



‘भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान तिरुवनंतपुरम
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
THIRUVANANTHAPURAM

(भारत सरकार, शिक्षा मंत्रालय/ Govt. of India, Ministry of Education)

मरुतामला.पी.ओ/ MARUTHAMALA.P.O, वितुरा/ VITHURA / तिरुवनंतपुरम/ THIRUVANANTHAPURAM - 695 551
केरला/ KERALA, भारत/ INDIA / फोन/ Phone: 0471-2778019 / ईमेल/ email: purchasestores@iisertvm.ac.in
GST 32AAAJIO299R1ZS

Tender No.: IISER/PUR/0587/PYS/IT/22-23

तारीख/ Date: 30 Jun 2023

Index for Invitation for Tender (IFT) (E-Procurement mode only)
(Global Tender Enquiry)

1. The Institute invites Two Cover Tenders from Class I, II and III suppliers, as per DPIIT order No. P-45021/2/2017-PP (BE-II) dated 04 Jun 2020 and MoF, Department of Expenditure order No. 5 1 -1 612020-T5.VII dated 02 Nov 2022 for the following items through the eProcurement System of National Informatics Centre, which enables the Tenderers to download the Tender Schedule free of cost and then submit the bids online through Central Public Procurement Portal of Government of India (<https://eprocure.gov.in/eprocure/app>.)

क्रम सं./ Sl. No	विवरण/ Description	Qty
1.	Supply, Installation and commissioning of Audio-Visual Facility and stage lighting for 500 seater auditorium and two 100 seater class rooms (refer Annexure 11 Technical Specifications)	As per annexure 11

2. Annexures enclosed: Bidders should follow the annexures before submission of bids:-

1.	Annexure 1	Instructions to Bidder for Online Bid Submission
2.	Annexure 2	Special conditions of tender
3.	Annexure 3	General Terms and conditions of Contract
4.	Annexure 4	Integrity Fact
5.	Annexure 5	Model bank guarantee format for EMD
6.	Annexure 6	Model bank guarantee format for performance security
7.	Annexure 7	Format for Tender Acceptance Letter
8.	Annexure 8	Format for Declaration of Local Content
9.	Annexure 9	Format for declaration regarding non-blacklisting
10.	Annexure 10	Format for declaration regarding land border
11.	Annexure 11	Detailed Technical Specifications
12.	Annexure 12	Check list of documents required to be uploaded in CPPP



3. All the correspondence in this regard should be done in favour of Deputy Registrar (Purchase & Stores), IISER Thiruvananthapuram referring the tender reference number. Email Id – purchasestores@iisertvm.ac.in
4. Please quote as per GFR 2017 and its amendment and with your lowest rate and shortest delivery period and as per Govt of India, Ministry of Commerce and Industry, DPIIT order No. P-45021/2/2017-PP (BE-II) dated 04 Jun 2020. Format for self-certification is given in **Annexure 10** of the tender document. Any non-compliance in this regard, the bid will not be considered in the category.
5. Online Bid Submission: The documents to be uploaded in the e-procurement module, should be in two envelopes / covers.
6. Failure to upload the annexures 7,8,9,10,11,12 in the enclosed format will lead to rejection of bids.
7. **ईएमडी/EMD: Rs. 5,60,000/- (Rupees Five lakh sixty thousand only)** स्टेट बैंक संग्रह द्वारा भुगतान करना चाहिए - निविदा संख्या और कंपनी का नाम उल्लेख किया जाना चाहिए। उद्धरण के साथ लेनदेन पर्ची / प्रिंट आउट या ईएमडी मूल्य के बराबर 90 दिनों की वैधता में बैंक गारंटी या बोलीदाता के उपक्रम जमा करना चाहिए।/ should be paid through State Bank Collect- Tender No & Company Name must be mentioned in the Remarks column. (<https://www.onlinesbi.com/sbicollect/icollecthome.htm> (State Bank Collect- Accept-Term and Conditions- Proceed-Select State **Kerala**-Select Type of Institution-**Educational Institution**- Select - **IISER Thiruvananthapuram**- Select Payment Category- **Stores and Purchase**) Quotes should accompany a copy of Transaction slip /Print out **OR** Bank guarantee equivalent **OR** Insurance Surety Bond to the EMD value with validity 90 days (should reach before tender due dates). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.



8. Details of covers to be uploaded in CPPP:-

<i>1st Envelope / Cover (Technical Bid)</i>		
Sl No	Contents	Format
1.	Compliance sheet as per specifications	PDF
2.	Detailed brochures, data sheets, catalogues etc. supporting the compliance of specifications	PDF
3.	Clientele list and details of TWO major installations in India	PDF
4.	Any other document as mentioned in the specifications or essential as per bidder	PDF
5.	All commercial terms and conditions of the bid (except price)	PDF
6.	Tender Acceptance letter, EMD and declarations as per checklist	PDF
<i>2nd Envelope / Cover (Price Bid)</i>		
1.	Price bid: item-wise prices for the items mentioned in the Technical Bid (clearly mentioning the break Tax/ Duty / other charges etc.)	Excel (.xls)

NOTE:

- Please note being an Institute under Ministry of Education, Govt of India, the Institute will not entertain any type of advance payment for the equipment, AMC or any other services.

Detailed Specifications:

Please refer Annexure 11



Deputy Registrar (Purchase & Stores)



Invitation for Tender (E-Procurement mode only)

1	Work / Item Description	Supply, Installation and commissioning of Audio-Visual Facility and stage lighting for 500 seater auditorium and two 100 seater class rooms (refer Annexure 11 Technical Specifications)
2	Quantity Required	As per the Annexure 11
3	Tender Type	Open
4	Tender Reference No	IISER/PUR/0587/PYS/IT/22-23
5	Number of covers (1/2/3/4)	2 ((Technical and Financial))
6	Date of Issue/Publishing	30 Jun 2023
7	Document Download/Sale Start Date	30 Jun 2023
8	Document Download/Sale End Date	20 Jul 2023 (1500 Hrs)
9	Clarification End Date	07 Jul 2023
10	Last Date and Time for Uploading of Bids	20 Jul 2023 (1500 Hrs)
11	Date and Time of Opening of Technical Bids	21 Jul 2023 (1530 Hrs)
12	Date of Opening of Price Bid	will be intimated later
13	Tender Fee (INR)	Nil
14	EMD Amount (INR)	Rs.5,60,000/- (Rupees Five lakh sixty thousand only)
15	Detailed Specifications	As per annexure 11

1. Please note being an Institute under Ministry of Education, Govt of India, the Institute will not entertain any type of advance payment for the equipment, AMC or any other services.


Deputy Registrar (Purchase & Stores)



ANNEXUE: 1
Instructions for Online Bid Submission

- 1) The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.
- 2) More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.
- 3)
- 4) REGISTRATION**
- 5) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "Online bidder Enrollment" on the CPP Portal which is free of charge.
- 6) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 7) 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 from the CPP Portal.
- 8) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 9) Only one 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.
- 10) 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.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) 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, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" 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.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.



SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) 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 BoQ 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 BoQ file, open it and complete the white coloured (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 BoQ file is found to be modified by the bidder, the bid will be rejected.
- 6) 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.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 9) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 10) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) 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.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

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The document 'Instructions To Bidder for Online Bid Submission' is downloadable from :
<https://eprocure.gov.in/eprocure/app?page=StandardBiddingDocuments&service=page>



ANNEXURE- 2 :
SPECIAL CONDITIONS OF CONTRACT

1.1. ELIGIBLE BIDDERS.

- 1.1.1 This Invitation for Bids is open to all suppliers.
- 1.1.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

1.2. COST OF BIDDING

- 1.2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

1.3. FRAUD AND CORRUPTION:

- 1.3.1 The purchaser requires that the bidders/suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts.
- 1.3.2 The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;

The Bidding Documents

1.4. COST OF BIDDING DOCUMENTS

- 1.4.1 Interested eligible bidders may download the document from our Website. However the bid document cost to be paid during the submission of the bid.

1.5. CONTENT OF BIDDING DOCUMENTS

- 1.5.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents which should be read in conjunction.
- 1.5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. **Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.**

1.6. CLARIFICATION OF BIDDING DOCUMENTS

- 1.6.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing via fax/email. The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than ten (10) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all those who have acquired the Bidding Documents directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under clause relating to amendment of Bidding documents and Clause relating to Deadline for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the purchaser for the benefit of the other prospective bidders.

1.7. AMENDMENT OF BIDDING DOCUMENTS

- 1.7.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 1.7.2 All prospective bidders who have received the bidding documents will be notified of the amendment in writing or by e-mail and will be binding on them. The same would also be hosted on the website of the purchaser and all prospective bidders are expected to surf the website before submitting their bids to take cognizance of the amendments.
- 1.7.3 In order to allow prospective bidders reasonable time to take the amendment into account, while in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids and host the changes on the website of the purchaser.
- 1.7.4 In case of any amendment to the bid, it will be done at least 7 days before due date and will be published in website. Bidders are required to keep this in view before submission. Normally extension of due date will not be entertained. However in special cases if due date is extended, it will be notified under the same tender notice before 3 days of due date.

PREPARATION OF BIDS

1.8. LANGUAGE OF BID

- 1.8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only especially when the details are technical. However of GOI makes it mandatory under Rajbhasha Abhnyam in that case views of Rajbhasha unit of IISER-TVM may be sought.
- 1.8.2 The Supplier shall bear all costs of translation, if any, to the English language and all risks of the accuracy of such translation, for documents provided by the Supplier.

1.9. DOCUMENTS COMPRISING THE BID

- 1.9.1 The bid prepared by the Bidder shall include:
- a) Bidder Information
 - b) Bid security as specified in the Invitation to Bids.
 - c) Service support details
 - d) Deviation Statement if any.



- e) Performance Statement.
- f) Manufacturer's Authorization.
- g) Documentary evidence establishing that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.
- h) Bid form.
- i) Documents establishing goods eligibility and conformity to bidding documents.
- j) Applicable Price Schedule Form.
- k) DGS&D Registration certificate in case the items under procurement falls under the restricted category of the current export-import policy of the Govt. of India.

1.10. BID FORM AND PRICE SCHEDULE

1.10.1 The bidder shall complete the Bid with the appropriate price schedule.

1.11. BID PRICES

1.11.1 The Bidder shall indicate on the appropriate price schedule, the unit prices and total bid prices of the goods it proposes to supply under the contract.

1.11.2 Prices indicated on the price-schedule form shall be entered separately in the following manner:

(A) FOR GOODS MANUFACTURED WITHIN INDIA

(i) The price of the goods quoted Ex-works including taxes already paid.

(ii) VAT and other taxes like excise duty etc [**shall be shown extra**] which will be payable on the goods if the contract is awarded.

a. The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule.

b. The installation, commissioning and training charges including any incidental services, if any.

(B) FOR GOODS MANUFACTURED ABROAD (if not specified in Annexure 9)

Bidders are required to show break-up of Ex-works [which should include packing and handling charges], FOB/FCA and CIF/CIP price in the quotation. IISERTVM has a mechanism for consolidation and customs clearance. The consolidators will be nominated for this purpose at the time of awarding the contract if desires so.

(i) The price of the goods, quoted on FCA (named place of delivery abroad) or FOB (named port of shipment), as specified in the price schedule.

(ii) The charges for insurance and transportation of the goods to the port/place of destination.

(iii) **The agency commission charges should be shown, if any.**

(iv) The installation, commissioning and training charges including any incidental services, if any

1.11.3 **The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.**

1.11.4 Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc. such offer shall be rejected as incomplete.

1.11.5 The price quoted shall remain fixed during the contract period and shall not vary on any account

1.11.6 All lots and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced their prices shall be assumed to be included in the prices of other items. Lots or items not listed in the Price Schedule shall be assumed to be not included in the bid.

1.11.7 **Taxes & Duties: At actuals. The purchases made by the purchaser for scientific purpose are exempt from Custom Duty under notification 51/96.**

1.12. BID CURRENCIES

1.12.1 Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries.

1.13. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS

1.13.1 The bidder shall furnish, as part of its bid, documents establishing the bidders' eligibility to bid and its qualification to perform the contract if its bid is accepted.

1.13.2 The documentary evidence of the bidders qualification to perform the contract if the bid is accepted shall establish to the purchasers satisfaction that;

(a) The bidder meets the qualification criteria listed in bidding documents, if any.

(b) Bidder that doesn't manufacture the goods it offers to supply shall submit to Manufacturers' Authorization Form (MAF) to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and/or supply the goods.

(c) In case a bidder not doing business within India, it shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period.

1.13.3 Conditional tenders shall not be accepted

1.14. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS

1.14.1 To establish the goods' eligibility, the documentary evidence of the goods and services eligibility shall consist of a statement on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.

1.14.2 To establish the conformity of the goods and services to the specifications and schedule of requirements of the bidding document, the documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:

(a) A detailed description of the essential technical and performance characteristics of the goods;



- (b) A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period following commencement of the use of the goods by the Purchaser in the Priced bid; and
- (c) An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- 1.14.3 For purposes of the commentary to be furnished pursuant to above, the Bidder shall note that standards for workmanship, material and equipment, designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute these in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.
- 1.15. BID SECURITY**
- 1.15.1 The Bidder shall furnish, as part of its bid, a bid security (BS) for an amount as specified in the Invitation for Bids. In the case of foreign bidders, the BS shall be submitted either by the principal or by the Indian agent and in the case of indigenous bidders; the BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder.
- 1.15.2 The bid security shall be in Indian Rupees for offers received for supply within India and denominated in the currency of the bid or in any freely convertible foreign exchange in the case of offers received for supplies from foreign countries in equivalent Indian Rupees. The bid security shall be in one of the following forms at the bidders' option:
- (a) A bank guarantee issued by a Nationalized/Scheduled bank/Foreign Bank operating in India in the form provided in the bidding documents and valid for 45 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a Nationalized/Scheduled Indian bank; or
- (b) Fixed Deposit receipt pledged in favour of the IISER-TVM.
- (c) A Banker's cheque or demand draft in favour of IISERTVM issued by any Nationalised/Scheduled Indian bank.
- 1.15.3 The bid security shall be payable promptly upon written demand by the purchaser in case the conditions listed in the ITB clause 15.11 are invoked.
- 1.15.4 The bid security should be submitted in its original form. Copies shall not be accepted.
- 1.15.5 While Bid security (EMD) is a requirement, the Director IISER-TVM may grant exemption of Bid security to some specific parties having sound credentials and are of national/international repute.
- 1.15.6 The bid security of unsuccessful bidder will be discharged /returned as promptly as possible positively within a period of 15 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.
- 1.15.7 The successful Bidder's bid security will be discharged upon the Bidder furnishing the performance security, without any interest. Alternatively, the BS could also be adjusted against PS, if it is paid through DD/BC.
- 1.15.8 **The firms registered with DGS&D, NSIC if any, are exempted from payment of bid security (BS) provided such registration includes the item they are offering which are manufactured by them and not for selling products manufactured by other companies.**
- 1.15.9 In case a bidder intimates at the time of tender opening in writing that the bid security is kept inside the financial bid, then in such cases, the technical bid of the party would be accepted provisionally till opening of the financial bids with which the party has attached the bid security.
- 1.15.10 The bid security may be forfeited:
- (a) If a Bidder withdraws or amends or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; or
- (b) **In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 15 days of the order or fails to sign the contract and/or fails to furnish Performance Security within 21 days from the date of contract/ order.**
- 1.16. PERIOD OF VALIDITY OF BIDS**
- 1.16.1 Bids shall remain valid for minimum of 90 days after the date of bid opening prescribed by the Purchaser. **A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.**
- 1.16.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable, telex, fax or e-mail). The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.
- 1.16.3 Bid evaluation will be based on the bid prices without taking into consideration the above corrections.
- 1.17. CONFIDENTIALITY**
- 1.17.1 Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.
- 1.17.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.
- 1.18. CLARIFICATION OF BIDS**
- 1.18.1 To assist in the examination, evaluation, comparison and post qualification of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, no negotiation shall be held except with the lowest bidder, at the discretion of the



purchaser. Any clarification submitted by a bidder in respect to its bid which is not in response to a request by the purchaser shall not be considered.

1.19.

CONVERSION TO SINGLE CURRENCY

1.19.1

To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India on the date of bid opening in the case of single part bidding and the rates prevalent on the date of opening of the Priced bids in the case of two-part bidding. For this purpose, exchange rate notified in www.xe.com or www.rbi.org or any other website could also be used by the purchaser.

1.20.

CONTACTING THE PURCHASER

1.20.1

Subject to ITB Clause 1.24, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.

1.20.2

Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

1.21.

POST QUALIFICATION

1.21.1

In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.

1.21.2

The determination will take into account the eligibility criteria listed in the bidding documents and will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.

1.21.3

An affirmative determination will be a prerequisite for award of the contract to the Bidder.

A negative determination will result in rejection of the Bidder's bid.

1.22.

PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

1.22.1

The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.

1.23.

WARRANTY

1.23.1

The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

1.23.2

The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.

1.23.3

Unless otherwise specified, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.

1.23.4

The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof.

The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

1.23.5

Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

1.23.6

If having been notified, the Supplier fails to remedy the defect within the reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

1.23.7

Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.

1.23.8

Performance Guarantee:

The successful bidder is required to submit a performance Guarantee of 10% of Purchase Order value valid during warranty period, plus two months grace period.

1.24

PENALTY CLAUSE

1.24.1

Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in contract of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in contract. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC. Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable

1.25

INSURANCE

1.25.1

Should the purchaser elect to buy on CIF/CIP basis, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in contract.

1.25.2

Where delivery of the goods is required by the purchaser on CIF or CIP basis the supplier shall arrange and pay for Cargo Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.

1.25.3

Where delivery is on FOB or FCA basis, insurance would be the responsibility of the purchaser.

1.25.4

With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the

consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.

1.26

TRANSPORTATION

- 1.26.1 Where the Supplier is required under the Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price.
- 1.26.2 Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 1.26.3 In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.

1.27

PACKING

Should be as per standards prescribed for international trade and movement of the goods.

1.38

STANDARDS

The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

1.39

PERFORMANCE SECURITY

- 1.39.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security of 7% of Contract/ Purchase Order value in the amount specified in the Contract, valid till 60 days beyond the completion of contractual obligations.
- 1.39.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 1.39.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.
- 1.39.4 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.
- 1.39.5 The Performance security shall be in one of the following forms:
- (a) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/Scheduled bank located in India or a bank located abroad in the form provided in the bidding documents. Or,
 - (b) A Banker's cheque or Account Payee demand draft in favour of the purchaser. Or,
 - (c) A Fixed Deposit Receipt pledged in favour of the Purchaser.

1.40

DELIVERY SCHEDULE : Delivery schedule should be specified clearly.

1.41

As per Ministry of Finance, Department of Expenditure order No. F.No./6/18/2019-PPD dated 23 Jul 2019, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department of Promotion of Industry and Internal Trade (DPIIT). Format certificate for the same is given in **Annexure 10** of the tender document. 'Bidder' for the purpose of this order (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidder stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process. Bidder from a country which shares a land bordered with India 'for the purpose of this order means:-

- (i) An entity incorporated, established or registered in such a country; or
- (ii) A subsidiary of an entity incorporated, established or registered in such a country; or
- (iii) An entity substantially controlled through entities incorporated, established or registered in such a country; or
- (iv) An entity whose beneficial owner is situated in such a country; or
- (v) An Indian (or other) agent of such an entity; or
- (vi) A natural person who is a citizen of such a country ; or
- (vii) A consortium or joint venture where a member of the consortium or joint venture falls under any of the above.



1.42

PAYMENT TERMS

1. For Indigenous supplies payment will be (i) 90% against delivery and (ii) 5% after Installation, submission of performance test check report and training . (iii) 5% on submission of bank guarantee 3% covering the warranty period + 3 months. For Imported goods, is Letter of Credit the LC will be established for 100% of Purchase Order value out of which (i) 90% will be paid against shipping documents, (ii) 5% after Installation, submission of performance test check report and training . (iii) 5% on submission of bank guarantee 10% covering the warranty period + 3 months. However the advance payment to the vendors is not encouraged.

2. AMC payment would be after AMC period only.



Deputy Registrar (Purchase & Stores)



Annexure: 3

GENERAL TERMS & CONDITIONS OF THE CONTRACT

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2.1 DEFINITIONS

2.1.1 The following words and expressions shall have the meanings hereby assigned to them:

- a) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- b) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.
- c) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.
- d) "Day" means calendar day.
- e) "Completion" means the fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- f) "GCC" means the General Conditions of Contract.
- g) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- h) "Related Services" means the services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.
- i) "SCC" means the Special Conditions of Contract.
- j) "Subcontractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- k) "Supplier" means the natural 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 Contract Agreement.
- l) Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM) means a society registered under the Travancore Cochin Literary Scientific and Charitable Societies' Registration Act, 1995 (12 of 1955) on 20.02.2008 at Kerala at no. T.342/08.
- m) "The final destination," where applicable, means the place named in the SCC.

2.2 CONTRACT DOCUMENTS

2.2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

2.3 FRAUD AND CORRUPTION

2.3.1 The purchaser requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,

- a) The terms set forth below are defined as follows:
 - i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
 - ii) "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;



- iii) "Collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to establish bid prices at artificial, noncompetitive levels; and
 - iv) "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- b) the purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;

2.4 JOINT VENTURE, CONSORTIUM OR ASSOCIATION

2.4.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfilment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

2.5 SCOPE OF SUPPLY

2.5.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

2.6 SUPPLIERS' RESPONSIBILITIES

2.6.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with Scope of Supply Clause of the GCC, and the Delivery and Completion Schedule, as per GCC Clause relating to delivery and document.

2.7 CONTRACT PRICE

2.7.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid.

2.8 COPYRIGHT

2.8.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

2.9 APPLICATION

2.9.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

2.10 STANDARDS

2.10.1 The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

2.11 USE OF CONTRACT DOCUMENTS AND INFORMATION

2.11.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information, furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract.

Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.

2.11.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated above except for purposes of performing the Contract.

2.11.3 Any document, other than the Contract itself, enumerated above shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.

2.12 PATENT INDEMNITY

2.12.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 12.2, indemnify and hold harmless the Purchaser and its employees and officers 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 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:

- (a) the installation of the Goods by the Supplier or the use of the Goods in India; and
- (b) the sale in any country of the products produced by the Goods.

2.12.2 If any proceedings are brought or any claim is made against the Purchaser, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier 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 claims.

2.13 PERFORMANCE SECURITY

2.13.1 Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.

2.13.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

2.13.3 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.

2.13.4 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.

2.13.5 The Performance security shall be in one of the following forms:

- (d) A Bank guarantee or stand-by Letter of Credit issued by a Nationalized/Scheduled bank located in India or a bank located abroad in the form provided in the bidding documents. Or,
- (e) A Banker's cheque or Account Payee demand draft in favour of the purchaser. Or,
- (f) A Fixed Deposit Receipt pledged in favour of the Purchaser.

2.13.6 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.



- 2.13.7 In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.
- 2.13.8 The order confirmation should be received within 15 days from the date of notification of award. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order confirmation /PS are not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for re-tendering in the particular case.
- 2.14. INSPECTIONS AND TESTS**
- 2.14.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC or as discussed and agreed to during the course of finalization of contract.
- 2.14.2 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. The Technical Specifications and SCC shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes
- 2.14.3 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.
- 2.14.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection
- 2.14.5 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- 2.14.6 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- 2.14.7 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 2.14.8 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.
- 2.15. PACKING**
- 2.15.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 2.15.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser
- 2.16. DELIVERY AND DOCUMENTS**
- 2.16.1 Delivery of the Goods and completion and related services shall be made by the Supplier in accordance with the terms specified by the Purchaser in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.
- 2.16.2 The terms FOB, FCA, CIF, CIP etc shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.
- 2.16.3 The mode of transportation shall be as specified in SCC
- 2.17. INSURANCE**
- 2.17.1 Should the purchaser elect to buy on CIF/CIP basis, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.
- 2.17.2 Where delivery of the goods is required by the purchaser on CIF or CIP basis the supplier shall arrange and pay for Cargo Insurance, naming the purchaser as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.
- 2.17.3 Where delivery is on FOB or FCA basis, insurance would be the responsibility of the purchaser.
- 2.17.4 With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.
- 2.18. TRANSPORTATION**
- 2.18.1 Where the Supplier is required under the Contract to deliver the Goods FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract price.
- 2.18.2 Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.
- 2.18.3 In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Supplier, and the related costs shall be included in the Contract Price.
- 2.19. INCIDENTAL SERVICES**
- 2.19.1 The supplier may be required to provide any or all of the services, if any, specified in SCC
- 2.20. SPARE PARTS**
- 2.20.1 The Supplier shall be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- (a) Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
 - (b) In the event of termination of production of the spare parts:
 - (i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
 - (ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.
- 2.21. WARRANTY**
- 2.21.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 2.21.2 The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
- 2.21.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 2.21.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof.
- The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.



- 2.21.5 Upon receipt of such notice, the Supplier shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 2.21.6 If having been notified, the Supplier fails to remedy the defect within the reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
- 2.21.7 Goods requiring warranty replacements must be replaced on free of cost basis to the purchaser.
- 2.22 TERMS OF PAYMENT**
- 2.22.1 The method and conditions of payment to be made to the Supplier under this Contract shall be as specified in the SCC.
- 2.22.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to Delivery and document Clause of the GCC and upon fulfillment of other obligations stipulated in the contract.
- 2.22.3 Payments shall be made promptly by the Purchaser but in no case later than thirty (30) days after submission of the invoice or claim by the Supplier.
- 2.22.4 Payment shall be made in currency as indicated in the contract.
- 2.23 CHANGE ORDERS AND CONTRACT AMENDMENTS.**
- 2.23.1 The Purchaser may at any time, by written order given to the Supplier pursuant to Clause on Notices of the GCC 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 shipping or packing;
 - The place of delivery; and/or
 - The Services to be provided by the Supplier.
 - The delivery schedule.
- 2.23.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within fifteen (15) days from the date of the Supplier's receipt of the Purchaser's change order.
- 2.23.3 No variation or modification in the terms of the contract shall be made except by written amendment signed by the parties.
- 2.24 ASSIGNMENT**
- 2.24.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.
- 2.25 SUBCONTRACTS**
- 2.25.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or duties or obligation under the Contract.
- 2.26 EXTENSION OF TIME.**
- 2.26.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser.
- 2.26.2 If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 2.26.3 Except as provided under the Force Majeure clause of the GCC, a delay by the Supplier in performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to Penalty Clause of the GCC unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.
- 2.27 PENALTY CLAUSE**
- 2.27.1 Subject to GCC Clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC. Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable
- 2.28. TERMINATION FOR DEFAULT**
- 2.28.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part
- If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause on Extension of Time; or
 - If the Supplier fails to perform any other obligation(s) under the Contract.
 - If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices as defined in GCC Clause on Fraud or Corruption in competing for or in executing the Contract.
- 2.28.2 In the event the purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:
- The Performance Security is to be forfeited;
 - The purchaser may procure, upon such terms and in such manner as it deems appropriate, stores similar to those undelivered, and the supplier shall be liable for all available actions against it in terms of the contract.
 - However, the supplier shall continue to perform the contract to the extent not terminated.
- 2.29 FORCE MAJEURE**
- 2.29.1 Notwithstanding the provisions of GCC Clauses relating to extension of time, penalty and Termination for Default the Supplier shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 2.29.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 2.29.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 2.29.4 If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of force majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.
- 2.30 TERMINATION FOR INSOLVENCY**
- 2.30.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.
- 2.31 TERMINATION FOR CONVENIENCE**
- 2.31.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 2.31.2 The Goods those are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
- To have any portion completed and delivered at the Contract terms and prices; and/or
 - To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.
- 2.32 SETTLEMENT OF DISPUTES**
- 2.32.1 The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 2.32.2 If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.
- 2.32.3 The dispute settlement mechanism/arbitration proceedings shall be concluded as under:
- In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Chairman, Board of Governors of IISER TVM and if he is unable or unwilling to act, to the sole arbitration of some other



- person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to this order.
- (b) In the case of a dispute between the purchaser and a Foreign Supplier, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the supplier then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.
- 2.32.4 The venue of the arbitration shall be the place from where the purchase order or contract is issued.
- 2.32.5 Notwithstanding any reference to arbitration herein,
(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
(b) the Purchaser shall pay the Supplier any monies due the Supplier.
- 2.33 GOVERNING LANGUAGE**
2.33.1 The contract shall be written in English language which shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the English language only.
- 2.34 APPLICABLE LAW**
2.34.1 The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in SCC.
- 2.35 NOTICES**
2.35.1 Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing or by cable, telex, FAX, e-mail or and confirmed in writing to the other party's address specified in the SCC.
2.35.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- 2.36 TAXES AND DUTIES**
2.36.1 For goods manufactured outside India, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.
2.36.2 For goods Manufactured within India, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture/ production.
2.36.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in India, the Purchaser shall make its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 2.37 RIGHT TO USE DEFECTIVE GOODS**
2.37.1 If after delivery, acceptance and installation and within the guarantee and warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.
- 2.38 PROTECTION AGAINST DAMAGE**
2.38.1 The system shall not be prone to damage during power failures and trip outs.
The normal voltage and frequency conditions available at site as under:
(a) Voltage 230 volts - Single phase/ 415 V 3 phase (+_ 10%)
(b) Frequency 50 Hz.
- 2.39. SITE PREPARATION AND INSTALLATION**
The Purchaser is solely responsible for the construction of the equipment sites in compliance with the technical and environmental specifications defined by the Supplier. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The supplier shall inform the purchaser about the site preparation, if any, needed for installation, of the goods at the purchasers' site immediately after notification of award/contract.

Deputy Registrar (Purchase & Stores)



Annexure 4 **INTEGRITY PACT**

Between

Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM) hereinafter referred to as "The Principal".

And

.....

herein referred to as "The Bidder/ Contractor."

Preamble

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

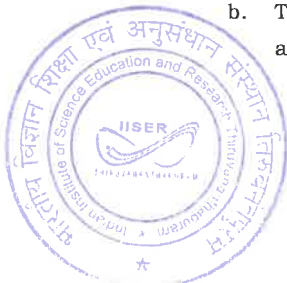
The Principal will nominate an Independent External Monitor (IEM) by name at the tender stage/will appoint in case of receipt of any reference, from the panel of IEMs, for monitoring the tender process and/or the execution of the contract in order to ensure compliance with the Integrity Pact by all the parties concerned.

Section 1 – Commitments of the Principal / Purchaser / Employer:

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

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

- (1) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution:
 - a. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract or to vitiate the Principal's tender process or contract execution.
 - b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to



prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process or to vitiate the Principal's tender process or execution of the contract.

- c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of the foreign supplier / contract agency, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" / Contract Agencies", shall be disclosed by the Bidder(s)/Contractor(s) wherever applicable. Further, as mentioned in the Guidelines all the payments made to the Indian agent (s)/representative (s) have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers/ Contract Agencies" is annexed and marked as Annexure - A.
 - e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made or committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future contracts.

- (1) A transgression is considered to have occurred, if the Principal after due consideration of the available evidence, concludes that reasonable doubt is possible.
- (2) If the Bidder(s)/Contractor(s), before award of contract or after award of Contract or during execution has committed a transgression through a violation of Section 2 above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or to terminate the Contract, if already awarded or take action as per the procedure mentioned in the "Guidelines on Banning of business dealings". Copy of the "Guidelines on Banning of business dealings" is annexed and marked as Annexure - B
- (3) If the Bidder (s) / Contractor (s) has committed transgression through a violation of any of the terms under Section 2 above or in any other form such as to put his reliability or credibility into question, the Principal is entitled also to exclude the bidder/contractor from future tenders/contract award processes. The imposition and duration of the exclusion will be determined by the Principal keeping in view the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgression, the position of the transgressors within the company hierarchy of the bidder/contractor and the amount of the damage.
- (4) If it is observed after payment of final bill but before the expiry of validity of Integrity Pact that



the contractor has committed a transgression through a violation of any of the terms under Section 2 above during the execution of contract, the Principal is entitled to exclude the contractor from future tenders / contract award processes.

- (5) The exclusion will be imposed for a minimum period of six (6) months and a maximum period of 3 (three) years.
- (6) If the Bidder/Contractor can prove that he has restored/recouped the damage to the Principal caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion before the expiry of the period of such exclusion.

Section 4 – Compensation for Damages

- (1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award in accordance with Section 3 above, the Earnest Money Deposit (EMD)/Bid Security furnished, if any, along with the offer as per the terms of the Invitation to Tender (ITT) shall be forfeited. This is apart from the disqualification of the Bidder as may be imposed by the Principal as brought out at Section 3 above.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to forfeit the Security Deposit/Performance Bank Guarantee furnished by the Bidder/Contractor or to demand and recover from the Contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee. This is apart from the disqualification of the Bidder as may be imposed by the Principal as brought out at Section 3 above.

Section 5 – Previous transgression

- (1) The Bidder/Contractor declares that no previous transgressions occurred in the last 3 years with any other Company in any country conforming to the anti-corruption approach or with Government/any other Public Sector Enterprise in India that could justify his exclusion from the tender process /contract.
- (2) If the Bidder/Contractor makes incorrect statement on this subject, he can be disqualified from the tender process /contract either it can be terminated for such reason or action can be taken as per the procedure mentioned in “Guidelines on Banning of business dealings.”

Section 6 – Equal treatment of all Bidders / Contractors/ Subcontractors.

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

Section 7 – Criminal charges against violating Bidders / Contractors/ Subcontractors.



If the Principal obtains knowledge of conduct of a Bidder, Contractor, Sub-contractor or of any employee or a representative or an associate of a Bidder/Contractor/Sub-contractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to Chief Vigilance Officer.

Section 8 - Independent External Monitor (s) (IEMs)

- (1) The Principal appoints competent and credible Independent External Monitor (s) (IEMs) with clearance from Central Vigilance Commission. IEMs reviews independently, the cases referred to him/them to assess whether and to what extent the parties concerned comply with the obligations under this Integrity Pact.
- (2) In case of non-compliance of the provisions of the Integrity Pact, the complaint/non-compliance is to be lodged by the aggrieved party with the Nodal Officer only appointed by Director, IISER-TVM. The Nodal Officer shall refer the complaint/non-compliance so received by him to the IEM, already appointed or to be appointed for that case.
- (3) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Director, IISER-TVM.
- (4) The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction, to all tender/contract documentation of the Principal including that provided by the Bidder/Contractor. The Bidder/Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his tender/contract documentation. The same is applicable to Sub-contractors also. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Sub-contractor(s) with confidentiality.
- (5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the tender/contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (6) As soon as the Monitor notice, or believes to notice, a violation of this Integrity Pact, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (7) The Monitor will submit a written report to the Director, IISER-TVM within 8 to 10 weeks from the date of reference or intimation to him by the Principal and should the occasion arise, submit proposals for correcting problematic situations for the violations or the breaches of the provisions of the agreement noticed by the Monitor.
- (8) Monitor shall be entitled to compensation on the same terms as being extended to/provided to Director IISER-TVM.
- (9) If the Monitor has reported to the Director, IISER-TVM, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director, IISER-TVM has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- (10) The word 'Monitor' means Independent External Monitor and would include both singular and plural.



Section 9 – Pact Duration

- (1) This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other unsuccessful Bidders 6 months after the contract has been awarded.
- (2) If any claim is made/lodged during the valid period of the Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Director, IISER-TVM.

Section 10 – Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and Jurisdiction is Thiruvananthapuram, Kerala.
Changes and supplements as well as termination notices need to be made in writing. Side agreements to this Integrity Pact have not been made.
- (2) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members or their Authorised Representative (s) by duly furnishing Authorisation to sign Integrity Pact.
- (3) Should one or several provisions of this agreement turn out to be invalid, the remaining part of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- (4) Wherever he or his is indicated in the above sections, the same may be read as he/she or his/her, as the case may be.

(For & On behalf of the Principal)

(For & On behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place.....

Place.....

Date.....

Date.....

Witness 1:

Witness 1:

(Name & Address): _____

(Name & Address): _____

Witness 2:

Witness 2:

(Name & Address): _____

(Name & Address): _____



Annexure 5

MODEL BANK GUARANTEE FORMAT FOR FURNISHING BID SECURITY (BS)

Whereas (hereinafter called the "tenderer")
has submitted their offer dated for the supply of
..... (hereinafter called the
"tender") against the Purchaser's tender enquiry No.
..... KNOW ALL MEN by these presents that WE
..... of having our registered office at
..... are bound unto (hereinafter called the "Purchaser") in
the sum of for which
payment will and truly to be made to the said Purchaser, the Bank binds itself, its
successors and assigns by these presents. Sealed with the Common Seal of the
said Bank this day of 20.....

THE CONDITIONS OF THIS OBLIGATION ARE:

- 1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- 2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
 - a) If the tenderer fails to furnish the performance security for the due performance of the contract.
 - b) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the purchaser (IISER-TVM) having to substantiate its demand, provided that in its demand the purchaser will note that the amount claimed by it is due to it owing the occurrence of one or both the two conditions, specifying the occurred condition or conditions. This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the bank not later than the above date.

Signature of the authorized officer of the bank

Name and designation of the officer

Seal, name and address of the Bank and address of the Branch.



Annexure 6

SPECIMEN

**PERFORMANCE SECURITY FORM
MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY**

To,

WHEREAS
(name and address of the supplier) (hereinafter called "the supplier") has undertaken, in pursuance of contract no. dated to supply (..... description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

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

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the day of, 20.....

(Signature of the authorized officer of the Bank)

.....
Name and designation of the officer

.....
Seal, name & address of the Bank and address of the Branch

Place:

Signature with Date and Stamp of the Bidder



ANNEXURE: 7

TENDER ACCEPTANCE LETTER (To be given on Company Letter Head)

To,

Date:

The Director, Indian Institute of Science Education and Research –
Thiruvananthapuram,

Maruthamala P.O, Vithura, Thiruvananthapuram, Kerala -695551, India.

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: - _____

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: _____ as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.
6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.
7. I / We declare the following information provided are correct to the best of my knowledge:

1	Name and Address of the bidder	
2	Manufacturer / Dealer / Agent	
3	Contact Person	
4	Phone	
5	Email	
6	Mobile Number	
7	GST No	
8	PAN No	
9	UTR No / DU No (in case of online transfer of Tender Fee) (if any)	
10	UTR No / DU No (in case of online transfer of EMD)	
11.	Inco terms, if import	
12	Warranty, if any	
13	HSN Codes of the equipment(s) quoted	
14	Delivery period	
15	Payment terms	
16.	PO to be placed in favour of	

Yours Faithfully,

(Signature of the Bidder, with Official Seal)



ANNEXURE 8

Declaration of Local Content

(ON COMPANY LETTER HEAD)

(In case the procurement value is less than or equal to Rs. 10 Crores declaration to be given in Bidder's/Company's letter head and if more than Rs. 10 Crores declaration to be issued from the statutory auditor or cost auditor of the company (in case of companies from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies)

To,
The Director,
Indian Institute of Science Education and Research Thiruvananthapuram,
Maruthamala P.O., Vithura, Thiruvananthapuram, Kerala, India - 695551

Subject: Declaration of local content and compliance of Public Procurement (Preference to Make in India) Order 2017 and its amendments regarding.

Sl No	Name of the goods/service/works	Category of the supplier (Class I / II / III)	Currency (must be in INR)	Local Content (%)	Location at which value addition is made	Country of Origin	Comply to the above referred rule (Yes / No)
1							

- "Local Content" means the amount of value added in India which shall, be the total value of the item being offered (excluding net domestic indirect taxes) minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.
- False declarations will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions permissible under law.

Date:

Place:

Signature with Date and Stamp of the Bidder



ANNEXURE: 9

CERTIFICATE

(ON COMPANY LETTER HEAD)

I hereby certify that we M/s _____

_____ (name and address of the firm) is neither blacklisted by any Central/ State Government / Public Undertaking/ Institute nor is any criminal case registered / pending against the firm or its owner / partners anywhere in India.

I also certify that the above information is true and correct in every aspect and in any case at a later date it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

Date:

Place:

Signature with Date and Stamp of the Bidder



ANNEXURE: 10

CERTIFICATE BY THE BIDDER (FOR TENDERS)
(ON COMPANY LETTER HEAD)

“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”

Date:

Place:

Signature with Date and Stamp of the Bidder



Annexure 11

(A): Required items for 100 seater class rooms

Sl #	Equipment	Specification	Approved Makes	Units	Qty
1	Multimedia projector	10000 lm(center), WUXGA, Laser light source, 16:10 aspect ration HDMI X 2, HD Base-T, 20,000 hours life	Epson/christie/Panasonic	Nos	2
2	Ceiling mount kit for projectcor	Custom as per site conditions	Custom	Nos	2
3	Motorised wall /Ceiling mount Screen	200" diagonal, motorised, Matwhite, 16:10 ratio, IR/RS 232 included with required supprotts and hardwares	Draper / Da - lite / Seemax	Nos	2
4	Podium	Podium with provision for 24" Tablet monitor, BYOD utpo 15", 2 numbers Gooseneck microphones, wall plate with retractable type cables of 1x HDMI, 1x USB type-C. Electrical points, AV equipment placement shelf and appropriate floor plate for the mentioned connectivity types. LAN for PC in podium.	Custom podium	Nos	2
5	Tablet monitor	24" Pen and LCD panel touch Display with adjustable display stand of minimum 15 degree to 70 degree, minimum 2500 lpi coordinate resolution, 1920 x 1080 pixels native resolution, 2048 pressure levels, 1000:1 contrast ratio,minimum 1 x HDMI IN and OUT, USB-C , USB, pen with eraser, pen holder, attachment, pen tether, QSG, IPI, USB cables, AC adapter, power cable	Wacom/ Viewsonic/XP-Pen	Nos	2



6	PC (in podium)	Small Form Factor, Core I7, RAM 16 GB, 2/4GB video graphic card, minimum 512GB SSD ,HDMI out, USBx3, USB-Cx1	Dell/Lenovo/HP/Intel	Nos	2
7	Button panel	Built-in Event Manager room control application, 11 backlit, programmable buttons and a Rotary knob with a circular line of LED feedback lights, 3x GPIO for occupancy sensor, motorized screen or shades control, 2x Ethernet connectivity, 1x RS-232 for peripheral device control	Lightware/Kramer/Extron	Nos	2
8	Recording and streaming unit	Supports 1080p 60/30fps recording. Supports 4 HDMI Inputs and IP video sources, Built-in 2TB HDD storage for local recording & Live streaming. H.264 / AVC 4:2:0 8bit color Encoding profile: High, Main, Baseline ,3 H.264 / AVC digital video over Ethernet 2 HDMI digital video ,Pull: RTSP Push: RTMP / RTMPS TCP, UDP, HTTP HDCP Client	Lumens/MediaPOINTE/Mediasite	Nos	2



9	Tracking Camera	<p>AI based Full HD 1080p @ 60fps Presenter PTZ Tracking Camera with Dual Camera- one PTZ Camera for Presenter Tracking and second fixed lens Panoramic Camera. PTZ Presenter Camera should support min 20X Optical Zoom and 12x Digital Zoom with Panning range of +170 deg to - 170 deg and Tilt Range of -30 to +90 Degrees, Field of View for PTZ Camera should be min 58 Degree and for Panoramic Camera min. 100 Degree, camera should support simultaneous outputs through HDMI, 3G-SDI, USB 3.0 and IP with 1x Audio In and can be controlled via RS232 and IP. Should support multiple video streams. Tracking Camera should support Everywhere Tracking, Partition Tracking, Auto Framing & Gesture Control. Should support PoE and Virtual USB Driver. OEM should be CE, FCC, RoHS & BIS Certified</p>	Lumens/Sony/Vaddio	Nos	2
10	Matrix switcher	<p>Matrix switcher, 2x USB-C IN, 2x HDMI IN, 3x HDMI OUT, 4x USB. Data speed of up to 5 Gbps, 4K@60Hz at 4:4:4, secure Ethernet with audio deembedder</p>	Lightware/Kramer/Extron/Crestron	Nos	2



11	USB extender	<p>USB Extender Kit over Extended-Reach CAT with 4-port USB 2.0 range 100m (330ft) with Fast remote device charging and Two-way powering, should have input and output of 1 CAT on RJ-45 and 1 Stereo Analog Unbalanced Audio on a 3.5mm mini jack connector, should have minimum 1 USB USB-B for USB host and 4 USB on USB-A female connectors for USB devices extension, 1 RS-232, USB should support data Rate up to 480Mbps, transmitted Data Bandwidth up to 300Mbps. Both transmitter and receiver to be included</p>	Lindy/Icron/ Aten	Nos	2
12	HDMI Transmitter	<p>INPUTS:1 HDMI on an HDMI connector, 1 bi directional RS-232 and IR signals OUTPUTS: 1 HDBT on an RJ-45 female connector Data rate of 10.2 Gbps or better Up to 40m (130ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at up to 4K@30Hz (4:4:4) HDTV and HDCP compatible with 2K and 4K content support.</p>	Lightware/Kramer/Extron	Nos	4



13	HDMI Receiver	<p>INPUTS: 1 HDBT on an RJ-45 female connector OUTPUTS:1 HDMI on an HDMI connector 1 bi-directional RS-232 and IR signals. 1 RS-232 on a 9-pin D-sub connector for serial link extension and for device firmware upgrade Data rate of 10.2 Gbps or better Up to 40m (130ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at up to 4K@30Hz (4:4:4) HDTV and HDCP compatible with 2K and 4K content support.</p>	Lightware/Kramer/Extron	Nos	4
14	Wireless handheld microphone	<p>Digital wireless handheld Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries) Transducer principle dynamic with Pick-up pattern cardioid, Sound pressure level 154 dB SPL, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12</p>	Sennheiser/Shure/Audio Technica	Nos	4



		mW ERP) BLE: max. 10 mW EIRP			
15	Wireless lapel microphone	Digital wireless lapel Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries Transducer principle pre-polarized condensor microphone Pick-up pattern omni- directional, Max. SPL at 1 kHz 130 dB, Frequency response 50 to 18,000 Hz,	Sennheiser/Shure/ Audio Technica	Nos	4



		Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP			
16	Gooseneck microphone	Gooseneck Microphone pre-polarized condenser designed for permanent installation or portable applications. It shall have a microphone capsule with a cardioid polar pattern with uniform 120° angle of acceptance (-3 dB). It shall have a frequency response of 50 Hz to 20,000 Hz and be capable of handling sound input levels up to 130 dB SPL. Nominal equivalent noise level shall be 26 dBA (37 dB weighted as per CCIR 468-3). Output shall be low impedance balanced (< 100 Ω). The microphone shall operate from an external 12 V to 48 V DC phantom power source; current consumption shall be 3 mA. The microphone shall offer radio frequency interference (RFI) shielding against intermodulation from	Sennheiser/Shure/Audio Technica	Nos	2



		wireless equipment or devices, table stand to be included from the same OEM's			
17	Digital signal processor	<p>AEC capable Digital Audio Conferencing Processor with at least 12 AEC Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % or better. Frequency Response 20 Hz - 20 kHz; Dynamic Range > 115 dB or better. 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring. 32x32 or more Bidirectional DANTE/BLULINK/AVB Audio Networking ports, Shall include standard Connectivity features like VOIP, POTS, USB Audio etc. Inbuilt DSP features like Conference room Routers, Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates , Source selectors etc. Shall</p>	Bose/Extron/Harman	Nos	2



		Support at least 15 remote Zone controllers.			
18	Amplifier	Class D configurable amplifier with total 4 x 150W output power or better @ 4/8ohms, 70/100 Volt or mixed use operation; Frequency Response : 20Hz - 20kHz for LZ mode ;THD <0.04% at rated output complete with standard accessories as required.	Bose/Harman/labgruppen	Nos	2
19	Wall speakers	Speaker with 2-way, 6-inch or better. Frequency range (-10dB) of 65Hz to 20kHz or better; Power handling of 100Watt continuous or more, 200Watt peak or more; Nominal dispersion of 120H X 120V or better; Sensitivity of 88 dB SPL and Max SPL of 110 dB SPL peak or more; Nominal impedance of 8 Ohms with an Integral multi-tap Transformer with selectable tap settings of 5/10/20/40/80W@100V or better.	Harman/ BOSE/TW Audio	Nos	8



		UL-1480A rated and shall be packed in pairs, IP55 rated surface mounted coaxial Music loudspeaker			
20	Network switch	16 port, PoE / PoE+, Gigabit, L2/L3 managed	Cisco/Dell/HP	Nos	2
21	AV Rack	15U, PDU, cantiliver shelves, ventilator fans	APW/ Netrack/ Rittal	Nos	2
22	Patch Cable	HDMI 2.0, 2 Mts, M - M	Lindy/Kramer/ Belden/ Aten	Nos	18
23	Patch Cable	HDMI 2.0, 5 Mts, M - M	Kramer/ Belden/ Aten	Nos	4
24	Patch Cable	USB, 2 Mts	Lindy/Kramer/Extron	Nos	8
25	USB Type-C Cable	USB Type-C cable of 5 Mts	Lindy/Kramer/Extron	Nos	4
26	Patch Cable	HDMI to USB-C type with 4K@60Hz (4:4:4), USB type-C (male), HDMI Type-A (male), minimum 5m length	Kramer/ Approved equivalent	Nos	4
27	Twisted pair Cable(Lot)	4 shielded twisted pairs (U/FTP) of 23AWG solid copper conductors are cabled together in an unshielded outer jacket.	Commscope/Kramer/Extron	Nos	2
28	Signal Cable (Lot)	16AWG , Shielded twisted pair copper cable.	Proel/Kramer/Extron	Mts	600
29	Speaker Cable (Lot)	14AWG , Shielded twisted pair copper cable.	Proel/Kramer/Extron	Mts	600
30	Connectors & Accessories (Lot)	Custom	Custom	Nos	2



Note:

1. The cable quantities indicated in the BoQ are in LOT. System integrator to verify the cable quantities, lengths, ect based on the drawings, site conditions and shall quote/charge accordingly (as per nos. or running metres).
2. The system integrator to produce shop drawings based on the detailed shared by the AV consultant and site conditions. The shop drawings to be shared with the clients and AV consultants for their review and approvals.
3. The shop drawings to includes all AV design related contents which includes equipment location and placement as per site conditions, cable/conduit routing, electrical sockets and LAN provision, cable connectivity drawings, heat maps for audio system, etc.
4. The system integrator shall share the details with respect to makes and model numbers considered for each line item along with their TDS for review and approval from clients and AV consultants.
5. The system integrator shall include the changes/modifications (if any) in the shop drawings based on AV consultants review and the same shall be re-submitted for approval.
6. Any changes/modifications (if any) in the design due to site constraints shall be brought into clients and AV consultant notice by the system integrator and approvals shall be taken from concerned stakeholders.
7. The system integrator to co-ordinate with relevant teams for any design related clarifications.
8. All the above points to be taken into consideration before the start of execution at site level.
9. The system integrator to co-ordinate with IT team for any dependencies.



(B): Required AV items for 500 seater auditorium

Sl #	Equipment	Specification	Approved Makes	Units	Qty
Video					
1	Active LED Video Wall	6000mm wide and 3500mm height active LED video wall, Pixel pitch: 2.5mm, Brightness: 1000 nits or better, Inputs: 4x HDMI, frame work for placing the video wall, screen depth: 50mm or less. LED wall cabinet: Die Cast Aluminium / Carbon Fibre / Magnesium Alloy. Software's, processor, controller and other accessories to be included from the same manufacturer.	Xtream Media / Unilumin / Absen	Nos	1
2	Wall plate	RJ45 I/O box	Custom	Nos	4
3	LED display	55", 4K UHD(3840 X 2160) LED display, Brightness: 500nit, minimum connectivity ports of HDMI X 2	Panasonic/ LG/ Samsung	Nos	1
4	Monitor cart	Includes non-marking locking/braked castors & alternative levelling feet, Able to take screen Size: up to 65", load: upto 70kg. should compatible with the above mentioned display	Peerless-AV/ Chief/ B-Tech	Nos	1
5	LED display	65", 4K UHD(3840 X 2160) LED display, Brightness: 500nit, minimum connectivity ports of HDMI X 2	Panasonic/ LG/ Samsung	Nos	3
6	Ceiling mount kit for display	Smart Mount, Universal ceiling Mount for 39" to 75", Load 75kg+ with additional supports	Peerless-AV/ Chief/ B-Tech	Nos	3



		and requirements as per site condition			
7	Camera preview monitor	43", 4K UHD(3840 X 2160) LED display, Brightness: 500nit, minimum connectivity ports of HDMI X 2, wall mount kit included	Panasonic/ LG/ Samsung	Nos	1
8	Podium	Podium with provision for 24" Tablet monitor, BYOD upto 15", 2 numbers wireless Gooseneck microphones, wall plate with retractable type cables of 2x HDMI, 2x USB type-C, 1x USB provisions. 4x electrical points, 1x RJ45, AV equipment placement shelf and appropriate floor plate for the mentioned connectivity types	Custom podium	Nos	1
9	PC (in podium)	Small Form Factor, Core I7, RAM 16 GB, 2/4GB video graphic card, minimum 512GB SSD ,HDMI out, USBx3, USB-Cx1	Lenovo/HP/Dell/Intel	Nos	1
10	Tablet monitor	24" Pen and LCD panel touch Display with adjustable display stand of minimum 15 degree to 70 degree, minimum 2500 Ipi coordinate resolution, 1920 x 1080 pixels native resolution, 2048 pressure levels, 1000:1 contrast ratio, minimum 1 x HDMI IN and OUT, USB-C , USB, pen with eraser, pen holder, attachment, pen tether, QSG, IPI, USB cables, AC adapter, power cable	Wacom/ Viewsonic/XP-Pen	Nos	1



11	Presentation switcher	Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps. USB :Should have USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Audio: Should support Simultaneous pass-through of HDMI 2.0 audio formats and de-embedding to the Audio layer. Input connector: 2or more HDMI 1or more USB C, USB Connectivity:2 no.s USB Type B for for user application and 3 or more USB Type A for peripherals, Charging via USB-C up to 60w, Output connector: HDMI connector 2 or more.	Ligtware/Extron/Approved equivalent	Nos	1
12	Podium	Podium with provision for BYOD upto 15", 2 numbers of wireless Gooseneck microphones, wall plate with retractable HDMI, USB provisions. Electrical points, AV equipment placement shelf	Custom podium	Nos	1
13	Floor box Transmitter	Twisted pair HDBaseT™ compatible extenders provide extension of uncompressed 4K/UHD video with for long distances over a single CATx cable. The unit offers bi-directional RS-232, IR, and Ethernet pass-through on the same CATx cable that carries	Ligtware/Kramer/Extron	Nos	1



		the video signal. PoE 48V remote powerings is available through a single CATx cable, but a local power supply can also be used. All devices can be mounted on a rack shelf or used standalone.			
14	Control room PC	Core I7, RAM 16 GB, minimum 512GB SSD, HDMI out, USBx4, 24" monitor, Windows 11 or better with keyboard and mouse	Lenovo/HP/Dell	Nos	1
15	Tracking Camera	Should have Automatic subject tracking with smart switching and auto framing, Resolution: 1080p / 720p, Frame Rate : 60 / 50 / 30 / 25 Video interface HDMI / SDI / Ethernet or USB 3.0 simultaneous out, Optical Zoom: 12 X or better, PTZ Camera Viewing Angle:58° (H) 33° (V)/65° (D) or better, Preset: 256 user-defined presets or better Video S/N Ratio:> 40dB or better, should have IP compression - H.264, USB compression MPEG, IP Protocol HTTP / RTSP / RTMP / RTMPS / SRT. All necessary license to be included and considered.	Lumens/Sony/Vaddio	Nos	1



16	PTZ camera	Network PTZ camera with 30x optical zoom & 65-degree horizontal coverage. 12G-SDI, HDMI, Ethernet, and USB 3.0 video output. Supports RTSP / RTMP / RTMPS / MPEG-TS / SRT streaming protocols. Supports Power Over Ethernet (PoE++). AI-enabled autofocus system. Horizontal Rotation Range: ±170°, Vertical Rotation Range: -30° to +90°. Power - PoE & AUX. Ceiling mounting bracket included.	Lumens/Panasonic/Sony	Nos	2
17	Joy stick	Control up-to total of 255 IP-connected cameras Joystick for remote camera control RS-232C, RS-422 x2, and Ethernet control VISCA, VISCA Over IP, Pelco P, and Pelco D control protocols,12V DC and PoE support	Lumens/Panasonic/Sony	Nos	1
18	Recording and streaming unit	Supports 1080p 60/30fps recording. Supports 4 HDMI Inputs and IP video sources, Built-in 2TB HDD storage for local recording & Live streaming. H.264 / AVC 4:2:0 8bit colorEncoding profile: High, Main, Baseline ,3 H.264 / AVC digital video over Ethernet2 HDMI digital video ,Pull: RTSPPush: RTMP / RTMPSTCP, UDP, HTTPHDCP Client	Lumens/MediaPOINTE/Mediasite	Nos	1



19	Matrix switcher	16x16 - HDMI 2.0, standalone matrix switcher, 4K UHD resolution at 60Hz 4:4:4 and deembedding audio from the HDMI stream, RS-232 and Ethernet ports	Lightware/Extron/approved equivalent	Nos	1
20	USB extender	USB Extender Kit over Extended-Reach CAT with 4-port USB 2.0 range 100m (330ft) with Fast remote device charging and Two-way powering, should have input and output of 1 CAT on RJ-45 and 1 Stereo Analog Unbalanced Audio on a 3.5mm mini jack connector, should have minimum 1 USB USB-B for USB host and 4 USB on USB-A female connectors for USB devices extension, 1 RS-232, USB should support data Rate up to 480Mbps, transmitted Data Bandwidth up to 300Mbps. Both transmitter and receiver to be included	Lindy/Icron/Aten	Nos	1
21	HDMI Transmitter	INPUTS:1 HDMI on an HDMI connector, 1 bi directional RS-232 and IR signals OUTPUTS: 1 HDBT on an RJ-45 female connector Data rate of 10.2 Gbps or better Up to 40m (130ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at up to 4K@30Hz (4:4:4) HDTV and HDCP compatible with 2K and 4K content support.	Lightware/Kramer/Extron	Nos	9



22	HDMI Receiver	<p>INPUTS: 1 HDBT on an RJ-45 female connector OUTPUTS:1 HDMI on an HDMI connector 1 bi-directional RS-232 and IR signals. 1 RS-232 on a 9-pin D-sub connector for serial link extension and for device firmware upgrade Data rate of 10.2 Gbps or better Up to 40m (130ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at up to 4K@30Hz (4:4:4) HDTV and HDCP compatible with 2K and 4K content support.</p>	Lightware/Kramer/Extron	Nos	10
23	AV Bridge	<p>Network Video Decoder. Outputs - minimum 1xHDMI with scaling. Inputs - minimum 1xHDMI and minimum 1xUSB. Audio embedding and deembedding Video Resolution - 4K60 4:4:4. Power - PoE and AUX, Control Port - RS232, Mounting hardware, Necessary AV Bridging feature license to be included for the required boxes.</p>	Vaddio	Nos	1
Audio					



24	FOH Line array Loud speakers - Left set	<p>Stage FOH clusters having 14" or dual 10" or better LF driver and multiple MF/HF drivers (More than 4), Bi-amplified 2 or 3 Way array loudspeaker system, with Individual Module free field Frequency Range (-10dB) of 60Hz - 18kHz or better & Continuous Power Handling of \geq 600W LF + 125W MF/HF. The Loudspeaker module shall have a Max. SPL (Peak) of MF/HF \geq 130 or better. It should have a Horizontal near dispersion pattern of 100° or better, vertical dispersion of the array shall be 60 degrees or better. The Modules shall be of Baltic birch plywood construction with internal metal bracing. All OEMs shall offer a suitable number of modules to achieve the required vertical angle (Minimum of 2 array modules)</p>	BOSE/Harman/TW Audio	Set	1
25	FOH Line array Loud speakers - Right set	<p>Stage FOH clusters having 14" or dual 10" or better LF driver and multiple MF/HF drivers (More than 4), Bi-amplified 2 or 3 Way array loudspeaker system, with Individual Module free field Frequency Range (-10dB) of 60Hz - 18kHz or better & Continuous Power Handling of \geq 600W LF + 125W MF/HF. The Loudspeaker module shall have a Max. SPL</p>	BOSE/Harman/TW Audio	Set	1



		(Peak) of MF/HF >= 130 or better. It should have a Horizontal near dispersion pattern of 100° or better, vertical dispersion of the array shall be 60 degrees or better. The Modules shall be of Baltic birch plywood construction with internal metal bracing. All OEMs shall offer a suitable number of modules to achieve the required vertical angle (Minimum of 2 array modules)			
26	Subwoofer	Single 18" subwoofer. The loudspeaker shall meet the following criteria: usable Frequency Range (-10 dB) of 38 Hz - 80Hz or better. It should have an axial Sensitivity of > = 92dB (1W/1m) or more delivering a free field Max. Calculated SPL(peak) of >=127 db or better. The loudspeaker should have a nominal impedance: 4/8 ohm and continuous Power Handling of 750W or more; Complete with installation accessories as per the site requirement.	Harman/ BOSE/TW Audio	Nos	2
27	Suspension frame for array loudspeakers	OEM flying array frame and other necessary hardware for suspending main speaker arrays. All necessary hardware to be included to achieve a safety factor of 8:1 or better	Harman/BOSE/TW Audio	Nos	2
28	Suspension for array subwoofers	Suspension for array subwoofers	Custom	Nos	2



29	Front fills	<p>2-way, 5.25-inch or better IP55 rated surface mounted coaxial music and PA loudspeaker. The loudspeaker shall meet the following criteria: Frequency range (-10dB) of 60Hz to 20kHz; Power handling of 200Watt peak; Nominal dispersion of 90°(H) × 80°(V); Sensitivity of 87 dB SPL and Max SPL of 105 dB SPL peak or better; Nominal impedance of 8 Ohms with an Integral multi-tap Transformer with selectable tap settings of 6/12/25/50W@100V or better. The loudspeaker system shall be enclosed in engineered-plastics with an In-built waveguide designed to provide uniform area coverage across the loudspeakers frequency range. UL-1480A rated and shall be packed in pairs.</p>	Harman/ BOSE/TW Audio	Pairs	2
30	Stage Monitors	<p>Two-way a Single 8-inch or better high SPL surface mount loudspeaker. The loudspeaker shall meet the following performance criteria: Frequency Range (-10 dB) of 80Hz - 18kHz or better; Nominal Dispersion : 90°H x 60°V or better; Power handling of 800W peak or more; Sensitivity : 92dB or better; Max SPL : 116dB Peak or more with a Nominal</p>	Harman/ BOSE/TW Audio	Nos	4



		impedence of 8 ohms and Integral multi-tap Transformer with selectable tap settings of 10/20/40/80W@70V & 100V Standard wall mount brackets shall be included			
31	Control room monitor speaker	Full range 4.5-inch or better IP55 rated surface mounted music loudspeaker. The loudspeaker shall meet the following performance criteria: Frequency range (-10dB) of 70Hz to 17kHz; Power handling of 160 Watt peak; Nominal dispersion of 90°(H) × 80°(V); Sensitivity of 87 dB SPL and Max SPL of 109 dB SPL peak or better; Nominal impedance of 8 ohms and Integral multi-tap Transformer with selectable tap settings of 5/10/20/40W@70V & 100V. The loudspeaker system shall be enclosed in engineered-plastics and a powder-coated steel grille. UL-1480 rated and EN54-24 compliant for Life safety/VA applications	Harman/ BOSE/TW Audio	Pairs	1



32	Power Amplifier	8 channel class D Networkable Power amplifier with a Max Output Power of 8x500W@8 ohms, or bridged mode output power of 4x 1000W @ 8/4 ohms. 20Hz - 20 KHz, SNR of 102dB and THD + N of <0.4% with built in protection such as Limiters, Temperature, DC, Short Circuit, Peak Current Limiters, Turn on delay etc. Built in DSP for Matrix routing, Speaker equalization, Delays, Array EQs etc complete with Ethernet Port for Network Control, programming and monitoring. Shall offer optional Network audio connectivity (Dante or CobraNet) through expansion slot. All Oem need to calualte amplification as per Nos of boxes.	Harman/BOSE/powersoft	Nos	3
33	Digital signal processor	AEC capable Digital Audio Conferencing Processor with at least 12 AEC Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % or better ; Frequency Response 20 Hz - 20 kHz ;Dynamic Range > 115 dB or better; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; 32x32 or more Bidirectional DANTE Audio Networking ports,	Harman/BOSE/extron	Nos	1



		<p>Shall include standard Connectivity features like VOIP, POTS, USB Audio etc. inbuilt DSP features like Conference room Routers, Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates , Source selectors etc. Shall Support at least 15 remote Zone controllers</p>			
34	Digital mixer with Dante card	<p>Digital Mixer With Dante , Mix channel - ≥ 46, Buses - 20- aux, matrix-2 , 1 stereo, 1 sub,8 DCA, Analog input and output - ≥ 22 Mic/Line, 16XLR with expansion slot, Connection - 1-RJ45, 2 USB (TYPEA, B, 2.0), phones TRS, Interfaces - ≥ 7" touch panel, Min 32 faders or higher, User defined keys, knobs, monitor knobs, ipad application, Recording & Playback - 34 x 34 digital record/playback channels via USB 2.0 + 2 x 2 via a USB storage device, Channel - 2 input, 3 output, Samplig frequency - ≥ 48 kHz, LED Indicator. Signal delay - < 2.8ms, Frequency response - ,+0.5, -1.5 dB 20 Hz-20 kHz, reference to the nominal output level@1 kHz, INPUT to OMNI OUT, THD - ≤ 0.05 % 20 Hz - 20 kHz@+4 dBu into 600Ω, INPUT to OMNI OUT, Input Gain= Min*1, Dynamic</p>	Yamaha/ Allen heath/Midas	Nos	1



		range - ≥ 110 dB typ., DA Converter, 106 dB typ., INPUT to OMNI OUT, Input Gain=Min. Crosstalk - , ≤ -100 dB, adjacent INPUT/OMNI OUT channels, Input Gain= Min. @1 kHz*3, additional features - quick pre sets, scene preset, recording,, Bundled with software for audio recording and editing, Plug-in support, Dante functionality required - 64 inputs and 64 outputs of 32-bit, 48 kHz uncompressed digital audio signals, Frequency compatible- 44.1kHz / 48kHz or higher.			
35	10 Port switch with Dante capability	L2 network switch-10 Port-Dante, Total ports - 10, POE - 9, Polarity - automatic detection of straight/crossed, Standard - IEEE 802.3Hz, connectors - RJ-45, USB, Indicators - power, MicroSD, Stack ID, LANPORT, Switching bandwidth - ≥ 20 Gbits.	Yamaha/ Approved equivalent	Nos	1
36	I pad	10.5" iPad, 64GB with docking station	Apple	Nos	1
37	Network switch	26 port, PoE / PoE+, Gigabit, L2/L3 managed	Cisco/Dell/HP	Nos	1



38	Wireless lapel microphone	<p>Digital wireless lapel Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries Transducer principle pre-polarized condenser microphone Pick-up pattern omni-directional, Max. SPL at 1 kHz 130 dB, Frequency response 50 to 18,000 Hz, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP</p>	Sennheiser/Shure/Audio Technica	Nos	4
39	Gooseneck Microphone	<p>Microphone connector ,XLR 3M, XLR 5M, Impedance < 100 Ω, Dimensions length: 450 mm, Frequency response (Microphone) 50 Hz - 20 kHz ,Equivalent noise level</p>	Sennheiser/Shure/Audio Technica	Nos	4



		26 dB (A), Maximum sound pressure level (passive) 130 dB SPL			
40	Digital Wireless Tablestand for above mentioned Gooseneck microphone	Frequency response-75 to 20,000 Hz,Signal-to-noise ratio-> 90 dB(A),RF output power adaptive, up to 250 mW (country-specific),Dynamic range > 120 dB(A), Input impedance 30 k Ω ,XLR Microphone Inputs XLR 3F	Sennheiser/Shure/Audio Technica	Nos	4
41	Four Channel Receiver	Connector 2x RJ-45 Network (Dante and Control) Power consumption < 15 W Audio output 3- pin Phoenix 3.81.mm F) Number of channels up to 4 Frequency 1880 - 1930 MHz Frequency band DECT Frequency range 20 Hz - 20 kHz Mains voltage 44 - 57 V DC via PoE IEEE 802.3af	Sennheiser/Shure/Audio Technica	Nos	1
42	Two Bay microphone charger	Power consumption-2.5 A,Max. Input voltage-12 V DC,	Sennheiser/Shure/Audio Technica	Nos	2
43	Wireless handheld microphone	Digital wireless handheld Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable	Sennheiser/Shure/Audio Technica	Nos	6



		<p>connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries) Transducer principle dynamic with Pick-up pattern cardioid, Sound pressure level 154 dB SPL, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP</p>			
44	Wireless lapel microphone (for control room)	<p>Digital wireless Lapel Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries) Transducer principle pre-polarized</p>	Sennheiser/Shure/Audio Technica	Nos	2



		condensormicrophonePick-up pattern omni-directional, Max. SPL at 1 kHz 130 dB, Frequency response 50 to 18,000 Hz, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP			
45	Wired vocal microphone	Dynamic cardioid type designed for lead vocal stage use. With rugged metal body and shock-mounted capsule and shall include a hum compensating coil. The frequency response shall be 50Hz - 16KHz and the sensitivity (free field, no load) shall be 2.7 mV/Pa at 1 kHz. The nominal impedance shall be 350 Ω, with a min. terminating impedance of 1 kΩ. The microphone shall provide a 3-pin XLR connector.	Sennheiser/Shure/Audio Technica	Nos	4
46	Instrumental microphone	Microphone shall be a super-cardioid pre-polarized condenser designed for demanding instrument miking applications. The frequency response shall be 40 Hz - 20,000 Hz and the sensitivity (free field, no load) shall be 3 mV/P at 1	Sennheiser/Shure/Audio Technica	Nos	4



		kHz. Maximum SPL shall be 139 dB at 1 kHz. Nominal impedance shall be 50 Ω , with a min. terminating impedance of 1 k Ω . The microphone shall operate on 12 - 52 V phantom power and shall provide a 3-pin XLR connector.			
47	Microphone stand	Base dimension: \varnothing 650 mm or better, Minimum height: 900 mm or better, Maximum height: 1500 mm, Weight: 2,2 kg, Boom length: 750 mm	Proel/K&M/Roadworx	Nos	6
48	Microphone stand	Base dimension: \varnothing 650 mm or better, Minimum height: 500 mm or better, Maximum height: 850 mm, Weight: 2,1 kg, Boom length: 750 mm	Proel/K&M/Roadworx	Nos	6
49	Digital Antenna Splitter	Active Antenna Splitter for use with Digital systems. With 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies UHF transmission greatly enhances range, reliability and scalability Mobile App streamlines setup and operation and eliminates complicated menus	Sennheiser/Shure/Audio Technica	Nos	4
50	Passive external directional antenna	UHF passive directional antenna , with Frequency range 470 - 1075 MHz, Impedance 50 Ω , Built-in $\frac{5}{8}$ " and $\frac{3}{8}$ " threads allow for easy mounting. Connection BNC female.	Sennheiser/Shure/Audio Technica	Nos	2



51	Stage Box	Dante capable Digital stage box with minimum 20 port, minimum 16 XLR input ports and 4 XLR output ports, 16 cable pair, 15m length audio cable compatible with the above mentioned digital mixer	Yamaha/Midas/Allen heath	Nos	1
52	Control processor	Controller with Minimum 4 bidirectional RS232, 4 IR, 4 Relays and 4 GPIO and 1 Ethernet port to control all the devices in the room, Should have inbuilt IR sensor to learn IR commands, Should have inbuilt processing power and internal storage to store and process the control program. Compatible with any (IOS/Android) wireless or wired Touch screen of any size flexibility to add as many user interfaces as required, embedded webpage for control port settings, Status LED to check for Control/Connection status, It should support PoE, should have minimum 5 free license if required for iOS/Android application	Crestron/Extron/kramer	Nos	1
53	Wi-fi router	Wi-fi router	Cisco/TPLink/Netgear	Nos	1
54	AV Rack	36U, PDU, cantiliver shelves, ventilator fans	APW/ Netrack/ Rittal	Nos	1
55	Patch Cable	HDMI 2.0, 2 Mts, M - M	Lindy/Kramer/ Belden/ Aten	Nos	35
56	Patch cable	USB patch cable, 2 Mts	Lindy/Kramer/Extron	Nos	2
57	Patch cable	USB type-C patch cable, 2 Mts/ 1.5mts	Lindy/Kramer/Extron	Nos	2



58	Patch cable	(USB-C to HDMI converter patch cable). 2mts	Lindy/Kramer/Aten	Nos	2
59	HDMI AOC cable	HDMI, 20 Mts length AOC, 18Gbps, 600MHz	Lindy/Kramer/Aten/Extron	Nos	4
60	Twisted pair Cable(Lot)	4 shielded twisted pairs (U/FTP) of 23AWG solid copper conductors are cabled together in an unshielded outer jacket.	Commscope/Kramer/Extron	Nos	1
61	Signal Cable (Lot)	16AWG , Shielded twisted pair copper cable.	Proel/Kramer/Extron	Mts	400
62	Speaker Cable (Lot)	14AWG , Shielded twisted pair copper cable.	Proel/Kramer/Extron	Mts	400
63	Snake cable (Lot)	8 pair shielded Audio snake cable.	Proel/Sommer/Cordial	Mts	80
64	Microphone cables (Lot)	2 x0.22 Sqmm Oxygen Free conductor Microphone Cable	Proel/Sommer/Cordial	Mts	100
65	Connectors & Accessories (Lot)	Custom	Custom	Nos	1



Note:

1. The cable quantities indicated in the BoQ are in LOT. System integrator to verify the cable quantities, lengths, ect based on the drawings, site conditions and shall quote/charge accordingly (as per nos. or running metres).
2. The system integrator to produce shop drawings based on the detailed shared by the AV consultant and site conditions. The shop drawings to be shared with the clients and AV consultants for their review and approvals.
3. The shop drawings to includes all AV design related contents which includes equipment location and placement as per site conditions, cable/conduit routing, electrical sockets and LAN provision, cable connectivity drawings, heat maps for audio system, etc.
4. The system integrator shall share the details with respect to makes and model numbers considered for each line item along with their TDS for review and approval from clients and AV consultants.
5. The system integrator shall include the changes/modifications (if any) in the shop drawings based on AV consultants review and the same shall be re-submitted for approval.
6. Any changes/modifications (if any) in the design due to site constraints shall be brought into clients and AV consultant notice by the system integrator and approvals shall be taken from concerned stakeholders.
7. The system integrator to co-ordinate with relevant teams for any design related clarifications.
8. All the above points to be taken into consideration before the start of execution at site level.
9. The system integrator to co-ordinate with electrical team for any dependencies.
10. The required programming and managing shall be made in the i PAD for controlling, AV, lighting, etc as per client's requirement.
11. Upto 4 nos. of pre set audio to be played from i PAD/control room PC.
Hence, the programming shall be performed accordingly.



(C): Required stage lighting items for 500 seater auditorium

Sl #	Equipment with specification	Approved Makes	Units	Qty
1	<p>SITC of 100W High Quality LED Parcan Light complete with, Lamp source 3200K CCT Colour temperature CRI & TLCI Values above 95 COB LED source from Citizen/ Philips/ Osram/ Cree or reputed make (LM80 to be provided) DmX 512 dimming with 3 channel control Beam Angle of 9° / 25° / 35° Total Power Consumption of 120W High quality output replacing 1000W Halogen Par Flicker Free 100% for Tv & Film Cameras 11.7KHz Refresh Rate, Linear Dimming 0 ~ 100% Fuse and Internal safety protections Strobe option Adjustable 1~25 times/Sec Variable Fixture provided with Yoke of Manual Adjustment 5 Pin XLR for DmX , Black powder coated body. RDM Control options with latest technology (RDM ID to be specified) Certification having BIS compliant to IS 10322 (Part 5/ Sec 1):2012 CE Certification compliant to EN60598-1:2015, EN61437-2-13:2014 LM79 Certificates from NABL Acredited laboratory. Brand embosed impact on the light body for genuine product</p>	<p>Leksa Lighting / Aultra Lighting / Canara Lighting</p>	<p>Nos</p>	<p>10</p>



2	<p>SITC of 200W LED Profile Spot 14 Degree Light complete with, 3200K CCT Colour Temperature COB LED source from Citizen/ Philips/ Osram/ Cree or reputed make (LM80 to be provided) CRI & TLCI above 95, Strobe option Adjustable 1 ~ 25 times / Sec 4 Kinds of dimming curves, Black finish housing, Manual Focus with 4 Beam shaping cutters Efficient and well-designed Lamp reflector Efficient Copper tube based Heat Sink for Heat Dissipation Sleek and Unique Designed Light weight body Fixture provided with Yoke of Manual Adjustment DmX 512 dimming with 1 or 3 Channel modes IP20 protection having Lux @ 3 Mtrs above 9080 suitable to illuminate the key presenter or talent on stage. RDM Control options with latest technology (RDM ID to be specified) Certification having BIS compliant to IS 10322 (Part 5/ Sec 1):2012 . CE Certification compliant to EN60598-1:2015, EN61437-2-13:2014 LM79 Certificates from NABL Accredited laboratory. Brand embossed impact on the light body for genuine product</p>	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	6
3	<p>SITC of 200W LED Blinder Light 30 Degree complete with 3200K CCT 2x100W Chip On Board LED Lamp source COB LED source from Citizen/ Philips/ Osram/ Cree or reputed make (LM80 to be provided) DmX 512 dimming with 4 / 8 Channel modes CRI & TLCI Value > 90 , Strobe option Adjustable 1 ~ 25 times / Sec Variable, Beam Angle 30 Degree Total Power Consumption of 220W 11.7KHz Refresh Rate, In built preset's for effects Fuse and Internal safety protections, Active Cooling with Low Noise Fan, 5 Pin XLR for DmX, High quality well designed inbuilt reflector, Flicker Free 100% for Tv & Film Cameras, Black finish housing, IP20 protection, Having Strobe option and smooth dimming, illuminate Stage with uniform light intensity levels. RDM Control options with latest technology (RDM ID to be specified) Certification having BIS compliant to IS 10322 (Part 5/ Sec 1):2012 CE Certification compliant to EN60598-1:2015, EN61437-2-13:2014 LM79 Certificates from NABL Accredited laboratory.</p>	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	10



4	SITC of Motorized LED Moving Head Beam / Spot and Wash effect light, High bright long throw 350W Chip On Board Daylight White LED 1 Static Gobo Wheel - 10 Fixed Metal Gobos 21/26 Channel DmX Control Moto Dual Prism Mode 3 Colour Wheels - 9 Colours + CMY Motorized Zoom from 7° ~ 31° Motorized Focus and Frost, High Bright Daylight 6500K Open 7 Interchangeable Glass Gobos + Open Master Slave, Test Modes, 8 Bit/ 16 Bit High Precision Movement Sound Active and Auto Run Mode, Pan Angle 540°, Tilt Angle 270°. DmX control through 3 / 5 Pin XLR's, IP20 rated product.	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	2
5	SITC of Light fixture mouting clamp Customized for suspending on fixed bars on stage Made up of Aluminium Die casted MS threaded T bolt with yellow passivation finish Complete with black powder coating matt black finish. Safe working load 150 KG Suitable to Batten of size 30 OD to 60 OD	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	30
6	SITC of Light Fixture dual safety Chain made up of GI wire rope Bundled and twisted together Having load bearing capacity above 200 Kgs Sleve on the rope. Carabiner Clip	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	28
7	SITC of Suspender cum clamps designed made out of MS material 150mm x 150mm x 5mm MS Base plate Threaded rod, Black powder coated finish All the materials under gone through 7 tank process with various chemical treatment to keep them rust free Suitable to hold various type grid & other rigging systems.	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	16



8	<p>SITC of Fixed on stage Lighting bar/winch of 13 Mtr length constructed with an dual construction light bar with an Mild Steel 40NB 48 OD black matt finish with an supporting flat patti of height 200mm x 50mm x 6mm thickness for the extra support with 2 holes of 10mm diameter to fix the cable tray on the bar.It shall be hanged from the roof to accommodate various type of stage light fittings. It should hang from the roof with MS anglewhich is suspended from the fish plate of 5mm thickness which is fixed on the rcc roof with 4 anchor fastners of 10mm which can take an total load of 400KG each fastner. Made out of 48mm Outer Dai, 40 Nominal Bore Material for the light bar shall be of Mild Steel Pipe. Dual Barrel Arrangement Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions Dual Construction and an additional End Caps on the Pipe end shall be there Light bar Length shall be of customized type as per site condition. Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures</p>	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	1
9	<p>SITC of Fixed FOH Lighting bar/winch of 15 Mtr length constructed with an dual construction light bar with an Mild Steel 40NB 48 OD black matt finish with an supporting flat patti of height 200mm x 50mm x 6mm thickness for the extra support with 2 holes of 10mm diameter to fix the cable tray on the bar.It shall be hanged from the roof to accommodate various type of stage light fittings. It should hang from the roof with MS anglewhich is suspended from the fish plate of 5mm thickness which is fixed on the rcc roof with 4 anchor fastners of 10mm which can take an total load of 400KG each fastner. Made out of 48mm Outer Dai, 40 Nominal Bore Material for the light bar shall be of Mild Steel Pipe. Dual Barrel Arrangement Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions Dual Construction and an additional End Caps on the Pipe end shall be there Light bar Length shall be of customized type as per site condition. Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures</p>	Leksa Lighting / Aultra Lighting / Canara Lighting	Nos	1



10	<p>SITC of Power Distribution Electrical panel having a Individual MCB control for 15 outgoing circuits Made up of MS Sheet metal fabricated housing Black powder coated Ivery connectors for the internal terminations and external outgoing connecting points, Fibre / brass glands of suitable size fitted MCB control for outgoing circuits. Custom built as per specification and project requirement.</p>	Leksa Lighting / Seimens/ L&T	Nos	1
11	<p>SITC of High quality power junction box 4 way made up of MS Sheet metal fabricated housing. Snap fit fixing /15 (1.5mm) Total Max Rating 10A, 250V A.C 20°C to +70°C Operating Temp Moldings: Nylon, Flammability Rating UL94V-0 Black powder coated, fibre glands of suitable size fitted with Powercon or IEC connector Box 10A. Clamp arrangement for fixing or Raul plug arrangement for wall / floor fixing</p>	Leksa Lighting / Nuetrick/ Aultra Lighting	Nos	15
12	<p>SITC of High quality power junction box 2 way made up of MS Sheet metal fabricated housing. Snap fit fixing /15 (1.5mm), Total Max Rating 10A, 250V A.C 20°C to +70°C Operating Temp Moldings: Nylon, Flammability Rating UL94V-0 Black powder coated, fibre glands of suitable size fitted with Powercon or IEC connector Box 10A. Clamp arrangement for fixing or Raul plug arrangement for wall/floor fixing</p>	Leksa Lighting / Nuetrick/ Aultra Lighting	Nos	1
13	<p>SITC of High quality Dimming In junction box 1 way made up of MS Sheet metal fabricated housing High temperature resistant insulator material All metal housing offers best overall RF protection & electromagnetic shielding Black powder coated, fibre glands of suitable size fitted with 5 Pin DmX XLR Male socket Clamp arrangement for fixing or Raul plug arrangement for wall / floor fixing</p>	Leksa Lighting / Nuetrick/ Aultra Lighting	Nos	1
14	<p>SITC of High quality Dimming Out junction box 1 way made up of MS Sheet metal fabricated housing High temperature resistant insulator material All metal housing offers best overall RF protection & electromagnetic shielding Black powder coated, fibre glands of suitable size fitted with 5 Pin DmX XLR Female socket Clamp arrangement for fixing or Raul plug arrangement for wall / floor fixing</p>	Leksa Lighting / Nuetrick/ Aultra Lighting	Nos	4



15	SITC of DmX Loop Junction Box having 1 No. of DmX 5 Pin XLR Female Socket & 1 No. DmX XLR Male Socket fitted on to a sheet metal fabricated compact Junction box powder coated with matt black texture finish paint. High temperature resistant insulator material All metal housing offers best overall RF protection & electromagnetic shielding. Clamp arrangement for fixing or Raul plug arrangement for wall / floor fixing	Leksa Lighting / Nuetrick/ Aultra Lighting	Nos	1
16	SITC of Internal Earthing System with copper bare conductors all along the cable trays, metal parts and Installation Hardwares	Custom	Nos	1
17	SITC of Black Powder coated cable trays made out of MS Sheet fabricated for a size of 40 x 75 x 40mm & 1.6 mm thickness undergone through 7 tank process with various chemical treatment to keep them rust free with perforation for heat dessipation provided with lid.	Custom	Mts	80
18	SITC of DmX Male Female Connectors 5 Pin having rubber sheeth protection for Cross connecting DmX wiring connections	LL / Nuetrick/ Aultra Lighting	Nos	6
19	SITC of DmX Male Termination Connector 5 Pin soldered with required capacity of resistor for signal deframing	LL / Nuetrick/ Aultra Lighting	Nos	4
20	SITC of digital lighting console with laptop having Processor Intel i7: 7th Gen and above Benchmark 6000 or more, Memory 16GB, GPU PassMark 2000 or more, Hard Drive SSD 256GB + 20% free space, Operating System Windows 10 & 11. 2 Universes of DMX, LTC Timecode In, USB Midi Control + Supports Titan Mobile Fader Wing, Supports Web API, Generative, animation-based pixel mapping, Quicksketch labelling for ultimate personalisation, Powerful multi-user networking with any Titan console, Create huge effects in seconds with Key Frame Shapes, Feature-packed cue lists supporting macros, tracking, autoloads, timecode and more, Expand DMX channel capacity with Titan Net Processors, Synergy-ready. Add any Ai product to unlock seamless video integration	Leksa Lighting / Zero88 / Avolite	Nos	1



21	SITC of Opto isolated RDM enabled DmX splitter unit provided with, 4 Isolated outputs, Slow blow safety fuse 5 Pin XLR for output interface, Dual mode to select 2 universe operation, DmX Input through 5 Pin XLR Connector, Control Protocol RDM and DMX 512 Powder coated compartment finish. Mounting brackets for grid mount.	Leksa Lighting / Liteputer / Avolite	Nos	1
22	SITC of FRLS Copper unarmoured Flexible cable IS694 having 3 Core each of 1.5 Sq mm size.	Polycab / Custom	Mts	550
23	SITC of 5 Core DmX Cable with Sheathed housing on the cable, well designed insulation, low noise suitable to transmet DmX signal.	LL / Custom	Mts	300
<p>Note:1. The successful bidder shall review the specifications, site conditions, etc and submit the shop drawings, shcematics, etc for review and approval from clients and consultant.2. The technical data sheets of all the stage lighting components shall be submitted for the review and approval of the clients and consultant.3. The required changes as suggested (if any) by the clients/consultant has to be performed on review of the shop drawings and data shared.4. All the shop drawings and relevant data has to be submitted for approval before execution at site.5. Any deviation in the design due to site constraints, etc has to be brought into client and consultant notice and prior approval shall be taken.6. Any dependencies on other team like electrical, etc shall be co ordinated and taken forward accrodngly by the successful bidder.</p>				



(D): Offered items for 100 seater class rooms

Sl #	Equipment	Specification	Make	Model No/Part No	Units	Qty
1	Multimedia projector	10000 lm(center), WUXGA, Laser light source, 16:10 aspect ratio HDMI X 2, HD Base-T, 20,000 hours life			Nos	
2	Ceiling mount kit for projector	Custom as per site conditions			Nos	
3	Motorised wall /Ceiling mount Screen	200" diagonal, motorised, Matwhite, 16:10 ratio, IR/RS 232 included with required supports and hardwares			Nos	
4	Podium	Podium with provision for 24" Tablet monitor, BYOD upto 15", 2 numbers Gooseneck microphones, wall plate with retractable type cables of 1x HDMI, 1x USB type-C. Electrical points, AV equipment placement shelf and appropriate floor plate for the mentioned connectivity types. LAN for PC in podium.			Nos	
5	Tablet monitor	24" Pen and LCD panel touch Display with adjustable display stand of minimum 15 degree to 70 degree, minimum 2500 lpi coordinate resolution, 1920 x 1080 pixels native resolution, 2048 pressure levels, 1000:1 contrast ratio, minimum 1 x HDMI IN and OUT, USB-C , USB, pen with eraser, pen holder, attachment, pen tether, QSG, IPI, USB cables, AC adapter, power cable			Nos	
6	PC (in podium)	Small Form Factor, Core I7, RAM 16 GB, 2/4GB video graphic card, minimum 512GB SSD ,HDMI out, USBx3, USB-Cx1			Nos	



7	Button panel	Built-in Event Manager room control application, 11 backlit, programmable buttons and a Rotary knob with a circular line of LED feedback lights, 3x GPIO for occupancy sensor, motorized screen or shades control, 2x Ethernet connectivity, 1x RS-232 for peripheral device control			Nos
8	Recording and streaming unit	Supports 1080p 60/30fps recording. Supports 4 HDMI Inputs and IP video sources, Built-in 2TB HDD storage for local recording & Live streaming. H.264 / AVC 4:2:0 8bit colorEncoding profile: High, Main, Baseline ,3 H.264 / AVC digital video over Ethernet2 HDMI digital video ,Pull: RTSPPush: RTMP / RTMPSTCP, UDP, HTTPHDCP Client			Nos
9	Tracking Camera	AI based Full HD 1080p @ 60fps Presenter PTZ Tracking Camera with Dual Camera- one PTZ Camera for Presenter Tracking and second fixed lens Panoramic Camera. PTZ Presenter Camera should support min 20X Optical Zoom and 12x Digital Zoom with Panning range of +170 deg to - 170 deg and Tilt Range of -30 to +90 Degrees, Field of View for PTZ Camera should be min 58 Degree and for Panoramic Camera min. 100 Degree, camera should support simultaneous outputs through HDMI, 3G-SDI, USB 3.0 and IP with 1x Audio In and can be controlled via RS232 and IP. Should support multiple video streams. Tracking Camera should support Everywhere Tracking, Partition Tracking, Auto Framing & Gesture Control. Should support PoE and Virtual USB Driver. OEM should be CE, FCC, RoHS & BIS Certified			Nos



10	Matrix switcher	Matrix switcher, 2x USB-C IN, 2x HDMI IN, 3x HDMI OUT, 4x USB. Data speed of up to 5 Gbps, 4K@60Hz at 4:4:4, secure Ethernet with audio deembedder			Nos	
11	USB extender	USB Extender Kit over Extended-Reach CAT with 4-port USB 2.0 range 100m (330ft) with Fast remote device charging and Two-way powering, should have input and output of 1 CAT on RJ-45 and 1 Stereo Analog Unbalanced Audio on a 3.5mm mini jack connector, should have minimum 1 USB USB-B for USB host and 4 USB on USB-A female connectors for USB devices extension, 1 RS-232, USB should support data Rate up to 480Mbps, transmitted Data Bandwidth up to 300Mbps. Both transmitter and reciever to be included			Nos	
12	HDMI Transmitter	INPUTS:1 HDMI on an HDMI connector, 1 bi directional RS-232 and IR signalsOUTPUTS: 1 HDBT on an RJ-45 female connectorData rate of10.2 Gbps or better Up to 40m (130ft) at 4K@60Hz (4:4:4)Up to 70m (230ft) at up to 4K@30Hz (4:4:4)HDTV and HDCP compatible with 2K and 4K content support.			Nos	
13	HDMI Receiver	INPUTS: 1 HDBT on an RJ-45 female connector OUTPUTS:1 HDMI on an HDMI connector1 bi-directional RS-232 and IR signals. 1 RS-232 on a 9-pin D-sub connector for serial link extension and for device firmware upgrade Data rate of10.2 Gbps or better Up to 40m (130ft) at 4K@60Hz (4:4:4) Up to 70m (230ft) at up to 4K@30Hz (4:4:4) HDTV and HDCP compatible with 2K and 4K content support.			Nos	

14	Wireless handheld microhpone	<p>Digital wireless handheld Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries) Transducer principle dynamic with Pick-up pattern cardioid, Sound pressure level 154 dB SPL, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP</p>			Nos	
15	Wireless lapel microphone	<p>Digital wireless lapel Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries) Transducer principle pre-polarized condensor microphone Pick-up pattern omni-directional, Max. SPL at 1 kHz 130 dB, Frequency response 50 to 18,000 Hz, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP</p>			Nos	



16	Gooseneck microphone	<p>Gooseneck Microphone pre-polarized condenser designed for permanent installation or portable applications. It shall have a microphone capsule with a cardioid polar pattern with uniform 120° angle of acceptance (-3 dB). It shall have a frequency response of 50 Hz to 20,000 Hz and be capable of handling sound input levels up to 130 dB SPL. Nominal equivalent noise level shall be 26 dBA (37 dB weighted as per CCIR 468-3). Output shall be low impedance balanced (< 100 Ω). The microphone shall operate from an external 12 V to 48 V DC phantom power source; current consumption shall be 3 mA. The microphone shall offer radio frequency interference (RFI) shielding against intermodulation from wireless equipment or devices, table stand to be included from the same OEM's</p>			Nos
17	Digital signal processor	<p>AEC capable Digital Audio Conferencing Processor with at least 12 AEC Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % or better. Frequency Response 20 Hz - 20 kHz; Dynamic Range > 115 dB or better. 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring. 32x32 or more Bidirectional DANTE/BLULINK/AVB Audio Networking ports, Shall include standard Connectivity features like VOIP, POTS, USB Audio etc. Inbuilt DSP features like Conference room Routers, Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Source selectors etc. Shall Support at least 15 remote Zone controllers.</p>			Nos



18	Amplifier	Class D configurable amplifier with total 4 x 150W output power or better @ 4/8ohms, 70/100 Volt or mixed use operation; Frequency Response : 20Hz - 20kHz for LZ mode ;THD <0.04% at rated output complete with standard accessories as required.			Nos
19	Wall speakers	Speaker with 2-way, 6-inch or better. Frequency range (-10dB) of 65Hz to 20kHz or better; Power handling of 100Watt continuous or more, 200Watt peak or more; Nominal dispersion of 120H X 120V or better; Sensitivity of 88 dB SPL and Max SPL of 110 dB SPL peak or more; Nominal impedance of 8 Ohms with an Integral multi-tap Transformer with selectable tap settings of 5/10/20/40/80W@100V or better. UL-1480A rated and shall be packed in pairs,IP55 rated surface mounted coaxial Music loudspeaker			Nos
20	Network switch	16 port, PoE / PoE+, Gigabit, L2/L3 managed			Nos
21	AV Rack	15U, PDU, cantiliver shelves, ventilator fans			Nos
22	Patch Cable	HDMI 2.0, 2 Mts, M - M			Nos
23	Patch Cable	HDMI 2.0, 5 Mts, M - M			Nos
24	Patch Cable	USB, 2 Mts			Nos
25	USB Type-C Cable	USB Type-C cable of 5 Mts			Nos
26	Patch Cable	HDMI to USB-C type with 4K@60Hz (4:4:4), USB type-C (male), HDMI Type-A (male), minimum 5m length			Nos
27	Twisted pair Cable(Lot)	4 shielded twisted pairs (U/FTP) of 23AWG solid copper conductors are cabled together in an unshielded outer jacket.			Nos
28	Signal Cable (Lot)	16AWG , Shielded twisted pair copper cable.			Mts



29	Speaker Cable (Lot)	14AWG , Shielded twisted pair copper cable.			Mts	
30	Connectors & Accessories (Lot)	Custom			Nos	



(E): Offered AV items for 500 seater auditorium

Sl #	Equipment	Specification	Make	Model No/Part No	Units	Qty
1	Active LED Video Wall	6000mm wide and 3500mm height active LED video wall, Pixel pitch: 2.5mm, Brightness: 1000 nits or better, Inputs: 4x HDMI, frame work for placing the video wall, screen depth: 50mm or less. LED wall cabinet: Die Cast Aluminium / Carbon Fibre / Magnesium Alloy. Software's, processor, controller and other accessories to be included from the same manufacturer.			Nos	
2	Wall plate	RJ45 I/O box			Nos	
3	LED display	55", 4K UHD(3840 X 2160) LED display, Brightness: 500nit, minimum connectivity ports of HDMI X 2			Nos	
4	Monitor cart	Includes non-marking locking/braked castors & alternative levelling feet, Able to take screen Size: up to 65", load: upto 70kg. should compatible with the above mentioned display			Nos	
5	LED display	65", 4K UHD(3840 X 2160) LED display, Brightness: 500nit, minimum connectivity ports of HDMI X 2			Nos	
6	Ceiling mount kit for display	Smart Mount, Universal ceiling Mount for 39" to 75", Load 75kg+ with additional supports and requirements as per site condition			Nos	
7	Camera preview monitor	43", 4K UHD(3840 X 2160) LED display, Brightness: 500nit, minimum connectivity ports of HDMI X 2, wall mount kit included			Nos	



8	Podium	Podium with provision for 24" Tablet monitor, BYOD upto 15", 2 numbers wireless Gooseneck microphones, wall plate with retractable type cables of 2x HDMI, 2x USB type-C, 1x USB provisions. 4x electrical points, 1x RJ45, AV equipment placement shelf and appropriate floor plate for the mentioned connectivity types			Nos
9	PC (in podium)	Small Form Factor, Core I7, RAM 16 GB, 2/4GB video graphic card, minimum 512GB SSD ,HDMI out, USBx3, USB-Cx1			Nos
10	Tablet monitor	24" Pen and LCD panel touch Display with adjustable display stand of minimum 15 degree to 70 degree, minimum 2500 lpi coordinate resolution, 1920 x 1080 pixels native resolution, 2048 pressure levels, 1000:1 contrast ratio, minimum 1 x HDMI IN and OUT, USB-C , USB, pen with eraser, pen holder, attachment, pen tether, QSG, IPI, USB cables, AC adapter, power cable			Nos
11	Presentation switcher	Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps. USB :Should have USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Audio: Should support Simultaneous pass-through of HDMI 2.0 audio formats and de-embedding to the Audio layer. Input connector: 2or more HDMI 1or more USB C, USB Connectivity:2 no.s USB Type B for for user application and 3 or more USB Type A for peripherals, Charging via USB-C up to 60w, Output connector: HDMI connector 2 or more.			Nos



12	Podium	Podium with provision for BYOD upto 15", 2 numbers of wireless Gooseneck microphones, wall plate with retractable HDMI, USB provisions. Electrical points, AV equipment placement shelf			Nos	
13	Floor box Transmitter	Twisted pair HDBaseT™ compatible extenders provide extension of uncompressed 4K/UHD video with for long distances over a single CATx cable. The unit offers bi-directional RS-232, IR, and Ethernet pass-through on the same CATx cable that carries the video signal. PoE 48V remote powerings available through a single CATx cable, but a local power supply can also be used. All devices can be mounted on a rack shelf or used standalone.			Nos	
14	Control room PC	Core I7, RAM 16 GB, minimum 512GB SSD, HDMI out, USBx4, 24" monitor, Windows 11 or better with keyboard and mouse			Nos	
15	Tracking Camera	Should have Automatic subject tracking with smart switching and auto framing, Resolution: 1080p / 720p, Frame Rate : 60 / 50 / 30 / 25 Video interface HDMI / SDI / Ethernet or USB 3.0 simultaneous out, Optical Zoom: 12 X or better, PTZ Camera Viewing Angle:58° (H) 33° (V)/65° (D) or better, Preset: 256 user-defined presets or better Video S/N Ratio:> 40dB or better, should have IP compression - H.264, USB compression MPEG, IP Protocol HTTP / RTSP / RTMP / RTMPS / SRT. All necessary license to be included and considered.			Nos	
16	PTZ camera	Network PTZ camera with 30x optical zoom & 65-degree horizontal coverage. 12G-SDI, HDMI, Ethernet, and USB 3.0 video output. Supports RTSP / RTMP / RTMPS / MPEG-TS / SRT streaming protocols. Supports Power Over Ethernet (PoE++). AI-enabled autofocus system. Horizontal Rotation Range: ±170°, Vertical Rotation Range: -30° to +90°. Power - PoE & AUX. Ceiling mounting bracket included.			Nos	



17	Joy stick	Control up-to total of 255 IP-connected cameras Joystick for remote camera control RS-232C, RS-422 x2, and Ethernet control VISCA, VISCA Over IP, Pelco P, and Pelco D control protocols,12V DC and PoE support			Nos
18	Recording and streaming unit	Supports 1080p 60/30fps recording. Supports 4 HDMI Inputs and IP video sources, Built-in 2TB HDD storage for local recording & Live streaming. H.264 / AVC 4:2:0 8bit color Encoding profile: High, Main, Baseline ,3 H.264 / AVC digital video over Ethernet 2 HDMI digital video ,Pull: RTSP Push: RTMP / RTMPS TCP, UDP, HTTP HDCP Client			Nos
19	Matrix switcher	16x16 - HDMI 2.0, standalone matrix switcher, 4K UHD resolution at 60Hz 4:4:4 and deembedding audio from the HDMI stream, RS-232 and Ethernet ports			Nos
20	USB extender	USB Extender Kit over Extended-Reach CAT with 4-port USB 2.0 range 100m (330ft) with Fast remote device charging and Two-way powering, should have input and output of 1 CAT on RJ-45 and 1 Stereo Analog Unbalanced Audio on a 3.5mm mini jack connector,should have minimum 1 USB USB-B for USB host and 4 USB on USB-A female connectors for USB devices extension, 1 RS-232, USB should support data Rate up to 480Mbps, transmitted Data Bandwidth up to 300Mbps. Both transmitter and reciever to be included			Nos



21	HDMI Transmitter	<p>INPUTS:1 HDMI on an HDMI connector, 1 bi directional RS-232 and IR signals</p> <p>OUTPUTS: 1 HDBT on an RJ-45 female connector</p> <p>Data rate of 10.2 Gbps or better</p> <p>Up to 40m (130ft) at 4K@60Hz (4:4:4)</p> <p>Up to 70m (230ft) at up to 4K@30Hz (4:4:4)</p> <p>HDTV and HDCP compatible with 2K and 4K content support.</p>			Nos
22	HDMI Receiver	<p>INPUTS: 1 HDBT on an RJ-45 female connector</p> <p>OUTPUTS:1 HDMI on an HDMI connector 1 bi-directional RS-232 and IR signals.</p> <p>1 RS-232 on a 9-pin D-sub connector for serial link extension and for device firmware upgrade</p> <p>Data rate of 10.2 Gbps or better</p> <p>Up to 40m (130ft) at 4K@60Hz (4:4:4)</p> <p>Up to 70m (230ft) at up to 4K@30Hz (4:4:4)</p> <p>HDTV and HDCP compatible with 2K and 4K content support.</p>			Nos
23	AV Bridge	<p>Network Video Decoder. Outputs - minimum 1xHDMI with scaling. Inputs - minimum 1xHDMI and minimum 1xUSB. Audio embedding and deembedding Video Resolution - 4K60 4:4:4. Power - PoE and AUX, Control Port - RS232, Mounting hardware, Necessary AV Bridging feature license to be included for the required boxes.</p>			Nos



24	FOH Line array Loud speakers - Left set	<p>Stage FOH clusters having 14" or dual 10" or better LF driver and multiple MF/HF drivers (More than 4), Bi-amplified 2 or 3 Way array loudspeaker system, with Individual Module free field Frequency Range (-10dB) of 60Hz - 18kHz or better & Continuous Power Handling of $\geq 600W$ LF + 125W MF/HF. The Loudspeaker module shall have a Max. SPL (Peak) of MF/HF ≥ 130 or better. It should have a Horizontal near dispersion pattern of 100° or better, vertical dispersion of the array shall be 60 degrees or better. The Modules shall be of Baltic birch plywood construction with internal metal bracing. All OEMs shall offer a suitable number of modules to achieve the required vertical angle (Minimum of 2 array modules)</p>			Set
25	FOH Line array Loud speakers - Right set	<p>Stage FOH clusters having 14" or dual 10" or better LF driver and multiple MF/HF drivers (More than 4), Bi-amplified 2 or 3 Way array loudspeaker system, with Individual Module free field Frequency Range (-10dB) of 60Hz - 18kHz or better & Continuous Power Handling of $\geq 600W$ LF + 125W MF/HF. The Loudspeaker module shall have a Max. SPL (Peak) of MF/HF ≥ 130 or better. It should have a Horizontal near dispersion pattern of 100° or better, vertical dispersion of the array shall be 60 degrees or better. The Modules shall be of Baltic birch plywood construction with internal metal bracing. All OEMs shall offer a suitable number of modules to achieve the required vertical angle (Minimum of 2 array modules)</p>			Set



26	Subwoofer	Single 18" subwoofer. The loudspeaker shall meet the following criteria: usable Frequency Range (-10 dB) of 38 Hz - 80Hz or better. It should have an axial Sensitivity of ≥ 92 dB (1W/1m) or more delivering a free field Max. Calculated SPL(peak) of ≥ 127 db or better. The loudspeaker should have a nominal impedance: 4/8 ohm and continuous Power Handling of 750W or more; Complete with installation accessories as per the site requirement.			Nos
27	Suspension frame for array loudspeakers	OEM flying array frame and other necessary hardware for suspending main speaker arrays. All necessary hardware to be included to achieve a safety factor of 8:1 or better			Nos
28	Suspension for array subwoofers	Suspension for array subwoofers			Nos
29	Front fills	2-way, 5.25-inch or better IP55 rated surface mounted coaxial music and PA loudspeaker. The loudspeaker shall meet the following criteria: Frequency range (-10dB) of 60Hz to 20kHz; Power handling of 200Watt peak; Nominal dispersion of $90^{\circ}(H) \times 80^{\circ}(V)$; Sensitivity of 87 dB SPL and Max SPL of 105 dB SPL peak or better; Nominal impedance of 8 Ohms with an Integral multi-tap Transformer with selectable tap settings of 6/12/25/50W@100V or better. The loudspeaker system shall be enclosed in engineered-plastics with an In-built waveguide designed to provide uniform area coverage across the loudspeakers frequency range. UL-1480A rated and shall be packed in pairs.			Pairs



30	Stage Monitors	<p>Two-way a Single 8-inch or better high SPL surface mount loudspeaker. The loudspeaker shall meet the following performance criteria: Frequency Range (-10 dB) of 80Hz - 18kHz or better; Nominal Dispersion : 90°H x 60°V or better; Power handling of 800W peak or more; Sensitivity : 92dB or better; Max SPL : 116dB Peak or more with a Nominal impedance of 8 ohms and Integral multi-tap Transformer with selectable tap settings of 10/20/40/80W@70V & 100V Standard wall mount brackets shall be included</p>			Nos	
31	Control room monitor speaker	<p>Full range 4.5-inch or better IP55 rated surface mounted music loudspeaker. The loudspeaker shall meet the following performance criteria: Frequency range (-10dB) of 70Hz to 17kHz; Power handling of 160 Watt peak; Nominal dispersion of 90°(H) × 80°(V); Sensitivity of 87 dB SPL and Max SPL of 109 dB SPL peak or better; Nominal impedance of 8 ohms and Integral multi-tap Transformer with selectable tap settings of 5/10/20/40W@70V & 100V. The loudspeaker system shall be enclosed in engineered-plastics and a powder-coated steel grille. UL-1480 rated and EN54-24 compliant for Life safety/VA applications</p>			Pairs	



32	Power Amplifier	<p>8 channel class D Networkable Power amplifier with a Max Output Power of 8x500W@8 ohms, or bridged mode output power of 4x 1000W @ 8/4 ohms. 20Hz - 20 KHz, SNR of 102dB and THD + N of <0.4% with built in protection such as Limiters, Temperature, DC, Short Circuit, Peak Current Limiters, Turn on delay etc. Built in DSP for Matrix routing, Speaker equalization, Delays, Array EQs etc complete with Ethernet Port for Network Control, programming and monitoring. Shall offer optional Network audio connectivity (Dante or CobraNet) through expansion slot. All Oem need to calualte amplification as per Nos of boxes.</p>			Nos	
33	Digital signal processor	<p>AEC capable Digital Audio Conferencing Processor with at least 12 AEC Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % or better ; Frequency Response 20 Hz - 20 kHz ;Dynamic Range > 115 dB or better; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; 32x32 or more Bidirectional DANTE Audio Networking ports, Shall include standard Connectivity features like VOIP, POTS, USB Audio etc. inbuilt DSP features like Conference room Routers, Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates , Source selectors etc. Shall Support at least 15 remote Zone controllers</p>			Nos	



34	Digital mixer with Dante card	Digital Mixer With Dante , Mix channel - ≥46, Buses - 20- aux, matrix-2 , 1 stereo, 1 sub,8 DCA, Analog input and output - ≥22Mic/Line, 16XLR with expansion slot, Connection - 1-RJ45, 2 USB (TYPEA, B, 2.0), phones TRS, Interfaces - ≥7" touch panel, Min 32 faders or higher, User defined keys, knobs, monitor knobs, ipad application, Recording & Playback - 34 x 34 digital record/playback channels via USB 2.0 + 2 x 2 via a USB storage device, Channel - 2 input, 3 output, Samplig frequency - ≥ 48 kHz, LED Indicator. Signal delay - <2.8ms, Frequency response - ,+0.5, -1.5 dB 20 Hz-20 kHz, reference to the nominal output level@1 kHz, INPUT to OMNI OUT, THD - ≤ 0.05 % 20 Hz - 20 kHz@+4 dBu into 600Ω, INPUT to OMNI OUT, Input Gain= Min*1, Dynamic range - ≥110 dB typ., DA Converter, 106 dB typ., INPUT to OMNI OUT, Input Gain=Min. Crosstalk - ,≤-100 dB, adjacent INPUT/OMNI OUT channels, Input Gain= Min. @1 kHz*3, additional features - quick pre sets, scene preset, recording,, Bundled with software for audio recording and editing, Plug-in support, Dante functionality required - 64 inputs and 64 outputs of 32-bit, 48 kHz uncompressed digital audio signals, Frequency compatible-44.1kHz / 48kHz or higher.			Nos
35	10 Port switch with Dante capability	L2 network switch-10 Port-Dante, Total ports - 10, POE - 9, Polarity - automatic detection of straight/crossed, Standard - IEEE 802.3Hz, connectors - RJ-45, USB, Indicators - power, MicroSD, Stack ID, LANPORT, Switching bandwidth - ≥20Gbits.			Nos
36	I pad	10.5" iPad, 64GB with docking station			Nos
37	Network switch	26 port, PoE / PoE+, Gigabit, L2/L3 managed			Nos



38	Wireless lapel microphone	Digital wireless lapel Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries Transducer principle pre-polarized condenser microphone Pick-up pattern omni-directional, Max. SPL at 1 kHz 130 dB, Frequency response 50 to 18,000 Hz, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP				Nos
39	Gooseneck Microphone	Microphone connector ,XLR 3M, XLR 5M, Impedance< 100 Ω,Dimensions length: 450 mm, Frequency response (Microphone) 50 Hz - 20 kHz ,Equivalent noise level26 dB (A), Maximum sound pressure level (passive) 130 dB SPL				Nos
40	Digital Wireless Tablestand for above mentioned Gooseneck microphone	Frequency response-75 to 20,000 Hz,Signal-to-noise ratio-> 90 dB(A),RF output power adaptive, up to 250 mW (country-specific),Dynamic range > 120 dB(A), Input impedance 30 kΩ,XLR Microphone Inputs XLR 3F				Nos
41	Four Channel Receiver	Connector 2x RJ-45 Network (Dante and Control) Power consumption < 15 W Audio output 3- pin Phoenix 3.81.mm F) Number of channels up to 4 Frequency 1880 - 1930 MHz Frequency band DECT Frequency range 20 Hz - 20 kHz Mains voltage 44 - 57 V DC via PoE IEEE 802.3af				Nos



42	Two Bay microphone charger	Power consumption-2.5 A,Max. Input voltage-12 V DC,			Nos
43	Wireless handheld microhpone	Digital wireless handheld Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries) Transducer principle dynamic with Pick-up pattern cardioid, Sound pressure level 154 dB SPL, Transmit power (radiated) Audio link: 10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP			Nos
44	Wireless lapel microphone (for control room)	Digital wireless Lapel Microphone with UHF transmission greatly enhances range, reliability and scalability of 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies with Mobile App streamlines setup and operation and eliminates complicated menus and Automated setup creates reliable connections with minimal time and effort Preserves every detail of even the most dynamic performances with 134 dB transmitter dynamic range, Lithium Ion battery pack delivers up to 12 hours of operation (up to 8 hours of operation with AA batteries Transducer principle pre-polarized condensor microphonePick-up pattern omni-directional, Max. SPL at 1 kHz 130 dB, Frequency response 50 to 18,000 Hz, Transmit power (radiated) Audio link:			Nos



		10 mW ERP (Range Y1-3: 12 mW ERP) BLE: max. 10 mW EIRP				
45	Wired vocal microphone	Dynamic cardioid type designed for lead vocal stage use. With rugged metal body and shock-mounted capsule and shall include a hum compensating coil. The frequency response shall be 50Hz - 16KHz and the sensitivity (free field, no load) shall be 2.7 mV/Pa at 1 kHz. The nominal impedance shall be 350 Ω, with a min. terminating impedance of 1 kΩ. The microphone shall provide a 3-pin XLR connector.			Nos	
46	Instrumental microphone	Microphone shall be a super-cardioid pre-polarized condenser designed for demanding instrument miking applications. The frequency response shall be 40 Hz - 20,000 Hz and the sensitivity (free field, no load) shall be 3 mV/P at 1 kHz. Maximum SPL shall be 139 dB at 1 kHz. Nominal impedance shall be 50 Ω, with a min. terminating impedance of 1 kΩ. The microphone shall operate on 12 - 52 V phantom power and shall provide a 3-pin XLR connector.			Nos	



47	Microphone stand	Base dimension: Ø 650 mm or better, Minimum height: 900 mm or better, Maximum height: 1500 mm, Weight: 2,2 kg, Boom length: 750 mm			Nos	
48	Microphone stand	Base dimension: Ø 650 mm or better, Minimum height: 500 mm or better, Maximum height: 850 mm, Weight: 2,1 kg, Boom length: 750 mm			Nos	
49	Digital Antenna Splitter	Active Antenna Splitter for use with Digital systems. With 56 MHz Bandwidth will allow for up to 90 channels Up to 2,240 selectable frequencies UHF transmission greatly enhances range, reliability and scalability Mobile App streamlines setup and operation and eliminates complicated menus			Nos	
50	Passive external directional antenna	UHF passive directional antenna , with Frequency range 470 - 1075 MHz, Impedance 50 Ω, Built-in 5/8" and 3/8" threads allow for easy mounting. Connection BNC female.			Nos	
51	Stage Box	Dante capable Digital stage box with minimum 20 port, minimum 16 XLR input ports and 4 XLR output ports, 16 cable pair, 15m length audio cable compatible with the above mentioned digital mixer			Nos	



52	Control processor	Controller with Minimum 4 bidirectional RS232, 4 IR, 4 Relays and 4 GPIO and 1 Ethernet port to control all the devices in the room, Should have inbuilt IR sensor to learn IR commands, Should have inbuilt processing power and internal storage to store and process the control program. Compatible with any (IOS/ Android) wireless or wired Touch screen of any size flexibility to add as many user interfaces as required, embedded webpage for control port settings, Status LED to check for Control/Connection status, It should support PoE, should have minimum 5 free license if required for iOS/ Android application			Nos
53	Wi-fi router	Wi-fi router			Nos
54	AV Rack	36U, PDU, cantiliver shelves, ventilator fans			Nos
55	Patch Cable	HDMI 2.0, 2 Mts, M - M			Nos
56	Patch cable	USB patch cable, 2 Mts			Nos
57	Patch cable	USB type-C patch cable, 2 Mts/ 1.5mts			Nos
58	Patch cable	(USB-C to HDMI converter patch cable). 2mts			Nos
59	HDMI AOC cable	HDMI, 20 Mts length AOC, 18Gbps, 600MHz			Nos
60	Twisted pair Cable(Lot)	4 shielded twisted pairs (U/FTP) of 23AWG solid copper conductors are cabled together in an unshielded outer jacket.			Nos
61	Signal Cable (Lot)	16AWG , Shielded twisted pair copper cable.			Mts
62	Speaker Cable (Lot)	14AWG , Shielded twisted pair copper cable.			Mts
63	Snake cable (Lot)	8 pair shielded Audio snake cable.			Mts
64	Microphone cables (Lot)	2 x0.22 Sqmm Oxygen Free conductor Microphone Cable			Mts
65	Connectors & Accessories (Lot)	Custom			Nos



(F): Offered items for stage lighting for 500 seater auditorium

Sl #	Equipment with specification	Make	Model No/Part No	Units	Qty
1	<p>SITC of 100W High Quality LED Parcan Light complete with, Lamp source 3200K CCT Colour temperature CRI & TLCI Values above 95 COB LED source from Citizen/ Philips/ Osram/ Cree or reputed make (LM80 to be provided) DmX 512 dimming with 3 channel control Beam Angle of 9° / 25° / 35° Total Power Consumption of 120W High quality output replacing 1000W Halogen Par Flicker Free 100% for Tv & Film Cameras 11.7KHz Refresh Rate, Linear Dimming 0 ~ 100% Fuse and Internal safety protections Strobe option Adjustable 1~25 times/Sec Variable Fixture provided with Yoke of Manual Adjustment 5 Pin XLR for DmX , Black powder coated body. RDM Control options with latest technology (RDM ID to be specified) Certification having BIS compliant to IS 10322 (Part 5/ Sec 1):2012 CE Certification compliant to EN60598-1:2015, EN61437-2-13:2014 LM79 Certificates from NABL Acredited laboratory. Brand embossed impact on the light body for genuine product</p>			Nos	



2	<p>SITC of 200W LED Profile Spot 14 Degree Light complete with,3200K CCT Colour Temperature COB LED source from Citizen/ Philips/ Osram/ Cree or reputed make (LM80 to be provided) CRI & TLCI above 95, Strobe option Adjustable 1 ~ 25 times / Sec 4 Kinds of dimming curves, Black finish housing, Manual Focus with 4 Beam shaping cutters Efficient and well-designed Lamp reflector Efficient Copper tube based Heat Sink for Heat Dissipation Sleek and Unique Designed Light weight body Fixture provided with Yoke of Manual Adjustment DmX 512 dimming with 1 or 3 Channel modes IP20 protection having Lux @ 3 Mtrs above 9080 suitable to illuminate the key presenter or talent on stage. RDM Control options with latest technology (RDM ID to be specified) Certification having BIS compliant to IS 10322 (Part 5/ Sec 1):2012 . CE Certification compliant to EN60598-1:2015, EN61437-2-13:2014 LM79 Certificates from NABL Accredited laboratory. Brand embossed impact on the light body for genuine product</p>			Nos	
3	<p>SITC of 200W LED Blinder Light 30 Degree complete with 3200K CCT 2x100W Chip On Board LED Lamp source COB LED source from Citizen/ Philips/ Osram/ Cree or reputed make (LM80 to be provided) DmX 512 dimming with 4 / 8 Channel modes CRI & TLCI Value > 90 , Strobe option Adjustable 1 ~ 25 times / Sec Variable, Beam Angle 30 Degree Total Power Consumption of 220W 11.7KHz Refresh Rate, In built preset's for effects Fuse and Internal safety protections, Active Cooling with Low Noise Fan, 5 Pin XLR for DmX, High quality well designed inbuilt reflector, Flicker Free 100% for Tv & Film Cameras, Black finish housing, IP20 protection, Having Strobe option and smooth dimming, illuminate Stage with uniform light intensity levels. RDM Control options with latest technology (RDM ID to be specified) Certification having BIS compliant to IS 10322 (Part 5/ Sec 1):2012 CE Certification compliant to EN60598-1:2015, EN61437-2-13:2014 LM79 Certificates from NABL Accredited laboratory.</p>			Nos	



4	SITC of Motorized LED Moving Head Beam / Spot and Wash effect light, High bright long throw 350W Chip On Board Daylight White LED 1 Static Gobo Wheel - 10 Fixed Metal Gobos 21/26 Channel DmX Control Moto Dual Prism Mode 3 Colour Wheels - 9 Colours + CMY Motorized Zoom from 7° ~ 31° Motorized Focus and Frost, High Bright Daylight 6500K Open 7 Interchangeable Glass Gobos + Open Master Slave, Test Modes, 8 Bit/ 16 Bit High Precision Movement Sound Active and Auto Run Mode, Pan Angle 540°, Tilt Angle 270°. DmX control through 3 / 5 Pin XLR's, IP20 rated product.			Nos	
5	SITC of Light fixture mouting clamp Customized for suspending on fixed bars on stage Made up of Aluminium Die casted MS threaded T bolt with yellow passivation finish Complete with black powder coating matt black finish. Safe working load 150 KG Suitable to Batten of size 30 OD to 60 OD			Nos	
6	SITC of Light Fixture dual safety Chain made up of GI wire rope Bundled and twisted together Having load bearing capacity above 200 Kgs Sleeve on the rope. Carabiner Clip			Nos	
7	SITC of Suspender cum clamps designed made out of MS material 150mm x 150mm x 5mm MS Base plate Threaded rod, Black powder coated finish All the materials under gone through 7 tank process with various chemical treatment to keep them rust free Suitable to hold various type grid & other rigging systems.			Nos	



8	<p>SITC of Fixed on stage Lighting bar/winch of 13 Mtr length constructed with an dual construction light bar with an Mild Steel 40NB 48 OD black matt finish with an supporting flat patti of height 200mm x 50mm x 6mm thickness for the extra support with 2 holes of 10mm diameter to fix the cable tray on the bar.It shall be hanged from the roof to accommodate various type of stage light fittings. It should hang from the roof with MS anglewhich is suspended from the fish plate of 5mm thickness which is fixed on the rcc roof with 4 anchor fastners of 10mm which can take an total load of 400KG each fastner. Made out of 48mm Outer Dai, 40 Nominal Bore Material for the light bar shall be of Mild Steel Pipe. Dual Barrel Arrangement Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions Dual Construction and an additional End Caps on the Pipe end shall be there Light bar Length shall be of customized type as per site condition. Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures</p>			Nos	
9	<p>SITC of Fixed FOH Lighting bar/winch of 15 Mtr length constructed with an dual construction light bar with an Mild Steel 40NB 48 OD black matt finish with an supporting flat patti of height 200mm x 50mm x 6mm thickness for the extra support with 2 holes of 10mm diameter to fix the cable tray on the bar.It shall be hanged from the roof to accommodate various type of stage light fittings. It should hang from the roof with MS anglewhich is suspended from the fish plate of 5mm thickness which is fixed on the rcc roof with 4 anchor fastners of 10mm which can take an total load of 400KG each fastner.Made out of 48mm Outer Dai, 40 Nominal Bore Material for the light bar shall be of Mild Steel Pipe. Dual Barrel Arrangement Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions Dual Construction and an additional End Caps on the Pipe end shall be there Light bar Length shall be of customized type as per site condition. Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures</p>			Nos	



10	<p>SITC of Power Distribution Electrical panel having a Individual MCB control for 15 outgoing circuits Made up of MS Sheet metal fabricated housing Black powder coated Ivery connectors for the internal terminations and external outgoing connecting points, Fibre / brass glands of suitable size fitted MCB control for outgoing circuits. Custom built as per specification and project requirement.</p>			Nos	
11	<p>SITC of High quality power junction box 4 way made up of MS Sheet metal fabricated housing. Snap fit fixing /15 (1.5mm) Total Max Rating 10A, 250V A.C 20°C to +70°C Operating Temp Moldings: Nylon, Flammability Rating UL94V-0 Black powder coated, fibre glands of suitable size fitted with Powercon or IEC connector Box 10A. Clamp arrangement for fixing or Raul plug arrangement for wall / floor fixing</p>			Nos	
12	<p>SITC of High quality power junction box 2 way made up of MS Sheet metal fabricated housing. Snap fit fixing /15 (1.5mm), Total Max Rating 10A, 250V A.C 20°C to +70°C Operating Temp Moldings: Nylon, Flammability Rating UL94V-0 Black powder coated, fibre glands of suitable size fitted with Powercon or IEC connector Box 10A. Clamp arrangement for fixing or Raul plug arrangement for wall/floor fixing</p>			Nos	
13	<p>SITC of High quality Dimming In junction box 1 way made up of MS Sheet metal fabricated housing High temperature resistant insulator material All metal housing offers best overall RF protection & electromagnetic shielding Black powder coated, fibre glands of suitable size fitted with 5 Pin DmX XLR Male socket Clamp arrangement for fixing or Raul plug arrangement for wall /floor fixing</p>			Nos	



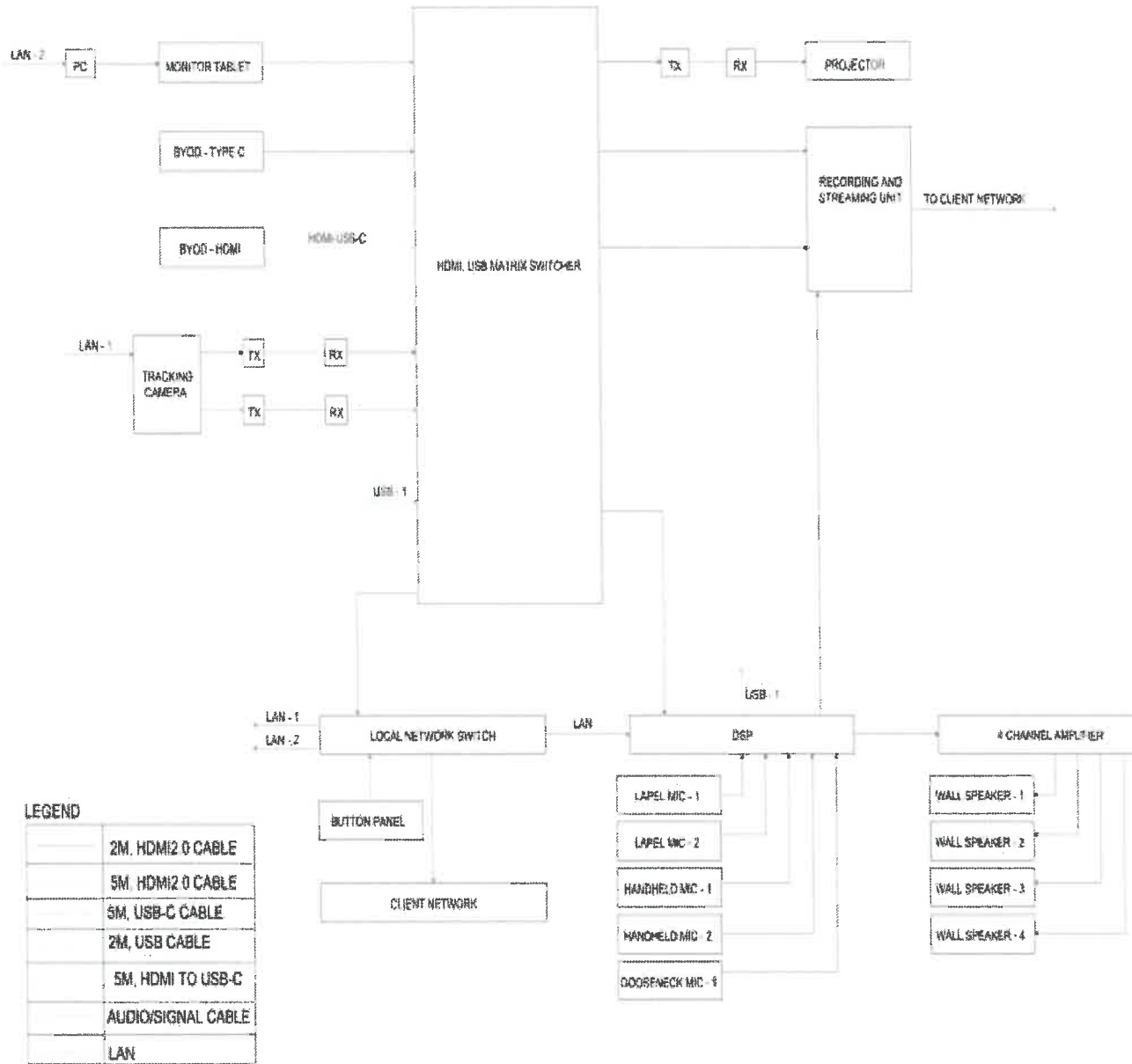
14	SITC of High quality Dimming Out junction box 1 way made up of MS Sheet metal fabricated housing High temperature resistant insulator material All metal housing offers best overall RF protection & electromagnetic shielding Black powder coated, fibre glands of suitable size fitted with 5 Pin DmX XLR Female socket Clamp arrangement for fixing or Raul plug arrangement for wall /floor fixing			Nos	
15	SITC of DmX Loop Junction Box having 1 No. of DmX 5 Pin XLR Female Socket & 1 No. DmX XLR Male Socket fitted on to a sheet metal fabricated compact Junction box powder coated with matt black texture finish paint. High temperature resistant insulator material All metal housing offers best overall RF protection & electromagnetic shielding. Clamp arrangement for fixing or Raul plug arrangement for wall /floor fixing			Nos	
16	SITC of Internal Earthing System with copper bare conductors all along the cable trays, metal parts and Installation Hardwares			Nos	
17	SITC of Black Powder coated cable trays made out of MS Sheet fabricated for a size of 40 x 75 x 40mm & 1.6 mm thickness undergone through 7 tank process with various chemical treatment to keep them rust free with perforation for heat dessipation provided with lid.			Mts	
18	SITC of DmX Male Female Connectors 5 Pin having rubber sheeth protection for Cross connecting DmX wiring connections			Nos	
19	SITC of DmX Male Termination Connector 5 Pin soldered with required capacity of resistor for signal deframing			Nos	



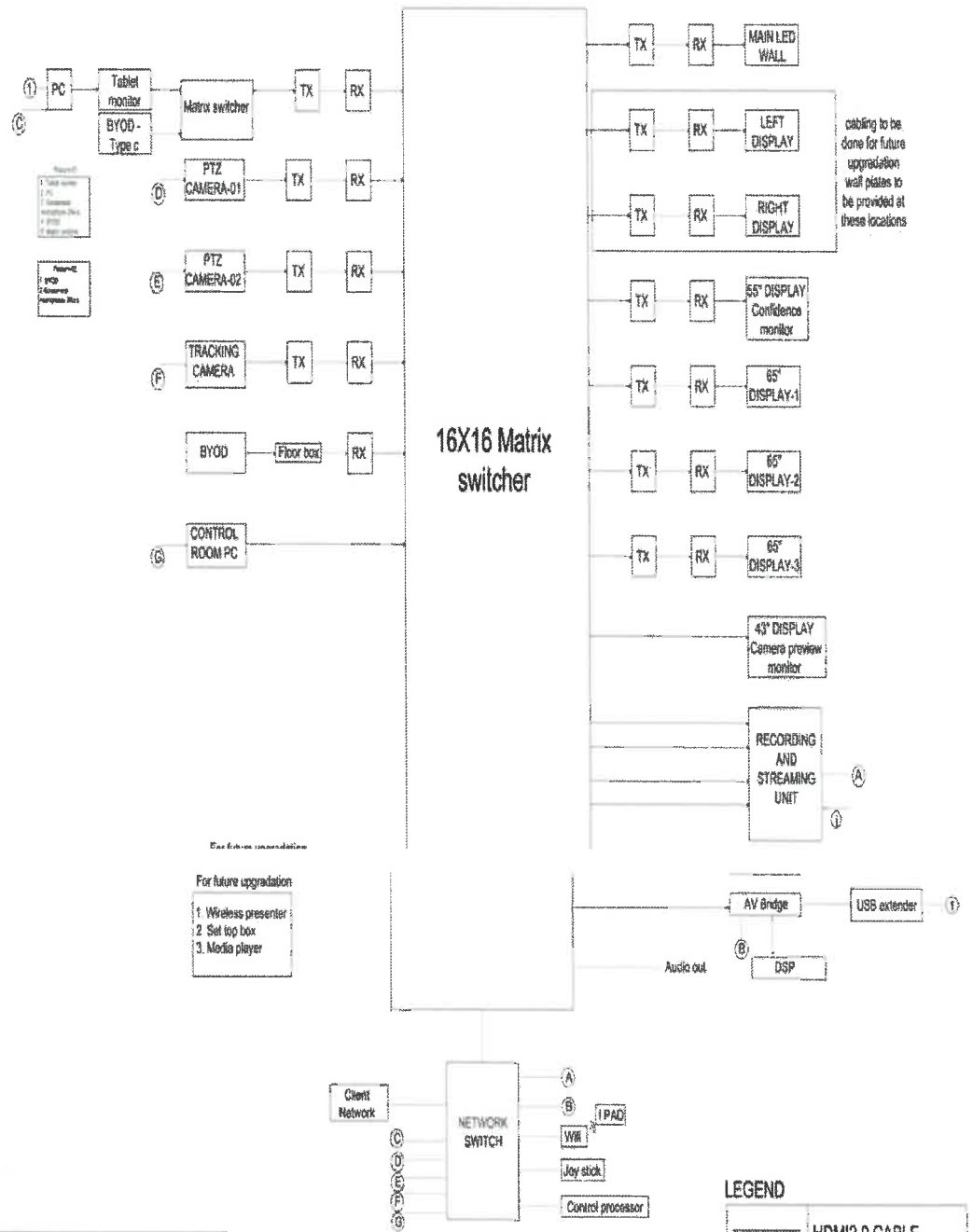
20	SITC of digital lighting console with laptop having Processor Intel i7: 7th Gen and above Benchmark 6000 or more, Memory 16GB, GPU PassMark 2000 or more, Hard Drive SSD 256GB + 20% free space, Operating System Windows 10 & 11. 2 Universes of DMX, LTC Timecode In, USB Midi Control + Supports Titan Mobile Fader Wing, Supports Web API, Generative, animation-based pixel mapping, Quicksketch labelling for ultimate personalisation, Powerful multi-user networking with any Titan console, Create huge effects in seconds with Key Frame Shapes, Feature-packed cue lists supporting macros, tracking, autoloads, timecode and more, Expand DMX channel capacity with Titan Net Processors, Synergy-ready. Add any Ai product to unlock seamless video integration			Nos	
21	SITC of Opto isolated RDM enabled DmX splitter unit provided with, 4 Isolated outputs, Slow blow safety fuse 5 Pin XLR for output interface, Dual mode to select 2 universe operation, DmX Input through 5 Pin XLR Connector, Control Protocol RDM and DMX 512 Powder coated compartment finish. Mounting brackets for grid mount.			Nos	
22	SITC of FRLS Copper unarmoured Flexible cable IS694 having 3 Core each of 1.5 Sq mm size.			Mts	
23	SITC of 5 Core DmX Cable with Sheathed housing on the cable, well designed insulation, low noise suitable to transmit DmX signal.			Mts	



AV SCHEMATIC DIAGRAM - 100 SEATER CLASSROOM



VIDEO SCHEMATIC DIAGRAM



Note.

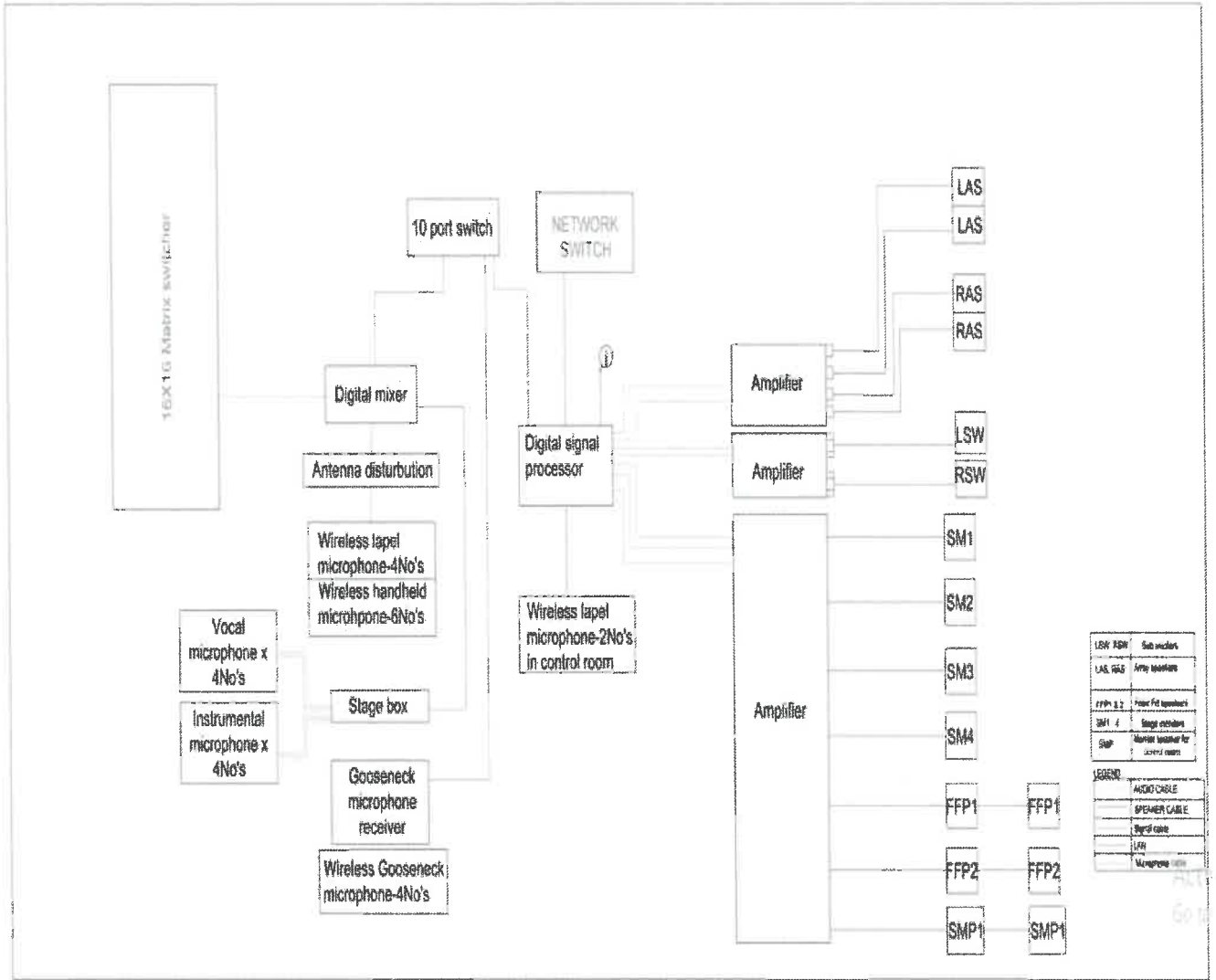
1. Soft VC should be initiate from the dedicated PC placed on the podium .
2. Audio video control and lighting control should be achieved in the single I-pad
3. Preset Audio can be played through the IPAD / from control room PC

LEGEND

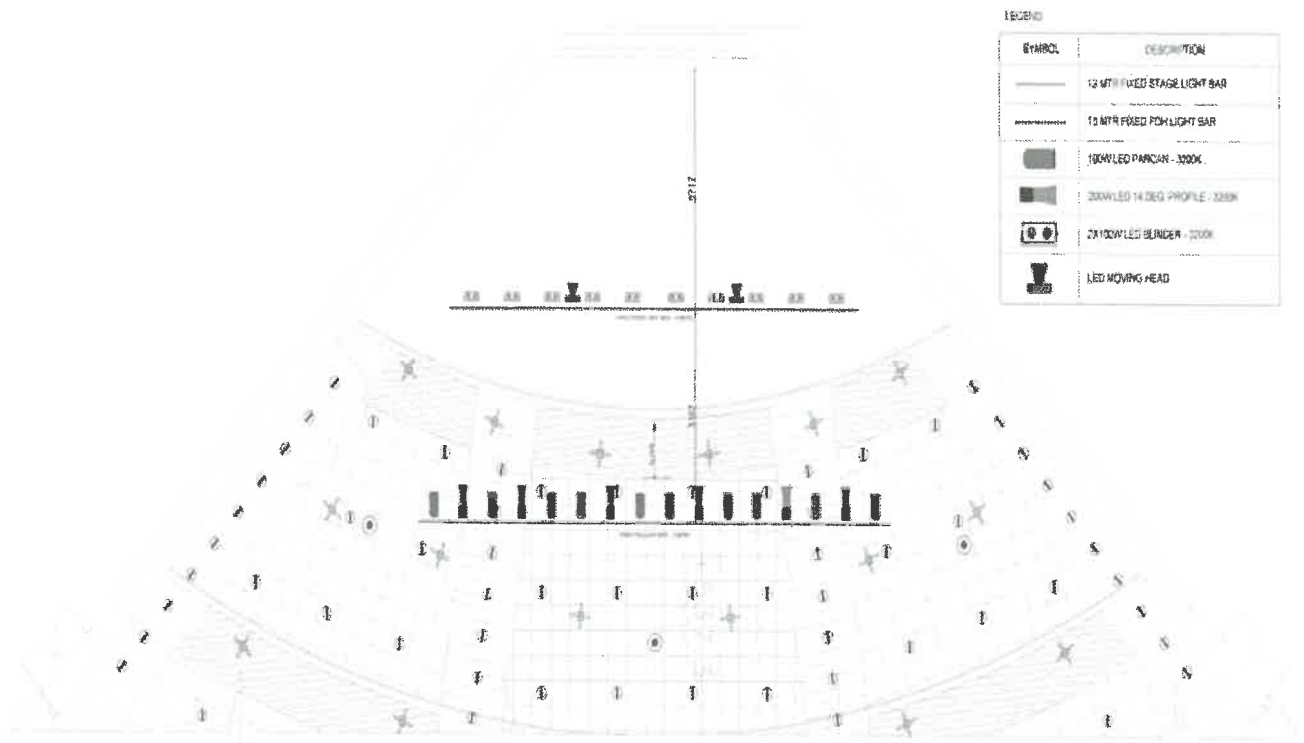
	HDMI 2.0 CABLE
	USB
	AUDIO CABLE
	LAN



AUDIO SCHEMATIC DIAGRAM

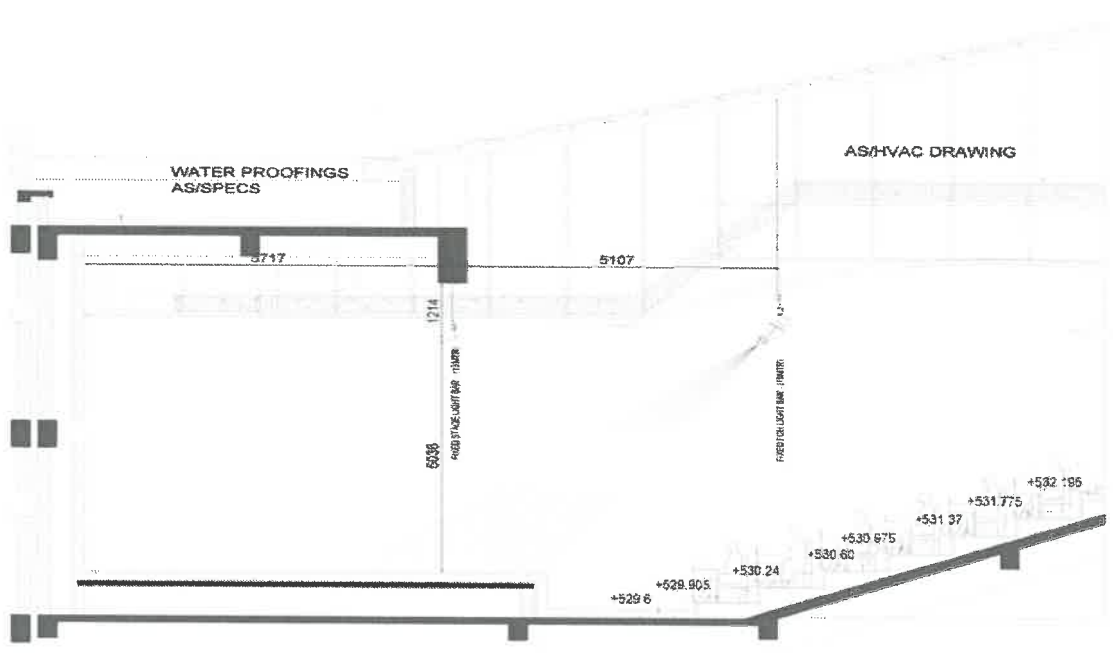


Stage Lighting plot - 500 seater auditorium



LEGEND

SYMBOL	DESCRIPTION
	12 MTR FIXED STAGE LIGHT BAR
	12 MTR FIXED FOH LIGHT BAR
	100W LED PARCAN - 3000K
	200W LED 14 DEG PROFILE - 3200K
	2X 100W LED BLINDER - 3200K
	LED MOVING HEAD



ADDITIONAL TERMS AND CONDITIONS

1. The party shall have a fully functional registered office in Kerala for the past 3 years. Registration certificate to be attached.
2. Scope: The Bidder capable of supplying complete items in the BOQ list only need to quote. Splitting up of Bid items not possible. Bidder's offer is liable to be rejected if they don't quote all products mentioned in Bill of Quantity.
3. Bidders shall have CTS (Certified Technology Specialist) certified engineers for AV system installation in Kerala. Certificate copy to be attached.
4. The bidder shall preferably have any of the ISO Certificate, ISO 45001 :2018(OHS), ISO 9001 :2015(QMS), ISO 14001 :2015(EMS).
5. The bidder shall provide Manufacturers Authorization with OEM details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid. This has to be submitted in the given format along with Technical bid for LED WALL, Display, Audio & Video Switchers, Audio Mixers, Microphone, Control System, Camera System & Extenders.
6. The bidder should provide the Service Escalation Matrix with office set up and Warehouse details in Kerala. Registration Certificate to be submitted as documentary evidence.
7. Bidder should upload Specification/ Catalogues of quoted products.
8. Availability of Service Centers: Bidder/OEM must have a Functional Service Centre in Kerala in case of carry-in warranty. The Bidder/ OEM Should have their dedicated dealer and service network in Trivandrum which will help in quick rectification Service Complaints. The service Centre should be equipped with necessary stores for the spares and standby machines. The details and address of the premises to be provided. This will ensure quick and assured after sales service. Last 2 years supporting documents should be submitted.
9. Unpriced Bill of Material with line item wise Make and Model to be submitted along with Technical compliance.
10. PO Copies of similar work done in the past 4 years. Out of that 1 PO should be in the past 2 years.
11. Customer Reference in Kerala for Last 5 years with a minimum value of 1.5 Cr for single order or 2 orders worth 75 lakhs.
12. The bidder should have a trained manpower based at Kerala. The list of Technical staff with the training certification for the major components quoted in the tender to be submitted.



13. Bidders offer is liable to be rejected if they don't upload any of the certificates/ documents sought in the Bid document. ATC, Corrigendum if any and based on the technical committee decision.
14. The party shall provide any additional quantity of items listed in BOQ in the same rate as agreed in the purchase order.
15. The Bidder should visit the site before submitting their bid.
16. Project should be completed within 4 months after purchase order is released. In case of failure to comply with the bid will be summarily rejected.
17. All electronic components should carry 3 Year onsite warranty.
18. Annexure A, Annexure B and Annexure C lists the required items with specification. Vendor is required to fill and submit Annexure D, Annexure E and Annexure F, without which, the offer is liable to be rejected.
19. The price bid should indicate price for each line item as given in Annexure A, Annexure B and Annexure C. Installation & commissioning charges should also be mentioned.



Deputy Registrar (P&S)



Annexure 12

CHECK LIST OF DOCUMENT REQUIRED

<u>Ser</u>	<u>List of documents required</u>	<u>Enclosed Yes / No</u>
1.	EMD Details / MSME Certificate	
2.	Tender Acceptance Letter as per Annexure 7 of the tender document	
3.	Self- Certification of local content as per Annexure 8 of the tender document	
4.	Self-Certification regarding non-blacklisting as per Annexure 9 of tender document	
5.	Self-Certification regarding land border as per Annexure 10 of tender document	
6.	Technical Compliance statement with tender specifications	
7.	BoQ	
8.	Statutory Registration Certificates	
9.	Detailed Brochures, data sheets, catalogues etc supporting the compliance of specifications (if any)	
10.	Clientele list and details of TWO major installations in India (if any)	
11.	Previous purchase orders (if any)	
12.	Any other document as provided in technical specifications (if any)	

