) or better, 1,000 TV lines or more (1920 x1080p mode) or better</li> <li>- Shutter Speed: 1/25 sec to 1/10,000 sec or better</li> <li>- Monitor/Viewfinder: 3.5" type TFTLCD color monitor and 0.39 type OLED Viewfinder</li> </ul> <p><b>Video/Audio Recording</b></p> <ul style="list-style-type: none"> <li>- Recording Media: SXS/SDHC/SDXC/ Micro P2 Memory card</li> <li>- Recording resolution: 3840 x2160 (UHD), 1920 x1080 (FHD), 1280 x720 (HD) 720 x480 (SD), 720 x576 (SD)</li> <li>- Recording Formats: XAVC/MOV(AVC)/MOV(HAVC)/AVCHD</li> <li>- Live Streaming: Network Protocol: RTSP/RTP/RTMP</li> <li>- Video Compression Format: H.264/ MPEG4 AVC Main Profile, High Profile Audio Compression Format: AAC LC</li> </ul> <p><b>Interfaces</b></p> <ul style="list-style-type: none"> <li>- Video Output: BNCx1HD-SDI, SD-SDI</li> <li>- HDMI Out: HDMI: 4:2:2/10 bit</li> <li>- Audio Input: XLR-type 3-pin</li> <li>- Audio Output: 3.5 mm stereo mini jack x 1,</li> <li>- Video Over IP Output: Should support NDI HX and RTMP Streaming.</li> <li>- Accessories: Battery, Battery charger, AC adaptor, AC cable, Microphone holder kit, Shoulder strap, Eye cup.</li> </ul>
2	<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>
3	<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> </ul>

	<ul style="list-style-type: none"> <li>- Bands: 3-band</li> </ul>
4	<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>
5	<p><b>Teleprompter 32 inch with stand Size</b></p> <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>
6	<p><b>Microphone: Lapel</b></p> <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>- Battery: In-built rechargeable lithium-ion battery – up to 5 hours' battery life</li> <li>- Range: 200m transmission range</li> </ul>
7	<p><b>Wired Mic with Table Mic Stand</b></p> <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>
8	<p><b>Audio Monitor</b></p> <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>
9	<p><b>Digital Pad</b></p> <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> </ul>

	<ul style="list-style-type: none"> <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> <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>
10	<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>- Color Displays: 16.7M</li> <li>- Contrast Ratio: 700:1• Viewing Angle: 178°</li> <li>- Response time: 30 ms or less</li> </ul> <p><b>Laptop</b></p> <ul style="list-style-type: none"> <li>- Intel Core i5 or AMD Ryzen 5</li> <li>- Minimum 8GB RAM</li> <li>- Minimum 480GB SSD or higher</li> <li>- Display Minimum 14.0"</li> <li>- 1 USB 3.0, 2- USB 2.0, HDMI</li> <li>- Windows 11</li> </ul>
11	<p><b>55 inches Professional Display</b></p> <ul style="list-style-type: none"> <li>- Screen Size (Diagonal) / Aspect ratio: 55" / 16:9 or better</li> <li>- Panel Type: IPS 'LED / Equivalent</li> <li>- Resolution (H x V): 1,920 x 1,080 pixels</li> <li>- Brightness: 350 cd/SqM or Better</li> <li>- Viewing Angle: 178° / 178°</li> <li>- Inputs: HDMI (2), RGB, Audio, USB or better</li> <li>- Mount: One floor Mount and Two Wall Mount</li> <li>- Certifications: BIS</li> </ul>

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**85 inches Interactive Panel Display:**

- Panel Size: 85" or more
- Panel Grade: Professional A- Grade Panel
- Type/Tech: LED Backlight
- Aspect Ratio 16:09
- Native Resolution: 3840\*2160 (UHD)
- Colors: 1.07 Billion (10 bit)
- Brightness: 350nits
- Contrast Ratio: 1200:1
- Response Time: 8ms
- Refresh Rate: 60Hz
- Viewing Angles: H = 178, V = 178 typ.

**TOUCH**

- Type/ Tech: Infra-Red
- Touch Point: 10 Point Multi Touch

**INPUT**

- HDMI x2
- Touch USB x2
- RGB / VGA x1
- Audio x1
- MIC(Microphone) x1
- OPS: OPS Slot support 4K@60HZ

**OUTPUT:**

- Audio x1
- AV out Yes

**USB**

- Type A x2
- SPEAKERS: 10Wx2
- Certifications: ROHS, BIS, FCC, CE

**COMPATIBILITY:**

- CVBS: 480i,
- HDMI: 480i, 480p,720p,1080i,1080p

**OPS System:**

- Intel Core i5 8<sup>th</sup>Generation or higher
- 4 GB RAM
- 500GB HDD or higher
- Key Board & Mouse- both Wireless
- OS- Windows 10 SL Preloaded

13	<p><b>Vector Encoder Server (Transmission Server)</b></p> <ul style="list-style-type: none"> <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>- Color 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>- Color Space REC 601, REC 709</li> <li>- Color 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 525i/59.94 NTSC, 625i/50 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/document.</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> <p>Bidder may propose any transmission server of equivalent or higher specifications which meets the solution requirement as per the RFP.</p>
14	<p><b>Laptop with HDMI Output</b></p> <ul style="list-style-type: none"> <li>- Intel Core i5</li> <li>- Minimum 8GB RAM</li> <li>- Minimum 1 TB HDD</li> <li>- Display Minimum 14.0"</li> <li>- 1 USB 3.0, 2- USB 2.0, HDMI, VGA</li> <li>- Windows 10, 64 bit or Ubuntu Latest</li> </ul>
15	<p><b>Laptop with application software</b></p> <ul style="list-style-type: none"> <li>- Intel Core i5 or AMD Ryzen 5</li> <li>- Minimum 8GB RAM</li> <li>- Minimum 480 GB SSD or higher</li> <li>- Display Minimum 14.0"</li> <li>- 1 USB 3.0, 2- USB 2.0, HDMI</li> <li>- Windows 11 bit or Ubuntu Latest</li> <li>- Virtual Classroom Application Software</li> </ul>

16	<p><b>LED Studio Lights with ceiling mount movable Grid and mounting clamps/hooks</b></p> <ul style="list-style-type: none"> <li>- Color temperature: 5600 K/3200K</li> <li>- Dimmable output from 100% to 10%</li> <li>- Power consumption: Less than 80W.</li> <li>- Ceiling mounts facility</li> <li>- AC Adaptor, Barn door and filters</li> <li>- Operated from nominal 230 V/50 Hz Ac Supply</li> </ul>
17	<p><b>Video Light</b></p> <ul style="list-style-type: none"> <li>- Studio Grade LED stand lights with soft box, minimum 150 watt</li> </ul>
18	<p><b>Editing Machine</b></p> <ul style="list-style-type: none"> <li>- Processor: 1 x Intel® Xeon Processor (6 Core/2.8GHz) or better</li> <li>- RAM: 16GB ECC DDR5 RAM</li> <li>- Controller: SATA3 (6Gbps)</li> <li>- HDD: 1x 480 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 or equivalent</li> <li>- OS: Windows 11</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- Live Stream and Recording</li> <li>- Supports Multiple Camera inputs, Video files</li> <li>- Peripherals: 2x 24" LED Monitor , Speaker, USB Keyboard &amp; Mouse</li> </ul>
19	<p><b>Furniture requirement</b>  Technical Table, Studio Room Table, Executive Chairs(4 no), Wooden Almira + Sofa (3+2)</p>
20	<p><b>Earthing + Cabling &amp; Installation + Integration + Testing</b></p> <p><b>1. Cabling</b>  It is required to set-up the facility for HD/SD operations; therefore, all the cabling should seamlessly support required operations.</p> <p><b>2. Installation Material</b>  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> <p><b>3. System Completeness</b>  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.</p> <p><b>4. Workflow Diagram</b>  The Bidder has to provide schematic diagram of the technical workflow to ensure the workability of the offered solution in all respects.</p> <p><b>5. Any Additional Items for Complete the workflow</b>  Bidder must mention any additional items required to complete the workflow with proper justification.</p>



21	<p><b>Accessories for integration</b> Accessories like required convertors, cables, audio/video connectors, adopters etc.</p>
22	<p><b>Acoustic, Fabric above Acoustics with Air Condition (20x20), Green Screen</b> 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> <p><b>1. Interior</b> Provision &amp; fixing of pre-fabricated acoustic panels for the walls inside the studio topped with suitable fabric giving an aesthetic finish</p> <p><b>2. Carpet</b> Providing and Fixing Wall to Wall</p> <p><b>3. Door Type and Size</b></p> <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> <p><b>4. Window</b></p> <ul style="list-style-type: none"> <li>- Provisioning and fixing sound proof window hermitically sealed with Glass (Size 3' X 5')</li> </ul> <p><b>5. Air-Conditioning(As required)</b></p>
23	<p><b>Light board</b></p> <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, color 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 Color Temperature 500K+/-300K.</li> <li>- Max Power Consumption: 80W.</li> <li>- All Metal Body.</li> <li>- 1200 True Color LEDs.</li> <li>- Light Stand: 9 Feet Height</li> <li>- Micro Fiber Cleaning Cloth Set of 5 piece</li> </ul>

24	<p><b>UPS 10 KVA</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 / 8 KW</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 3:1 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> </ul> </li> <li>- After Sales Support &amp; Manufacturer's Credibility <ul style="list-style-type: none"> <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> </li> </ul>
25	<p><b>Battery:</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>
26	<p><b>Servo Stabilizer</b></p> <ul style="list-style-type: none"> <li>- Capacity: 10 KVA</li> <li>- General Technology: Variac with Buck-Boost Transformer</li> <li>- Control Type: Micro Processor</li> <li>- Operating Environment Temp.: 0-45° C</li> <li>- 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: Continuous</li> <li>- Over Load Capacity: Up to 150% for 5 to 10 mins</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. Output protection through MCB</li> <li>- Construction: MS Sheet body, Powder Coated</li> <li>- Mounting: On Wheels</li> </ul>

**Regional Studio Setup**

Sl. No.	Technical specification of each line items as scope of work
1	<p><b>Digital Video camera</b></p> <p><b>IMAGE SENSOR</b></p> <ul style="list-style-type: none"> <li>- Type: Digital Single Lens Mirror less camera</li> <li>- Recording media: SD Memory Card, SDHC Memory Card, SDXC Memory Card</li> <li>- Recording media: (Compatible with UHS-I / UHS-II UHS Speed Class 3 standard SDHC /SDXC Memory Cards)</li> <li>- Image sensor size: 17.3 x 13.0 mm (in 4:3 aspect ratio)</li> <li>- Type: Live MOS Sensor</li> <li>- Camera effective pixels :16.00 megapixels</li> <li>- Color filter: Primary color filter</li> <li>- Dust reduction system: Supersonic wave filter</li> <li>- Recording file format, Motion picture: AVCHD (Audio format: Dolby Digital 2ch), MP4 (Audio format: AAC2ch)</li> <li>- Aspect ratio: 4:3, 3:2, 16:9, 1:1</li> <li>- Image quality: RAW, RAW+Fine, RAW+Standard, Fine, Standard Motion picture*MP4*: [4K] 3840x2160:4K/30p 100Mbps, 4K/25p: 100Mbps, 4K/24p 100MbpsAVCHD*: [Full HD] 1920x1080 FHD/50p: 28Mbps, 50p recordingMP4*: [Full HD] 1920x1080: FHD/60p 28Mbps, FHD/50p: 28Mbps, FHD/30p 20Mbps, FHD/25p: 20MbpsMP4* [HD] 1280x720: HD/30p 10Mbps, HD/25p: 10MbpsAVCHD*: [Full HD] 1920x1080 FHD/50i: 17Mbps, 50i recording AVCHD*: [FullHD] 1920x1080 FHD/25p: 24Mbps, 50i recording (sensor output is 25fps)AVCHD*: [Full HD] 1920x1080 FHD/24p: 24Mbps, 24p recording</li> <li>- Continuous recordable time (Motion picture): AVCHD [FHD/50i]: Approx. 120 min with H-FS1442A / H-FS12060 /H-FS14140</li> </ul> <p><b>FOCUS</b></p> <ul style="list-style-type: none"> <li>- AF mode: Face/Eye Detection / Tracking / 49-Area / Custom Multi / 1-Area /Pinpoint</li> <li>- Exposure mode: Program AE, Aperture Priority AE, Shutter Priority AE, Manual</li> <li>- White balance: Auto / Daylight / Cloudy / Shade / Incandescent / Flash / White Set 1, 2,3, 4 / Color temperature setting</li> <li>- Shutter speed:Still image: Bulb (Max. 2 minutes), 1/4,000 – 60, Motion picture: 1/16,000 - 1/25, Electronic shutter: 1/16,000 – 1, Electronic first curtain shutter: 1/2,000 - 60</li> </ul> <p><b>INTERFACE</b></p> <ul style="list-style-type: none"> <li>- USB: USB 2.0 Micro-B</li> <li>- HDMI**: micro HDMI Type D / VIERA Link</li> <li>- Video: Auto / 4K / 1080p / 1080i / 720p / 576p</li> <li>- Audio: Stereo</li> <li>- Monitor-through: 4:2:2/8-bit (While recording motion picture on the SD memory card in the camera unit.)</li> <li>- Remote input: φ2.5mm for remote</li> <li>- External microphone input: φ3.5mm for external microphone, Stereo/Lens Auto/Shotgun/Super Shotgun/Manual is selectable when attaching DMW-MS2 (optional).</li> <li>- Microphone: Stereo, Wind-cut: OFF / Standard / High</li> <li>- Speaker: Monaural</li> </ul>
2	<p><b>Camera Tripod</b></p> <ul style="list-style-type: none"> <li>- Camera Plate Features: Sliding Balance Plate</li> </ul>

	<ul style="list-style-type: none"> <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>
3	<p><b>Microphone: Lapel</b></p> <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</li> <li>- 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>
4	<p><b>Audio Monitor</b></p> <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>
5	<p><b>Teleprompter 32 inch with stand Size</b></p> <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>
6	<p><b>Digital Pad</b></p> <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 our 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> <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</li> <li>- DC 5 V &lt;100mA</li> <li>- Weight &lt; 600 grams</li> <li>- Certification CE, RoHS</li> </ul>
7	<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> </ul>

	<ul style="list-style-type: none"> <li>- Color Displays: 16.7M</li> <li>- Contrast Ratio: 700:1• Viewing Angle: 178°</li> <li>- Response time: 30 ms or less</li> </ul> <p><b>Laptop</b></p> <ul style="list-style-type: none"> <li>- Intel Core i5 or AMD Ryzen 5</li> <li>- Minimum 8GB RAM</li> <li>- Minimum 480GB SSD or higher</li> <li>- Display Minimum 14.0"</li> <li>- 1 USB 3.0, 2- USB 2.0, HDMI</li> </ul> <p>Windows 11</p>
8	<p><b>55 inches Professional Display</b></p> <ul style="list-style-type: none"> <li>- Screen Size (Diagonal) / Aspect ratio: 55" / 16:9 or better</li> <li>- Panel Type: IPS 'LED / Equivalent</li> <li>- Resolution (H x V): 1,920 x 1,080 pixels</li> <li>- Brightness: 350 cd/SqM or Better</li> <li>- Viewing Angle: 178° / 178°</li> <li>- Inputs: HDMI (2), RGB, Audio, USB or better</li> <li>- Mount: One floor Mount and One Wall Mount</li> <li>- Certifications: BIS</li> </ul>
9	<p><b>Vector Encoder Server (Transmission Server)</b></p> <ul style="list-style-type: none"> <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>- Color 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>- Color Space REC 601, REC 709</li> <li>- Color 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/document.</li> </ul>

	<ul style="list-style-type: none"> <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> <p>Bidder may propose any transmission server of equivalent or higher specifications which meets the solution requirement as per the RFP.</p>
10	<p><b>Laptop with HDMI Output</b></p> <ul style="list-style-type: none"> <li>- Intel Core i5,</li> <li>- Minimum 8GB RAM,</li> <li>- Minimum 1 TB HDD,</li> <li>- Display Minimum 14.0"</li> <li>- 1 USB 3.0, 2- USB 2.0, HDMI, VGA,</li> <li>- Windows 10 64 bit or Ubuntu Latest</li> </ul>
11	<p><b>Laptop with application software</b></p> <ul style="list-style-type: none"> <li>- Intel Core i5 or AMD Ryzen 5</li> <li>- Minimum 8GB RAM</li> <li>- Minimum 480 GB SSD or higher</li> <li>- Display Minimum 14.0"</li> <li>- 1 USB 3.0, 2- USB 2.0, HDMI</li> <li>- Windows 11 bit or Ubuntu Latest</li> <li>- Virtual Classroom Application Software</li> </ul>
12	<p><b>LED Studio Lights with ceiling mount movable Grid and mounting clamps/hooks</b></p> <ul style="list-style-type: none"> <li>- Color temperature: 5600 K/3200K</li> <li>- Dimmable output from 100% to 10%</li> <li>- Power consumption: Less than 80W</li> <li>- Ceiling mounts facility</li> <li>- AC Adaptor, Barn door and filters</li> <li>- Operated from nominal 230 V/50 Hz Ac Supply</li> </ul>
13	<p><b>Furniture requires</b> (Technical Table, Studio Room Table, Executive Chairs (4 no), Wooden Almira + Sofa (3+2))</p>
14	<p><b>Earthing + Cabling &amp; Installation + Integration + Testing Cabling</b> It is required to set-up the facility for HD/SD operations, therefore all the cabling should seamlessly support required operations.</p> <p><b>Installation Material</b> 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> <p><b>System Completeness</b> 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.</p> <p><b>Workflow Diagram</b> The Bidder has to provide schematic diagram of the technical workflow to ensure the workability of the offered solution in all respects.</p> <p><b>Any Additional Items for Complete the workflow</b> Bidder must mention any additional items required to complete the workflow with proper justification</p>
15	<p><b>Accessories for integration</b> Accessories like required convertors, cables, audio/video connectors, adopters etc.</p>
16	<p><b>Acoustic, Fabric above Acoustics with Air Condition (20x20), Green Screen</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> <p><b>Interior</b> Provision &amp; fixing of pre-fabricated acoustic panels for the walls inside the studio topped with aesthetic finish</p> <p><b>Carpet</b> Providing and Fixing Wall to Wall</p> <p><b>Door Type and Size</b></p> <ul style="list-style-type: none"> <li>- Acoustic Doors of 3 X 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 side handle with locking arrangement with vision panel for studio main door and control room door.</li> </ul> <p><b>Window</b> Provisioning and fixing sound proof window hermitically sealed with Glass (Size 3' X 5')</p> <p><b>Air-Conditioning</b> (As required)</p>
17	<p><b>UPS (5KVA)</b></p> <ul style="list-style-type: none"> <li>- Capacity: 05(KVA)</li> <li>- Voltage Range: 160V~280V AC, Single Phase</li> <li>- Power Factor: 0.8</li> <li>- Frequency Range (Hz): 50Hz ±10%</li> <li>- Waveform: Pure Sine Wave</li> <li>- Battery Voltage: 120V DC or better</li> <li>- Temperature Operating: 0~45°C, Storage: -10°C ~ 55°C</li> <li>- Noise: Noise Level &lt;50 DB, (1 meter)</li> <li>- Protection: Battery Low Voltage, Overload, Short Circuit and Over/Voltage</li> <li>- Quality: ISO 9000, ISO 14001, ISO 27001, BIS, RoHS</li> </ul>
18	<p><b>Battery</b> Sealed maintenance free 12V 62AH battery, should be not less than 7440VAH</p>
19	<p><b>Servo Stabilizer</b></p> <ul style="list-style-type: none"> <li>- Capacity: 5 KVA</li> <li>- General Technology: Variac with Buck-Boost Transformer</li> <li>- Control Type: Micro Processor</li> <li>- Operating Environment Temp.: 0-45° C</li> <li>- 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: Continuous</li> <li>- Over Load Capacity: Up to 150% for 5 to 10 mins</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. Output protection through MCB</li> <li>- Construction: MS Sheet body, Powder Coated</li> <li>- Mounting: On Wheels</li> </ul>

Sl. No.	Virtual Classroom with Digital assessment
1	<p><b>Server</b></p> <ul style="list-style-type: none"> <li>- Processor: Intel Xeon/ AMD</li> <li>- Minimum 4 Cores, Base Clock 2.8 GHz</li> <li>- Cache 4 MB</li> <li>- Memory: 8GB DDR4 ECC RAM, expandable to 64GB</li> <li>- SATA Controller: On-board SATA RAID Controller</li> <li>- HDD: 1 x 480GB SSD or higher, 1 x 1TB SATA HDD 7200 RPM</li> <li>- Display Port: 1 x VGA or DP, 1 x HDMI. Necessary cards can be added to achieve the solution requirement</li> <li>- Audio: 1 x Mic in, 1 x Audio out</li> <li>- USB: 3.1 Gen1, USB 2.0 Ports</li> <li>- Connectivity: 2 x RJ45 Gigabit Ethernet LAN ports</li> <li>- Input Device: USB Key Board &amp; USB Optical Mouse</li> <li>- Power Supply: Maximum 350W Power Supply</li> <li>- Operating System: Ubuntu 20.04 (64 bit) pre-installed</li> <li>- Out-of-Band Management Port: Dedicated 1 x 1G RJ45 with advanced license from Server hardware OEM.</li> <li>- Common Criteria certification: Minimum EAL2 or higher</li> <li>- Remote Support : As servers shall be deployed in remote locations, to maintain the uptime with remote IT support across all locations vendor should enable proactive support with automated support call logging for hardware RMA.</li> </ul>



**2**

**Interactive Flat Panel**

- Size (Diagonal): 75 inches
- Panel Technology: Direct type LED
- Brightness: 350 cd/m2 or higher
- Resolution: UHD (3840 x 2160-HDR10)
- Display Colors: 1.07 billion
- Viewing angle: 178 degrees
- - Screen Treatment: 7H or better
- Contrast Ratio (typical): 1200:1
- Panel Life Time (Min.): 30000 Hrs
- Active Area (H x V): 1428 x 804 mm or better
- Operating Humidity: 90%
- Refresh Rate: 60Hz
- Deep Standby: 0.5W
- Video Input: 1xHDMI2.0
- Audio Input/output: Line IN / Line OUT
- External Control: RJ45
- USB: 1 x Type B for Touch
- Touch Interactivity: IR Technology
- Continuous Touch Points: 10 Points
- Sensitivity: Any Touch with Finger, gloved hand or pointer
- Glass Type: Anti-Glare (AG), 3mm Tempered
- Response Time: 10mS or better
- Touch Accuracy: +/-2mm (90% area)
- Operating Temperature: +40 degree Celsius / 0 degree Celsius
- Power Supply: 100~240V
- Power Consumption: 420 W Typical or better
- Built-in Android version: ANDROID 11.0 or higher
- ROM: 32 GB
- RAM: 4 GB
- Built-in Speakers: Minimum 15W x 2 Speakers
- OEM Having Service Centre in Odisha / Not blacklisted in any Govt. Organization
- OEM ISO Certificate/MAF: Required
- OEM Having minimum 10 Years Establishment in India

3	<p><b>MFP PRINTER</b></p> <ul style="list-style-type: none"> <li>- Standard Functions: Digital Copier/Printer/Scanner</li> <li>- Type: Desktop- Memory: 32 MB or Better</li> <li>- Type of Originals: Sheets- Max. Original Size: A4</li> <li>- Output Size: A4</li> <li>- Paper Capacity: Standard 150 sheets</li> <li>- Warm-up Time: Less than 33 Sec</li> <li>- Copy Speed: 17 ppm or better</li> <li>- Resolution: 600 dpi x 400 dpi</li> <li>- Exposure Modes: Standard</li> <li>- Scanner Type: Flatbed Scanner</li> <li>- Driver: Twain</li> <li>- Scanning Size: Max. A4</li> <li>- Scanning Resolution: 150 dpi x 150 dpi, 300 dpi x 300 dpi, 600 dpi x 400 dpi</li> <li>- Supported OS: Windows 10, Windows 2008 / 2008 R2/2012 / 2012 R2 / Red Hat Enterprise Linux5 / SUSE Linux Enterprise Desktop</li> <li>- Interface: USB 1.1 / 2.0 equivalent</li> <li>- Power Consumption: 800 W or less</li> <li>- Power Requirement: AC220 to 240 V (50/60 Hz)</li> </ul>
4	<p><b>Virtual Classroom Software</b> As per the RFP needs</p>
5	<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 Size (max): 0 to infinity</li> <li>- Cable Length: 5 Feet or more base on the requirement</li> <li>- Brightness: Auto brightness</li> <li>- Privacy Cover: Yes</li> <li>- Indicator Lights: Activity/Power</li> <li>- Connection Type; USB</li> <li>- Certification: BIS</li> <li>- OEM: ISO 9001</li> </ul>
6	<p><b>MIC</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 indicating power of cells</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: Red Led for Power ON, Green LEDs for RF indication</li> <li>- Frequency Stability: 0.01%</li> <li>- Audio Output: 0-50mV</li> </ul>
<p><b>7</b></p>	<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/USB A Port</li> <li>- Should be integrated with Virtual Classroom application</li> </ul> <p><b>Transmitter Devices - 50Nos.</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 Odia &amp; English languages</li> <li>- Min 10 buttons with Functional Test report*#</li> <li>- Two 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>- Optionally 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: Dual/Single LED with various status indication</li> <li>- ID Address mapping from Application for real-time Roll number allocation</li> <li>- Transmission distance: around 30meters*#</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>- Color coded (Red, Green, Yellow, Blue)</li> <li>- Transmitting Distance of 10-30 meters controllable from application real-time</li> <li>- Should be operable by replaceable two AA/AAA/Button cell</li> <li>- OEM Should be ISO certified</li> <li>- Should be ROHS Compliant*#</li> <li>- Storage Rack should hold 50+Transmitter devices</li> </ul> <p>*#Testing Certificate from Government/ Government authorized testing LAB required</p>
<p><b>8</b></p>	<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.</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 .8mm and if wood to be used then 17mm natural wood color MDF sheet.</li> </ul>

<p><b>9</b></p>	<p><b>Wi-Fi Router</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>
<p><b>10</b></p>	<p><b>UPS</b></p> <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 with single battery bank</li> <li>- Technology      Microprocessor based, PWM with IGBT based, Phase neutral reversal protection</li> <li>- 1 KVA UPS designed with 0.8 output power factor with</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, Autosensing</li> <li>- Input Power Factor      ≥0.99</li> </ul> <p><b>OUTPUT</b></p> <ul style="list-style-type: none"> <li>- Power Factor: 0.8</li> <li>- Nominal Output Voltage: 220/230VAC</li> <li>- Voltage regulation: ± 1% static, ± 5% 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): &lt; 3% (linear load); &lt;5% (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: &lt; 4ms</li> <li>- Maintenance/Manual: Bypass              Automatic &amp; Manual</li> <li>- DC Ripple factor: ≤1%</li> <li>- Efficiency: Overall (Ac to AC): &gt; 88%</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: &lt;60 dBA at 1-meter distance</li> <li>- Pulse shape: Half-sine</li> <li>- CERTIFICATIONS</li> </ul>

	<ul style="list-style-type: none"> <li>○ ISO Certification: BIS Certificate, ISO 9001:2015, ISO14001:2015, ISO 27001:2013 (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 Odisha.</li> </ul>
11	<p><b>Battery:</b></p> <ul style="list-style-type: none"> <li>- The battery back-up time should be 60 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.</li> </ul> <p>Battery housing should be compact and space saving MS Steel Open Racks complete with interconnectors.</p>
12	<p><b>Servo Stabilizer</b></p> <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: 90V 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</li> <li>- Construction: MS sheet body with powder coated</li> </ul>

## 17. Detailed Bill of Material

### A. Main Studio Setup ( 4 Nos)

SI. No	BOM for Studio Description	Quantity
1	Digital Video Camera	2
2	Video Switcher	1
3	Audio mixer	1
4	Camera Tripod	2
5	Teleprompter	1
6	Microphone: Cordless	2
7	Wired Mic	2
8	Audio System	1
9	Digital Pad	1
10	Multi-touch Interactive Panel with Laptop	1
11	55 inches Professional Display	3
12	Interactive panel 85 inches	1
13	Transmission Server	1
14	Laptop with HDMI output	1
15	Preview Setup -Laptop with Application Software	1
16	LED Lights with ceiling mount movable Grid and mounting clamps	6
17	Video light	2
18	Editing Setup	1
19	Furniture	1
20	Earthing + Cabling & Installation + Integration + Testing	1
21	Accessories for integration	1
22	Acoustic, Fabric Above Acoustics, Green Screen(Chroma key) with Air Condition	1
23	UPS (10KVA) for Main studio	1
24	Light board 7 '*4 '	1
25	Servo Stabilizer (10KVA)	1

### B. Regional Studio Setup (8 Nos)

Sl. No	BOM for Studio Description	Quantity
1	Digital Video Camera	1
2	Camera Tripod	1
3	Microphone: Cordless	1
4	Audio System	1
5	Digital Pad	1
6	Multi-touch Interactive Panel with 14" Laptop	1
7	Teleprompter	1
8	55 inches Professional Display	1
9	Transmission Server	1
10	Laptop with HDMI output	1
11	Preview Setup -Laptop with Application Software	1
12	LED Lights with ceiling mount movable Grid and mounting clamps	2
13	Furniture	1
14	Installation and Integration	1
15	Accessories for integration	1
16	Acoustic and Sound proofing with Air Condition	1
17	UPS (5KVA) for 2 hours backup	1
18	Servo Stabilizer (5KVA)	1

### C. Virtual Classroom with Digital Assessment (5370 Nos)

Sl. No	BOM for Virtual Classroom	Sl. No
1	Server	1
2	75" Touch Screen IFPD	1
3	MFP Printer	1
4	Virtual Classroom Application Software	1
5	HD Camera	1
6	Mic System	1
7	Student Digital Assessment Sets (50 tools + 1 receiver)	1
8	e-Podium	1
9	Wi-Fi router per classroom and accessories like cables, Extension box, Connectors	1
10	1 KVA UPS	1
11	Battery 1520 VAH for backup	1
12	Integration and Installation	1
13	2 KVA Servo Stabilizer	1

Note:

- (1) Satellite connectivity and associated hardware are considered as managed services to be provided by the bidder, hence not considered as a part of the BOQ/BOM.
- (2) OCAC has specified minimum requirements in the RFP, and any bidder quoting higher specifications is always acceptable.
- (3) OCAC reserves the right to change the bill of quantity as well as bill of material as per the requirement of the project.
- (4) Following OEM/ Developers of the Software should submit a No Objection Certification on a stamp paper valued Rs.100 that they shall submit the source code of the application to School & Mass Education Department, Government of Odisha with Perpetual License for usage in any number of Government Schools in Odisha with no objection to the Department modifying and making use of the same or modified applications in any Government Schools in Odisha.
  - Content Management & Distribution System
  - Student Digital Analytics System
  - Mobile App based Learning Management System
  - Program Monitoring Dashboard
  - Student Information System
  - Asset Management System



## 18. Annexures

### A. Annexure-1: Particulars of the Bidders

Sl. No.	Information Sought	Details to be Furnished
1	Name of the bidding Company	
2	Address of the Company	
3	Incorporation status of the firm (Public limited / Private limited, etc.)	
4	Year of Establishment	
5	Date of registration	
6	RoC Reference No.	
7	Details of company registration	
8	Details of registration with appropriate authorities for GST	
9	Name, Address, e-mail ID, Phone nos. and Mobile Number of Contact Person	
10	Roles & Responsibilities	

Name of the Bidder: .....

Authorized Signatory: .....

Signature: Seal: Date: Place:

**B. Annexure-2: Bidder's Authorization Certificate**

*(To be filled by the Bidder)*

To,

The General Manager (Admn.)  
Odisha Computer Application Centre (OCAC)  
OCAC Building, Plot No.-N-1/7-D, Acharya Vihar Square,  
RRL Post Office, Bhubaneswar-751013

I/ We {Name/ Designation} hereby declare/ certify that {Name/ Designation} is hereby authorized to sign relevant documents on behalf of the company/ firm in dealing with RFP Enquire No: **OCAC-SEGP-INFRA-0056-2024/24001, Dated 05/01/2024**. He/ She is also authorized to attend meetings & submit technical & commercial information/ clarifications as may be required by you in the course of processing the Bid. For the purpose of validation, his/ her verified signatures are as under.

Thanking you,

Name of the Bidder: -

Verified Signature

Authorized Signatory :-

Seal of the Organization: -

Date:

Place:

### C. Annexure-3: RFP Form

(To be filled by the Bidder)

1. Addressed to:

<b>Name of the Tendering Authority</b>	The General Manager (Admin.)
<b>Address</b>	Odisha Computer Application Centre (OCAC) OCAC Building, Plot No.-N-1/7-D, Acharya Vihar Square, RRL Post Office, Bhubaneswar-751013 (INDIA)
<b>Telephone</b>	0674-2567280 / 2567064 /2567295 / 2588283
<b>Tele Fax</b>	0674-2567842
<b>Email</b>	gm_ocac@ocac.in

2. Firm Details:

<b>Name of Firm</b>				
<b>Name of CMD of the firm with email id, contact number</b>				
<b>Name of Contact Person with Designation</b>				
<b>Registered Office Address</b>				
<b>Address of the Firm</b>				
<b>Year of Establishment</b>				
<b>Type of Firm Put Tick (✓) mark</b>	Public Limited	Private Limited	Partnership	Proprietorship
<b>Telephone Number(s)</b>				
<b>Email Address/ Web Site</b>	Email:		Web-Site:	
<b>Fax No.</b>				
<b>Mobile Number</b>	Mobile:			
<b>Certification/Accreditation/Affiliation, if Any</b>				

3. The requisite tender fee amounting to Rs.   /- (Rupees <in words>) has been deposited vide DD/BC/  
receipt no.    dated
  
4. The requisite EMD amounting to Rs.        /-        (Rupees        <in        words>)        has        been  
deposited vide Bank Guarantee / DD No.        dated        . (If applicable)
  
5. We agree to abide by all the terms and conditions mentioned in this form issued by the Empanelment  
Authority and also the further conditions of the said notice given in the attached sheets (all the pages  
of which have been signed by us in token of acceptance of the terms mentioned therein along with  
stamp of the firm).

Date:

Name & Seal of the firm: \_\_\_\_\_

Authorized Signatory: \_\_\_\_\_

**D. Annexure-4: Self-Declaration**

*(Non-blacklisted in company Letter Head)*

To  
The General Manager (Admin)  
Odisha Computer Application Centre  
(Technical Directorate of I.T. Dept., Govt. of Odisha)  
N-1/7-D, Acharya Vihar P.O. - RRL, Bhubaneswar - 751013

Sir

In response to the RFP Enquire **No: OCAC-SEGP-INFRA-0056-2024/24001, Dated 05/01/2024**, for RFP titled "Selection of Agency for the Implementation, Operations, and Maintenance of Virtual Classrooms with Digital Assessment", as an owner/ partner/ Director of (organization name)

\_\_\_\_\_ I/We hereby declare that presently, as on date of submission of this bid our Company/ firm is not under any declaration of ineligible for corrupt & fraudulent practices, blacklisted indefinitely by any State/ Central government/PSU.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Thanking you,

Name of the Bidder: .....

Authorized Signatory: .....

Signature: Seal:

Date:

Place:

**E. Annexure-5: Project Citation Format**

*(To be filled by the Bidder)*

<b>Relevant IT Project Experience</b>	
<b>General Information</b>	
Name of the project	
Client for which the project was executed	
Name and contact details of the client	
<b>Project Details</b>	
Description of the project	
Scope of services	
<b>Other Details</b>	
Total cost of the project	
Duration of the project (no. of months, start date, completion date, current status)	

Name of the Bidder: .....

Authorized Signatory: .....

Signature: Seal:

Date:

Place:

## F. Annexure-6: Financial Capabilities

(To be filled by the Bidder)

Bidder should provide financial capability details for the latest three financial years.  
(2020-21, 2021-22, 2022-23)

Turnover (Rs. In Crores)		
2020-21	2021-22	2022-23
Net worth (Rs. In Crore)		
2020-21	2021-22	2022-23

Name of the Bidder: .....

Authorized Signatory: .....

Signature: Seal:

Date:

Place:

## G. Annexure-7: Financial Bid Cover Letter and Format

(To be filled by the bidder and signed in Company Letter Head)

Location:

Date:

To

The General Manager (Admin)  
Odisha Computer Application Centre  
(Technical Directorate of I.T. Dep't, Govt. of Odisha)  
N-1/7-D, Acharya Vihar P.O. - RRL, Bhubaneswar – 751013

**Subject:** Submission of the financial bid for Selection of Agency for the Implementation, Operations and Maintenance of Virtual Classrooms with Digital Assessment

RFP Enquire No: **OCAC-SEGP-INFRA-0056-2024/24001, Dated 05/01/2024.**

Dear Sir/Madam,

We, the undersigned, offer to provide the services in accordance with your Request for Proposal cited above and our Proposal (Technical and Financial Proposals). Our attached Financial Proposal is for the sum of [*Amount in words and figures*] for 5 Years support & update. This amount is inclusive of the applicable taxes.

### 1. Price and Validity

All the prices mentioned in our RFP are in accordance with the terms as specified in the RFP documents. We declare that our Bid Price is for the entire scope of the work as specified in the appropriate section in the RFP. All the prices and other terms and conditions of this Bid are valid minimum for a period 180 days from the date of opening of the Bid. However, we also confirm that our price bid will remain valid for 1 years from the opening date, if selected.

We understand that the actual payment would be made as per the existing tax rates during the time of payment.

### 2. Unit Rates

We have indicated in the relevant forms enclosed, the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.

### 3. Qualifying Data

We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our bid, we agree to furnish the same in time to your satisfaction.



#### 4. Bid Price

We declare that our Bid Price is for the entire scope of the work as specified in the RFP. These prices are indicated at Price Bid attached with our bid as part of the Bid.

We understand you are not bound to accept any tender you receive.

We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.

We understand that our bid is binding on us and that you are not bound to accept a bid you receive. Thanking you, we remain,

Yours sincerely,

Authorized Signature:

Name and Title of Signatory: Name of Firm:

Address:

## H. Annexure-8: Manufacturer's Authorization Form(MAF)

(To be submitted in OEM Letterhead)

Letter No. \_\_\_\_\_

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

To

The General Manager (Admin)  
Odisha Computer Application  
Centre  
Plot No. - N-1/7-D, Acharya Vihar,  
P.O. RRL, Bhubaneswar – 751013

Sub: OEM Authorization Letter

RFP Enquire No: **OCAC-SEGP-INFRA-0056-2024/24001, Dated 05/01/2024.**

Dear Sir

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

We hereby extend our full guarantee and support for the Solution, Products, and Services offered by the above firm against this Bid Invitation.

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 and should be signed by a person competent and having the power of attorney to bind the manufacturer.

## I. Annexure-9: Covering Letter – Technical Bid

(To be filled by the bidder and signed in Company Letter Head)

To  
The General Manager (Admin)  
Odisha Computer Application Centre  
(Technical Directorate of I.T. Dep't, Govt. of Odisha)  
N-1/7-D, Acharya Vihar P.O. - RRL, Bhubaneswar - 751013

**Subject:** Technical Proposal for Selection of Agency for the Implementation, Operations and Maintenance of Virtual Classrooms with Digital Assessment vide RFP Enquire No: **OCAC-SEGP-INFRA-0056-2024/24001, Dated 05/01/2024.**

Sir/Madam,

We, the undersigned, offer to provide our services against your RFP enquiry no. <Insert RFP no>dated <insert date>. We are hereby submitting our Proposal, which includes this Technical Bid sealed in the envelope.

We hereby declare that all the information and statements made in this Technical bid are true and accept that any misinterpretation contained in it may lead to our disqualification.

We agree to abide by all the terms and conditions of the tender document. We would hold the terms of our bid valid for 180 days as stipulated in the RFP document.

We agree that you are not bound to accept the lowest or any bid response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products / services specified in the bid response without assigning any reason whatsoever.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company /firm/organization and empowered to sign this document as well as such other documents which may be required in this connection.

Yours sincerely,

Authorized Signature [*In full and initials*]: \_\_\_\_\_ Name and

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

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

## **J. Annexure-10: Acceptance of Terms & Conditions**

To,

The General Manager (Admin)  
Odisha Computer Application Centre  
(Technical Directorate of I.T. Dep't, Govt. of Odisha)  
N-1/7-D, Acharya Vihar P.O. - RRL, Bhubaneswar - 751013

Sir,

I have carefully gone/examined through the Terms & Conditions mentioned in "RFP for Selection of Agency for Implementation, Operations and Maintenance of Virtual Classroom with Digital Assessment", RFP Enquire No: **OCAC-SEGP-INFRA-0056-2024/24001**, Dated 05/01/2024 and I declare that all the previous/clause mentioned in this RFP Document are acceptable to my company. I further certify that I am an authorized signatory of my company and am, therefore, competent to make this declaration.

Authorized Signatory Name:

Designation:

**K. Annexure-11: Main Studio Equipment Compliance sheet ( 4 Nos)**

<b>Sl. No</b>	<b>BOM for Studio Description</b>	<b>Quantity</b>	<b>OEM</b>	<b>Technical Compliance (Yes/NO)</b>
1	Digital Video Camera	2		
2	Video Switcher	1		
3	Audio mixer	1		
4	Camera Tripod	2		
5	Teleprompter	1		
6	Microphone: Cordless	2		
7	Wired Mic	2		
8	Audio System	1		
9	Digital Pad	1		
10	Multi-touch Interactive Panel with Laptop	1		
11	55 inches Professional Display	3		
12	Interactive panel 85 inches	1		
13	Transmission Server	1		
14	Laptop with HDMI output	1		
15	Preview Setup -Laptop with Application Software	1		
16	LED Lights with ceiling mount movable Grid and mounting clamps	6		
17	Video light	2		
18	Editing Setup	1		
19	Furniture	1		
20	Earthing + Cabling & Installation + Integration + Testing	1		
21	Accessories for integration	1		
22	Acoustic, Fabric Above Acoustics, Green Screen(Chroma key) with Air Condition	1		
23	UPS (10KVA) for Main studio	1		
24	Light board 7 '*4 '	1		
25	Servo Stabilizer (10KVA)	1		

### L. Annexure-12: Regional Studio Equipment Compliance sheet ( 8 Nos)

Sl. No	BOM for Studio Description	Qty	OEM	Technical Compliance (Yes/NO)
1	Digital Video Camera	1		
2	Camera Tripod	1		
3	Microphone: Cordless	1		
4	Audio System	1		
5	Digital Pad	1		
6	Multi-touch Interactive Panel with 14" Laptop	1		
7	Teleprompter	1		
8	55 inches Professional Display	1		
9	Transmission Server	1		
10	Laptop with HDMI output	1		
11	Preview Setup -Laptop with Application Software	1		
12	LED Lights with ceiling mount movable Grid and mounting clamps	2		
13	Furniture	1		
14	Installation and Integration	1		
15	Accessories for integration	1		
16	Acoustic and Sound proofing with Air Condition	1		
17	UPS (5KVA) for 2 hours backup	1		
18	Servo Stabilizer (5KVA)	1		

### M. Annexure-13: Virtual Classroom Compliance sheet (5370 Nos)

Sl. No	BOM for Virtual Classroom	Qty	OEM	Technical Compliance (Yes/NO)
1	Server	1		
2	75" Touch Screen IFPD	1		
3	MFP Printer	1		
4	Virtual Classroom Application Software	1		
5	HD Camera	1		
6	Mic System	1		
7	Student Digital Assessment Sets (50 tools + 1 receiver)	1		
8	e-Podium	1		
9	Wi-Fi router per classroom and accessories like cables, Extension box, Connectors	1		
10	1 KVA UPS	1		
11	Battery 1520 VAH for backup	1		
12	Integration and Installation	1		
13	2 KVA Servo Stabilizer	1		

## N. Annexure-14 : Document Check-list

This sheet must be filled up and submitted

(in case document is not required for any item please mention **Not Applicable**)

Sl#	Document required	Reference	Remark, if any
1	Prim bidder's Certificate of Incorporation		
2	Consortium Partner's Certificate of Incorporation (Partner-1)		
3	Consortium Partner's Certificate of Incorporation (Partner-2)		
4	Agreement of Prime bidder with consortium Partner-1		
5	Agreement of Prime bidder with Consortium Partner-2		
6	Earnest Money Deposit (EMD) of ₹3,00,00,000/- (Rupees Three Crores only)		
7	ISO 9001-2015 certificate of Prime bidder/consortium partner		
9	ISO 27001 certificate of Prime bidder/consortium partner		
10	Audited balance sheet for last three years ending with 31-Mar-2023 in support of turnover		
11	Chartered Accountant's Certificate in support of turnover and positive net worth		
12	Satisfactory Work completion certificates from the client +Copy of the Work Order/PO/ Agreement <b>OR</b> Copy of Work Order/ PO/ Agreement + Go-LIVE Certificate from the client for ongoing projects  in support of Virtual Classroom/Digital Classrooms/E- Classrooms project		
13	Satisfactory Work completion certificates from the client +Copy of the Work Order/PO/ Agreement <b>OR</b> Copy of Work Order/ PO/ Agreement + Go-LIVE Certificate from the client for ongoing projects  in support of XC & KU band connectivity project		
14	Satisfactory Work completion certificates from the client +Copy of the Work Order/PO/ Agreement <b>OR</b> Copy of Work Order/ PO/ Agreement + Go-LIVE Certificate from the client for ongoing projects  in support of experience in implementation of student analytics solution in minimum 500 schools		

15	<p>Satisfactory Work completion certificates from the client +Copy of the Work Order/PO/ Agreement</p> <p style="text-align: center;"><b>OR</b></p> <p>Copy of Work Order/ PO/ Agreement + Go-LIVE Certificate from the client for ongoing projects</p> <p>in support of experience in supply Digital content under Virtual Classroom/ Digital Classrooms/E-Classrooms for at least 500 Schools/colleges/institutions</p>		
16	Non-Black listing Agreement by Prime Bidder. (Annexure-4)		
17	Non-Black listing Agreement by Consortium Partner-1 (Annexure-4)		
18	Non-Black listing Agreement by Consortium Partner-2 (Annexure-4)		
19	VSAT-VNO license agreement (if Any)		
20	Consent of VSAT service provider to provide VSAT services to the VNO for the entire service period		
21	Annexure-1 : Particulars of the Bidder		
22	Annexure-2 : Bidders' Authorization Certificate		
23	Annexure-3 : RFP Form		
24	Annexure-8: Manufacturer's Authorization Form (MAF) for each product.		
25	Annexure-5: Project citation		
26	Annexure-6 : Financial capability		
27	Annexure-7: Financial bid Cover Letter		
28	Annexure-9: Cover letter -Technical bid		
29	Annexure-10: Acceptance of Terms and conditions		
30	Annexure-11 : Main Studio Equipment Compliance sheet		
31	Annexure-12 : Regional Studio Equipment Compliance sheet		
32	Annexure-13 : Virtual Classroom Compliance sheet		
33	Annexure-14 : Document Ckecklist		



**O. Annexure-15: PRICE BID FORMAT**

<b>[A] Item Wise Price Schedule for One (01) Main Studio Setup</b>						
<b>SL.No.</b>	<b>Item</b>	<b>Quantity (a)</b>	<b>Unit Cost (in Rs.) (b)</b>	<b>Taxes (in Rs.) (c)</b>	<b>Total Cost (in Rs.) (d=b+c)</b>	<b>Total Amount (in Rs.) (e=axd)</b>
1.	As per BOQ Item list from 1 to 25 (Annexure-11)	01				
<b>Total Cost Including GST @ One (01) Main Studio Setup For 5 Years</b>						
<b>[A] Total Cost Including GST for 04 Nos of Main Studio Setup For 5 Years</b>						

<b>[B] Item Wise Price Schedule for One (01) Regional Studio Setup</b>						
<b>SL.No.</b>	<b>Item</b>	<b>Quantity (a)</b>	<b>Unit Cost (in Rs.) (b)</b>	<b>Taxes (in Rs.) (c)</b>	<b>Total Cost (in Rs.) (d=b+c)</b>	<b>Total Amount (in Rs.) (e=axd)</b>
1.	As per BOQ Item list from 1 to 18 (Annexure-11)	01				
<b>Total Cost Including GST @ One (01) Regional Studio Setup For 5 Years</b>						
<b>[B] Total Cost Including GST for 08 Nos of Regional Studio Setup For 5 Years</b>						

<b>[C] Item Wise Price Schedule for One (01) Virtual Classroom with Digital Assessment</b>						
<b>SL.No.</b>	<b>Item</b>	<b>Quantity (a)</b>	<b>UnitCost (inRs.) (b)</b>	<b>Taxes (inRs.) (c)</b>	<b>TotalCost (inRs.) (d=b+c)</b>	<b>TotalAmount (inRs.) (e=axd)</b>
1.	As per BOQ Item list from 1 to 13 (Annexure-11)	01				
<b>Total Cost Including GST @ One (01) Virtual Classroom with Digital Assessment For 5 Years</b>						
<b>[C] Total Cost Including GST for 5370 Nos of Virtual Classroom with Digital Assessment For 05 Years</b>						

<b>[D] Recurring Cost for 05 Years</b>						
<b>SL.No.</b>	<b>Item</b>	<b>Quantity (a)</b>	<b>UnitCost (inRs.) (b)</b>	<b>Taxes (inRs.) (c)</b>	<b>TotalCost (inRs.) (d=b+c)</b>	<b>TotalAmount (inRs.) (e=axd)</b>
1.	Operation and Management including Instructional Expenses, Digital Content, Training, Connectivity Support, Analytics, Assessment, Manpower and Support Charges for 01 year	01				
<b>Total Cost Including GST for the Operations &amp; Management @ One (01) Virtual Classroom with Digital Assessment per annum</b>						
<b>[D] Total Cost Including GST for the Operations &amp; Management at 5370 Virtual Classrooms with Digital Assessment for 05 years</b>						
<b>Grand Total Cost i.e. [A] + [B] + [C] + [D] Including GST for 05 Years</b>						

Note: –

- All the above price would be in INR only.
- The above price would include FIVE Years Warranty Support.
- The bidder has to compulsorily quote for all items mentioned in the Commercial-bid Tables. In case bidder fails to quote for any of this stage, the bid would be summarily rejected.
- Above is indicative, however the quantity may increase or decrease at the time of placing the purchase order as per actuals.
- The Tax rates to be mentioned as per standards.