

**Tender for**  
**Supply and Installation of Acoustics, Audio-Visual, HVAC, Lighting &**  
**Furniture for Auditorium, Classrooms and Video Conferencing Room at IISc**  
**Chemical Sciences Building.**

**Tender No:** IISc/CSB-AV/2022-23

**Dt:** 20.05.2022



**Indian Institute of Science**  
**Bengaluru - 560012**

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**SECTION 1 – BID SCHEDULE**

<b>Tender No:</b>	IISc/CSB-AV/2022-23
<b>Tender Date:</b>	20.05.2022
<b>Item Description :</b>	<b>Supply and Installation of Acoustics, Audio-Visual, HVAC, Lighting &amp; Furniture for Auditorium, Classrooms and Video Conferencing Room at IISc Chemical Sciences Building.</b>
<b>Tender Type:</b>	Two Bid System -
	Technical Bid (Part-A); Commercial Bid (Part-B)
	Pre-bid clarification meeting: 02.06.2022
<b>Last date &amp;time for submission of Bids:</b>	10.06.2022 5:00 pm
<b>Place of Submission:</b>	Office of the Divisional Deans
	Indian Institute of Science
	Bangalore-560012
<b>Opening Date &amp; Time of Technical Bid:</b>	10.06.2022 5:30 pm
<b>Opening Date &amp; Time of Commercial Bid:</b>	TBA
<b>Place of Opening of Technical Bid:</b>	Chemical Sciences Building
<b>Tender Fees:</b>	NIL
<b>Earnest Money Deposit:</b>	Earnest Money Deposit (EMD) of Rs 5,00,000/- (Rupees Five Lakhs only) in the form of Bank Guarantee/Demand Draft in favour of “The Registrar, IISc, Bangalore”, payable at Bangalore to be submitted with the Technical Bid.
<b>Any Clarification:</b>	
	Office of the Divisional Deans
	Email: dean.che@iisc.ac.in
	Contact No: 080-22932478

## SECTION 2 – ELIGIBILITY CRITERIA

### Prequalification criteria:

1 Bidder should be a well-established firm. (Enclose GST & MSME Registration Certificate of the firm)
2 Bidder should have at least 5(five) years experience in Auditorium Interior and Turnkey Fitout, which includes Acoustical treatment, Audio Visual Equipment, HVAC, Stage and General Lighting, Seats and other allied works such as fabricating, supplying and installing modular furniture to Central/State Govt. Departments/ PSUs/Banks/reputed/IT and other premier educational institutions (Self declaration – Annexure 3) .
3 The bidder must have their office and/or service centre(s) in Bangalore. Preference shall be given to OEM's of AV, HVAC, lighting, and other critical components with service centres in Bangalore.
4 Bidders should be the Original Equipment Manufacturer or the Indian authorised distributor.
5 The quotation should be on FOR-IISc Bangalore Basis in INR Only.
6 Bidder should have executed at least one order of similar nature (as defined in Point no. 2) with a minimum value of Rs 300 lakhs (Rupees Three Hundred Lakhs only) in each year, during any 3 of the last 5 years. (Give details in the enclosed format along with Copy of Purchase orders – Annexure 2)
7 The Bidder should have a minimum Annual Turnover of Rs. 20 crore in Auditorium Fitout as mentioned in Point no.2 above and fixture and furnishing during any 3 of the last 5 years. (Copy of Audited Statement of Accounts to be submitted a certificate from the chartered accountant may kindly be furnished indicating the turnover).
8 The Bidder should not be blacklisted by any institution/bank in India and abroad <b>(Self declaration-Annexure-4)</b>
9 The Bidder should accept tender terms &conditions <b>(Annexure-5)</b>
10 Earnest Money Deposit (EMD) of Rs 5,00,000/- (Rupees Five Lakhs only) in the form of Bank Guarantee/Demand Draft in favour of "The Registrar, IISc, Bangalore", payable at Bangalore to be submitted with the Technical Bid or NSIC certificate for companies registered under MSME

### SECTION 3 – TERMS AND CONDITIONS

#### Submission of Tender:

1 All documentations in the tender should be in English
2 Sealed tenders are invited under two bid systems i.e. Technical and Commercial Bid.
(i) The technical bid consisting of technical details and the commercial terms and conditions without any commercial values of items should be placed in an envelope and sealed, super scribing as "Technical Bid". Also, superscribe on the envelope "Name and address of the tendering firm."
(ii) The commercial bid indicating item wise price of items mentioned in the technical bid should placed on an envelope and sealed, super scribing as "Commercial bid." Also, superscribe on the envelope "Name and address of the tendering firm."
The envelopes containing technical and commercial bids should be placed in another envelope and sealed super scribing as "Bid for fabrication, supply and installation o modular workstation, desks and other furniture". Also, superscribe on the envelope " Name and address of the tendering firm".
4 All communications are to be addressed to the undersigned only.
5 Price quoted should be in Indian Rupees.
6 G.S.T. & other statutory taxes/levies, are to be indicated separately. BIDDER should mention Central and State G.S.T. Registration and PAN in the tender. If vendor has exemption, separate and relevant document to be furnished in the technical bid.
7 If Price is not quoted in Commercial Bid as provided in Tender document then, IISc Bangalore will reject the bid.
8 Incomplete bids will be summarily rejected.
9 The selected vendor shall visit the site with the tender BOQ and ensure that all the specified quantities are matching the requirement as per site conditions. Any discrepancies in the quantity has to be highlighted before starting the work.
10 For all the custom fabricated furniture at site, the bidder shall visit the site and quote as per site conditions.

#### Cancellation of Tender:

Notwithstanding anything specified in this tender document, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason/s, reserves the rights:

- a. To accept OR reject lowest tender or any other tender or all the tenders.
- b. To accept any tender in full or in part.
- c. To reject the tender offer not conforming to the tender's terms.

**Validity of the bid:**

60 days from the last date for submission of the bid.

**Evaluation of Bid:**

1 The technical bid will be opened first and evaluated. The commercial bid of the technical qualified bidders only will be opened later.

2 Bidders meeting the required criteria as stated in Section 2 of this document shall only be considered for Commercial Bid. Further, agencies not furnishing the documentary evidence as required will not be considered.

3 Invitation of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during Technical / commercial evaluation. The decision regarding acceptance and / or rejection of any offer in part or full shall be at the sole discretion of IISc, and decision in this regard shall be binding on the Agencies.

4 The award of contract will be subject to acceptance of the terms and conditions stated in this tender. Contract document should be executed within 21 days of award of contract. Non-fulfilment of this condition of executing a contract by the awardee will lead to cancellation of the award and forfeiture of EMD. Institute reserves the right to award the contract to the next lowest bidder, if he agrees to execute the work at L1 price.

5 Offer which deviates from the vital conditions (as illustrated below) of the tender shall be rejected

- a. Non-submission of complete offers.
- b. Receipt of bids after due date and time and or by email / fax (unless specified otherwise).
- c. Receipt of bids in open conditions.

6 In case any BIDDER is silent on any clause mentioned in this tender document, IISc. Bangalore shall construe that the BIDDER had accepted the clause as per the invitation to tender and no further claim will be entertained.

7 No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

8 The date and time of the Bid opening shall be intimated to the bidders.

9 Consolidated prices of all items will be used for selecting the agency.

10 Quantities of cables, conduits and acoustical treatment shall be billed as per consumption at site.

**Guarantee:**

If the goods supplied is found defective due to bad design or workmanship, the same should be repaired or replaced free of charge. Performance guarantee and warranty for the items supplied need to be provided for a period of two years from the date of commissioning and certification in the form of bank guarantee for Rs. 25 Lakhs.

**Purchase Order:**

- 1 The order will be placed on the bidder whose bid is accepted by IISc based on the terms & conditions mentioned in the tender.
- 2 The item-wise price indicated in the commercial bid will be used for the purpose of arriving at price differential for any changes made in the specification/quantity during execution of the work.

**Earnest Money Deposit:**

- 1 EMD of unsuccessful bidders will be returned within 30 days after the award of the contract.
- 2 EMD of a bidder will be forfeited, if the bidder withdraws or amends its tender or derogates from the tender in any respect within the period of validity of its tender. Further, if the successful bidder fails to furnish the required performance security within the specified period, its EMD will be forfeited.
- 3 If the quality of product and service provided is not found satisfactory, IISc Bangalore reserves the right to cancel or amend the contract.

**Delivery Schedule:**

Free delivery and Installation at IISc, Bangalore within 120 days from the date of issue of purchase order.

**Penalty:**

Timely delivery is the essence of the contract and hence if the completion of milestone as mentioned below is delayed, liquidated damages at the rate 0.5% of the price of the delayed part, for each week or part thereof shall be levied and recovered subject to maximum of 5% of total purchase order value.

**Payment Terms:**

No advance payment shall be made. Running Bills along with supporting documents showing each item executed with its quantity & rate shall be submitted by the supplier on completion of the task in duplicate quoting GST and PAN and other supporting documents. Milestones for payment release:

- 1) Completion of Acoustics, conduiting & cabling, support system for seats, lighting bars and HVAC ducting – 25% of the order value. (Within 60 days from issue of Purchase Order)
- 2) Supply of all equipment and furniture - 25% of the order value. (Within 90 days from issue of Purchase Order)
- 3) Completion of installation and testing of all systems - 35% of the order value. (Within 105 days from issue of Purchase Order)
- 4) Completion of commissioning and handover – 10% of the order value. (Within 120 days from issue of Purchase Order)
- 5) Release of retention amount of 5% by submitting Performance Bank Guarantee is allowed.

**Statutory Variation:**

Any statutory increase in the taxes and duties after suppliers offer if it takes place within the original contractual delivery date will be to IISc account subject to the claim being supported by documentary evidence. However, if any decrease in statutory levies, if any has to be borne by the vendor. However, if any decrease in taxes, the same as to be passed on the institute.

**Disputes and Jurisdiction:**

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore.

**General:**

1 All amendments, time extension, clarifications etc, within the period of submission of the tender, will be uploaded on the IISc website only and will not be published in newspapers. Bidder Should regularly visit the above website to keep themselves updated. No extension in the bid due date/time shall be considered on account of delay in receipt of any document by mail.

2 The Bidder should ensure that the necessary facilities required for fabricating the tendered products are available in - house. IISc reserves the right to inspect, the supplier's factory at any time during the prevalence of the contract and also to inspect each manufactured item before dispatch.

3 The bidder may furnish any additional information, which he thinks is necessary to establish his capabilities to successfully complete the envisaged work. It is however, advised not to furnish superfluous information.

4 The bidder may visit the site before submission of tender, with prior intimation.

5 Any information furnished by the bidder if found to be incorrect either immediately or at a later date, the bid will be summarily rejected.

6 The sample for finishes indicated should be shown and got approved by the vendor before procurement. Mock-up of wall panelling and ceiling has to be done at site for approval (No additional cost can be charged for the samples).

**The Dean  
Division of Chemical Sciences.**



## Section 4 : Technical Bid

Sl.No	Description Of Product	Area	Preferred makes	Noted Make & Model	Compliance Y/N	Remarks/Deviations
ACOUSTIC WALL PANELLING						
1	Auditorium Walls, Bottom Strip Area : 2" thick Slotted Wood Finish Wall Panel system on Masonry - Providing and fixing wall panelling on existing masonry, with 50mm x 50mm SALWOOD framework of size 600mmx600mm grids and filled with of acoustical insulation of 50 mm thickness as defined. The framework and acoustical infill is to be concealed behind the 15mm Slotted finish wood finish MDF panels from Topkaustik, Wood Fit, Armstrong, Sound Slats, RPG or equivalent approved vendors. The perforated wood finish panels must have a minimum perforation area of 12% or higher and is to be supplied with black RP Tissue or equivalent of approved quality. This should be completed as per details and diagrams provided. Rate shall be inclusive of installation on the frame work arrangements. Works will be inclusive of scaffolding and staging at all levels. Rate shall include the preparation of detailed shop drawings as per site conditions, which shall be approved before commencement of works. UOM IN SQM	195	Armstrong, Himalyan Acoustics, Anutone / Chord or approved equivalent			
2	Central Wooden Strip: SITC of 3" width running across the length of the entire auditoriums seating areas on 3 walls with an underside groove to support cove lighting via LED strips. The entire lenth of wood must be covered with a laminate of wooden finish. UOM in meters. thickness 3".	75				
3	Auditorium Walls, Top Area: "Auditorium Walls, Top Strip Area: Acoustical Wall Panels - Gripper system - Providing and installing Acoustical treatment to the walls, including 2"x2"" SALWOOD framework and 50 mm thick Acoustical Insulation of 1000 gsm density from Star Insulation or Prime Insulation 9 mm thick Plywood strips-100 mm wid strips with 20 mm air gaps in between, fixed over acoustical insulation. The plywood strips are to be faced with 6 mm thk fire retardent polyester wadding and gripper system from Walltracts, Chisel Interiors INTER DIMENSION or equivalent system) pressure stapled over Plywood strips and selected FINAL Fabric is to be approved by Client and tested by vendor for dimensional stability etc installed in the gripper system, all done in accordance to the recommendation and the specs Rate quoted includes all the materials, labor, scaffolding, lead, lift, finishing, cleaning, hardwares, etc complete. Contractor shall submit the samples and the Shop drawings to the architect prior to the commencement of the work for approval. UOM IN SQM	340				
4	Auditorium Proscenium Areas: Veneer Paneling: SITC of premium grade veneer panelling for the auditorium walls as shown in the drawing areas, with specifications of the veneer to be as follows: Standard available size: 8ft height X 4ft Width with thickness of around 4mm (including face skin and backing ply layer). Cost to include professional polishing of the veneer panels upon application to arrive at the desired final outcome as prescribed by the architect. Samples to be provided for approval. The entire paneling to be supported on an MS framework proscenium horizontal facia and dual pillars as per drawings, which is to be created with 50mmX30mm X 3mm thick square tube as per site conditionsUOM IN SQM	97				
5	Stage Back Wall Area: SITC of 12mm woodwool board fixed on to the masonry wall 25mm frame work of 600mmX600mm and 25mm rockwool infill, with required accessories, painted. UOM IN SQM	130				
ACOUSTICAL CEILING TREATMENT						
6	SITC of an Acoustical Ceiling with 0.9 NRC acoustical tiles of thickness 12mm with a 50 mm polysynthetic wool (1000gsm) insulation behind. Insulation to be secured to the rear of the wood wool board via approved adhesive. This is to be installed over a 600mm x 600mm powdercoated gridwork constructed in the hall area. UOM in SQM	500				
AUDITORIUM FLOORING						
7	SITC of Providing vitrified glazed tiles 60 cms x 60 cms size of Jonson, Kajaria, Naveen or equivalent approved make, shade for flooring laid on a bed of 12mm thick cement mortar 1:3 mix, flush pointing with white cement using colour pigment, including cost of materials, labour,curing, with all lead and lift etc., complete as directed by the Engineer-in-charge. Basic Rate: Rs 1000. UOM IN SQM	525				
STAGE FLOORING						
8	Supply & Fixing of 50mm X 50mm Sal Wood Frame work of 600 X 600 mm size filled with 32 kg/ cum 50mm Glass wool, surface finish made of 12mm Ply & Teak wood pieces of size 35mm X 100mm arranged to form a pattern. UOM IN SQM	60				
DOOR SEALS						
9	Painting: SITC of painting of certain areas in the auditorium such as the side walls beside the stage and the curved areas of the control room and adjoining pillars with dual coat premium emulsion from reputed manufacturers. UOM in square meters.	125				
10	Door perimeter drop seals and gaskets - 1055mm retrofit drop seals on the bottom and gaskets on 3 sides for ~50 dB isolation with necessary modifications on the existing shutters to make it sound proof.	8				
11	providing and fixing of charging with depth of 2 ft X 12ft width between pillars on either sides as indicated in the drawing, with required support accessories.	2				
Control Room						
12	SITC of providing a partitioned area with lockable door of height 4.5ft , providing an area of 24Sqft near the stage for creation of a control room/desk. The area shall contain the necessary desk and chair for control room operation along with 4 X 15A and 8 x 6A sockets. UOM in 1 complete functional unit.	1				

S.No	Description	Tender Specifications	Preferred makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
<b>MAIN SPEAKERS</b>								
1	Main Array Speakers	SITC of Active steerable Installed Column array Loudspeaker with at least 12 full range drivers. Offered freq Range shall be 80Hz - 18 kHz or better & shall have 12 built-in amplifiers of 50W each for a total power upto 600W or better. The Loudspeaker shall have a Max. SPL (Peak) of >=101 dB or better at 30m. Horizontal dispersion pattern of 160° or better, Vertical dispersion shall be adjustable with both beam steering and spreading options. It shall be able to store upto 10 presets of beam positions for easy recall, shall offer analog as well Dante digital audio connectivity. It shall be possible to have loudspeakers stacked for increased SPL and effective throw range. Shall support beam modes for flat floor optimization, rake seating and dual beams with separate Equalizations. Shall include OEM wall/stacking bracket and other necessary hardware.	Bose / Tannoy / Renkus Heinz / Alpha Acoustics	4	Nos.			
2	Digital Signal Processor with Dante	SITC of Digital Audio DSP with 32-bit fixed/floating-point DSP 456 MHz/ARM Cortex-A8 600MHz Processor, Balanced Analog I/O – 12 inputs (routable to AEC), 8 outputs, GPIO – 5x5 expandable general-purpose control, ControlSpace Network Port – Interfaces with Bose and 3rd party control, Dante Network Port – 64 x 64 channel, 1 Gbps, 2-Line VoIP – SIP 2.0-Compliant IT web configuration page, USB Port – Micro-B USB for PC soft codecs with stereo input and output, Bose® Amplink – 8-channel uncompressed, ultra-low latency digital audio, Serial Port – 3-wire RS-232C (DTE) serial interface connection, CC-16 – Supports Bose® CC-16 user controls, PSTN (RJ-11) – Supports worldwide analog telephone connection, Dynamic Range > 115 dB, A-weighted 20 Hz – 20 kHz, analog input to analog output; Maximum Input Level +24 dBu; Equivalent Input Noise -118 dB at 48 dB gain setting; Phantom Power +48 VDC, 10 mA, selectable per input; Output Channels 8 balanced, line level	Bose / Biamp / Symmetrix	1	Nos.			
3	Front Fills Speaker System	SITC 5-inch, two-way loudspeaker, with 100° x 100° Coverage Pattern, Sensitivity 92 dB, 118 dB maximum SPL, long-term continuous Power Handling : 100 Watt, Frequency Response (-3 dB) : 100 Hz to 16 kHz, Exterior-grade plywood Enclosure Material with Two-part spray polyurea coating finishing, complete with standard accessories as required.	Bose / Martin Audio / D&B / Alpha Acoustics	4	Nos.			
4	Subwoofers (Powered)	SITC of Dual 10" powered Subwoofer, Nominal dispersion is Omnidirectional, Frequency Response (-3 dB) : 40 Hz - 250 Hz ; Frequency Range (-10 dB) : 38 Hz - 250 Hz ; Maximum SPL @ 1 m : 130 dB SPL (peak 6 dB CF) ; Rated Power: 1,000 W (500+500) ; Wood cabinet with high impact composite end caps complete with standard accessories	Bose / Martin Audio / D&B / Alpha Acoustics	2	Nos.			
5	Amplifier for front fills	SITC of Two Channel Power amplifier 2 x 600 W @ 4/8 Ohms with 20Hz - 20kHz or better frequency response, with digital Amplink Inputs/Outputs, LED Indicator, delivering as per OEM Guidelines, Amplifier Wattage should be 1.5 times the wattage of Speaker Driver with the system to make it functional.	Bose / Lab Gruppen / Powersoft	1	Nos.			
6	Stage Monitors	SITC of a compact portable powered stage monitor with multiple monitor positions with a wide dispersion angle of 10 x 40 deg, and generating a peak of 109 dB SPL. Multiple monitor positions should also allow the monitor to be placed on the floor, a table or even a tripod for various types of shows. Inputs to contain 2 XLR ports with an EQ on the speaker to control bass and treble.	Bose / Martin Audio / D&B / Alpha Acoustics	4	Nos.			
<b>CONTROL ROOM EQUIPEMENTS</b>								
7	Digital Mixer with digital stage box	SITC of 40 Channels Digital mixing console with the following minimum specifications. 32 Microphone Inputs with 8 XLR/1/4" Combi-jacks for line inputs and instruments, 40 DSP input channels (32 mono inputs and 4 stereo channels/returns), 31 Output busses all with full DSP processing and GEQ. Up to 80 channels to mix. 4-band Fully Parametric EQ on each channel and bus. 8 VCAs + 8 Mute groups. 26 motorised faders (24 input + LR/Mono), 4 fully customisable Fader Layers, Built-in Stage box Connectivity, 5" touch screen display, 4 studio-grade Effects engines and dedicated FX busses, Graphic Equalisers on every bus, 20 sub-group / aux busses, 4 mono/stereo matrix busses along with 32 channel stage box with 32 remote controlled mic inputs, 12 XLR analog line level outputs, RJ45 Connectivity to Mixing Console complete with standard accessories as required.	Behringer / Soundcraft / Allen and Heath	1	Nos.			
8	Tablet for wireless control	SITC of a 32GB tablet running on IOS platform with screen size of approx 10 inches.	Apple	1	Nos.			
9	Wifi Router	SITC of a wifi router to enable wireless connection on the tab as well as for the speakers	TP Link / Dlink	2	Nos.			
<b>MICROPHONES</b>								
10	Wireless handheld mic set	SITC of UHF Wireless Cardioid dynamic handheld microphone system with Frequency Response of 80 Hz to 18 kHz, RF Sensitivity < 2.5 µV for 52 dBA eff S/N, S/N ratio : ≥ 110 dBA or better, Total Harmonic Distortion ≤ 0.9 % or better, Operating range 100 mtrs or better, RF Power Output High: 30 mW or better, with Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodulation 1 frequency bank with up to 12 programmable channels, Audio output : 6.3 mm jack socket (unbalanced): +12 dBu & XLR socket (balanced): +18 dBu, with integrated mute switch.	Sennheiser / Shure / Beyerdynamic	4	Nos.			
11	Wireless lapel mic set	SITC of UHF Wireless condenser lavalier microphone system with omni-directional Pick-up pattern, Frequency Response of 50 Hz to 18 kHz, RF Sensitivity < 2.5 µV for 52 dBA eff S/N or better, Total Harmonic Distortion ≤ 0.9% or better, Operating range 100 mtrs or better, RF Power Output High: 30 mW or better, with Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodulation 1 frequency bank with up to 12 programmable channels, Audio output : 6.3 mm jack socket (unbalanced): +12 dBu & XLR socket (balanced): +18 dBu.	Sennheiser / Shure / Beyerdynamic	2	Nos.			
12	Wireless Headworn mic set	SITC of UHF Wireless Cardioid condenser headworn microphone system with Frequency Response of 80 Hz to 18 kHz, RF Sensitivity < 2.5 µV for 52 dBA eff S/N or better, Total Harmonic Distortion ≤ 0.9 % or better, Operating range 100 mtrs or better, RF Power Output High: 30 mW or better, with Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodulation 1 frequency bank with up to 12 programmable channels, Audio output : 6.3 mm jack socket (unbalanced): +12 dBu & XLR socket (balanced): +18 dBu.	Sennheiser / Shure / Beyerdynamic	2	Nos.			
<b>Podium Gooseneck</b>								
13	Podium gooseneck with base	SITC of Wired Gooseneck microphone with Frequency response: 50 Hz - 20 kHz or better, Transducer principle: pre polarised condenser microphone or better, Pick-up pattern: Cardioid/ Super- Cardioid, Equivalent noise level: 26 dB (A) or better, Gooseneck Microphone: 17 inches or better, Max SPL: 128dB or better, with Tablestand ON/OFF switch, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	2	Nos.			
<b>Vocal Microphone</b>								
14	Wired Vocal Mic	SITC of Corded Vocal Microphone with Dynamic Transducer principle, Pick-up pattern: cardioid, Sensitivity in free field, no load (1kHz): 2,7 mV/Pa, Nominal impedance: 350 Ohm, Frequency response 40 -16000 Hz, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	2	Nos.			
<b>Wireless Antenna Distribution</b>								
15	Antenna Splitter	SITC of Active antenna splitter support Up to 4 true diversity receivers can be used with two external antennas, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	2	Nos.			
16	Passive directional Antennas	SITC of Passive directional antenna with Frequency range: 450 - 960 MHz, Impedance: 50 Ohm, Antenna gain- 4 dBi, along with Antenna Booster complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	2	Nos.			
17	100M Antenna cable	SITC of coaxial Antenna Cable 50 Ohms cable, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	2	Nos.			
18	CD/DVD Player	SITC of Professional CD Cum DVD Cum USB player complete with standard accessories.	Gemini / Sony / Denon	1	Nos.			
19	Recorder	SITC of an audi recorder with stereo recording capability, complete with standard accessories.	Tascam / Zoom / Sony	1	Nos.			

20	DI Box	SITC of Active DI Box , complete with standard accessories.	BSS / Behringer / Samson / KT	4	Nos.			
<b>CABLES, CONDUIT, CONNECTORS AND ACCESSORIES</b>								
21	Speaker Cable	SITC of 2 core 2.5 sqmm PVC insulated CU conduction loudspeaker cable, complete with standard accessories.	Belden / Klotz / Sommer	350	Mtrs.			
22	Microphone Cable	SITC of 2 core shielded PVC insulated Cu conduction microphone cable, complete with standard accessories.	Belden / Klotz / Sommer	180	Mtrs.			
23	CAT 6 Cable	SITC of UTP CAT6 Cable	Belden / Klotz / D-Link	180	Mtrs.			
23	CAT 6A Cable	SITC of UTP CAT6A Cable for networking	Belden / Klotz / D-Link	305	Mtrs.			
24	PVC Conduit - 25mm	Supply and Laying of rigid PVC conduit, 25mm diameter, and accessories with ISI mark for the AV system as well as for Networking	Custom	200	Mtrs.			
25	PVC Conduit - 20mm	Supply and Laying of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	Custom	200	Mtrs.			
26	Equipment Rack	SITC of 27U Equipment Rack for housing all rack mountable equipments with internal wiring, front glass door; heat dissipation fans; movement wheels, power distribution units etc, complete with standard accessories.	Rittal / Valrack / D-Link / APC	1	Nos.			
27	Mic Stand - Floor	SITC of Floor Stand for Microphone	Ahuja / Samson / K&M	8	Nos.			
28	Mic Stand - Table	SITC of Table Stand for Microphone	Ahuja / Samson / K&M	8	Nos.			
29	Connectors	SITC of various type of connectors as required at site	Neutrik / Amphenol / Rean	1	LS			
30	ITC Charges	Installation, Testing and Commissioning Charges		1	Job.			

S.No	Description	Tender Specifications	Preferred makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
<b>PROJECTORS</b>								
1	Main Projector	Supply of DLP Laser Phosphor projector or better with dust protection , Min. 11,000 ISO Lumens or brighter, Laser light source having 20,000 hrs. life, WUXGA (1920 x 1200) display resolution or better, Contrast ratio (Dynamic) min. 10,000:1 or better, 24/7 operation, PC 3D ready, Anamorphic ready, PC configurable OEM software for control & monitoring of projector from control room. Inputs: 1 x Display port , 2 x HDMI , 1 x HDBaseT, 3G-SDI in/out Controls: 3D sync in/out, RS232, Control: Crestron RoomView, along with Suitable Lens as per site., along with Suitable Lens for a Screen Size of 335" diagonal from approx distance of 18ft or less.	Christie/ Digital Projection / Barco / NEC	1	Nos.			
2	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 150 lbs (68 kg) along with 9-11' Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	B-Tech / Liberty / Draper / Chief	1	Nos.			
3	Left & Right Projectors	"Supply of DLP Laser Phosphor projector or better with Laser light source having 20,000 hrs life or more, Min. of 6000 ISO Lumens or brighter, WUXGA resolution (1920 x 1200) and Contrast ratio (dynamic) 18,000:1 or better. Inbuilt capability of Vertical & Horizontal Keystone correction, Digital Zoom. The projector should have 10-bit colour display or better. The projector should have capability of Streaming of video and audio content from a compatible mobile device. The projector should be Full HD 3D ready. Inputs: 1 x VGA in/out, 2 x HDMI , 1 x HDBaseT, 3G-SDI in/out Controls: 3D sync in/out, RS232, Audio in/out stereo. Control: Crestron RoomView, AMX & RS232 along with Suitable short throw Lens for a Screen Size of 192" diagonal from approx distance of 15ft-16ft.	Christie/ Digital Projection / Barco / NEC	2	Nos.			
4	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 50 lbs (22.7 kg) along with 9-11' Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	B-Tech / Liberty / Draper / Chief	2	Nos.			
5	Main Projection screen	SITC of Fixed Projection Screen: 335 inches diagonal with 16:10 aspect ratio With MS supports as per site conditions. SIZE: 23.6 Feet x 14.79 Feet	Dalite / Draper / Stewart	1	Nos.			
6	Left & Right Projection screen	SITC of Motorized Projection Screen: 164 inches diagonal Motorized screen with 16:10 aspect ratio With Tubular Motor and RF Controls.	Dalite / Draper / Stewart	2	Nos.			
7	Confidence Monitor	SITC of confidence monitor 50" 4K UHD Display for local presentation with 3840 x 2160 (4K UHD) resolution, Brightness: 350 nits, Contrast Ratio: 4000:1, Viewing Angle(H/V): 178/178, Response Time: 8ms, Display Colors: 16.7M, Inputs: HDMI, DVI, USB with Audio input, and with having Audio output, External Control: RS232C, IR or better, working hour: 16/7, Built in Speaker (10W + 10W)	Samsung / Christie / LG	1	Nos.			
8	Floor stand for Confidence monitor	SITC of Confidence monitor mount with the following specifications: floor mount bracket for supporting display panel up to 55".	B-Tech / Chief / Realtech	1	Nos.			
9	Control room display	SITC of Control room monitor 32" Full HD Display monitor with 1920 x 1080 (Full HD) resolution, Brightness: 330 nits, Contrast Ratio: 5000:1, Viewing Angle(H/V): 178/178, Response Time: 8ms, Display Colors: 16.7M, Inputs: HDMI, DVI, USB with Audio input, and with having Audio output, External Control: RS232C, IR or better, working hour: 16/7, Built in Speaker (10W + 10W)	Samsung / Christie / LG	1	Nos.			
<b>TRANSMITTER, RECEIVER AND MATRIX SWITCH</b>								
10	Podium	SITC of Customised Podium with Space for Interactive Panel, Mouse, 19" rack Space, Provision for Gooseneck Microphone, Top Connectivity Plate with following provisions i.e. Power for External Laptop, VGA and HDMI Input, USB Ports for Pen Drive and sliding Table top, 22"-24" Pen Interactive Panel, Battery free Pen with Eraser Switch, DVI/HDMI Input and Output, 16ms response time along with mini PC of i3 processor, 500GB HDD and windows 10 OS complete with standard accessories.	Customized	1	Nos.			
11	Cable Cubby on Podium	SITC of Laptop connectivity enclosure with below minimum specifications: It should be flush mountable into a table or flat surface with tilt up lid, Anodized, metal enclosure. Should have a lid damper for smooth/quiet operations. It should have 2x Multi-region AC outlet for power option, 1x USB-A, 1x USB-C ports for charging. Should have option for 8x pass through holes/connectors for AV cables- VGA, Audio, HDMI, LAN, etc & Should have rectangular modular design for fast assembly and service. IT should be CE, UL, BIS certified	Extron / Lightware / Liberty AV	1	Nos.			
12	Matrix Switcher	SITC of "All in one Digital Matrix switcher" with below minimum specifications: Inputs to be Min 6 x HDMI, 4 x Twisted pair / HDBaseT, Outputs to be Min 4 x HDMI , 4 x Twisted pair / HDBaseT independent outputs, Should have min 2 x mirrored HDMI outputs for local monitors/Preview purpose, Resolution to be 4K or better. Audio Input: Six stereo balanced/unbalanced audio inputs & four mic/line audio inputs. Audio Output: Minimum four variable audio outputs. The unit to have Logo Keying - logo graphic may be placed at any position on any scaled video output. Should have seamless switching between connected inputs with Selectable seamless switching transitions. Should perform at 4:4:4 chroma sampling - Resolution range should be from 640x480 to 4K. Support HDMI audio de-embedding with S/PDIF audio output options. Should have in-built energy efficient Class D stereo or mono amplifier for direct speaker connections. Should be HDCP compliant & have inbuilt EDID management. Should support transmission of audio, video, control & power up to 70mtrs or 100mtrs over single shielded twisted pair cable. Should power up the select transmitters and receivers remotely without additional power adaptor. Should have inbuilt audio DSP to manage and manipulate the audio inputs with AEC feature enabled and this should allow 16x16 I/O channel to expand. For controls, the unit should have front panel buttons with indication, Ethernet/ RS 232. Should have scaling on Twisted pair/HDBaseT output on min 4 x Twisted pair outputs or scaling feature should be provided at the Twisted Pair HDMI receiver. The unit should have a inbuilt control system with min 3 x RS232, 2 IR/S, 4x Relay & 4x Digital I/O. Communication Ports: 2 x female RJ-45 connector 10/100/1000Base-T with 2 NIC cards for isolating AV network from common network. It should be J1TC Certified.	Extron / Lightware / Liberty AV	1	Nos.			
13	Multi-Format transmitter	SITC of "Multi-Format switcher transmitter" with below minimum specifications: Inputs to be 1 x Display Port, 1x HDMI, 1 x VGA or more. Outputs to be 1 x Twisted pair/ HDBaseT on RJ 45 or better. It should have 1 x stereo analog audio, embedded audio on HDMI/Display port input. Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. Should have an automatic switching feature between inputs. It should support local power supply and it should provide remote power to connected receiver. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. It should be J1TC Certified, Should be supplied with under table mounting kit	Extron / Lightware / Liberty AV	1	Nos.			
14	Wallplate Transmitter	SITC of "Wallplate Transmitter" with below minimum specifications: Inputs to be 1x HDMI, 1x VGA or more. Outputs to be 1 x Twisted pair on RJ 45 or better. Resolution to be 4K or better. It should have 2 x stereo analog audio or more, embedded audio on HDMI port input. Should have an automatic switching feature between inputs. It should support both local power supply and remote powering. Transmission Distance should be atleast 100 mtrs. Should be HDCP compliant & should support EDID management.	Extron / Lightware / Liberty AV	2	Nos.			
15	HDMI over twisted pair Transmitter	SITC of "HDMI Transmitter " with below minimum specifications: Inputs to be 1 x HDMI, Controls (RS 232/IR). Outputs to be 1 x Twisted pair on RJ 45. Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be J1TC Certified	Extron / Lightware / Liberty AV	4	Nos.			
16	HDMI over twisted pair Receiver	SITC of "HDMI Receiver " with below minimum specifications: Inputs to be 1 x Twisted pair on RJ 45. Outputs to be HDMI, Analog Audio, Controls (RS 232/IR). Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be J1TC Certified	Extron / Lightware / Liberty AV	7	Nos.			

17	Wireless Presentation system	SITC of "Wireless Presentation system" with below minimum specifications: Outputs to be 1 x HDMI / Display port or better. It should have Pass-through mode port with 4K resolution support or Better & Window mode with 1080p or better. Should have fully customizable welcome screen & Video screen saver & Should enable the moderator to select which user can access the display and how the content is displayed. Should be HDCP2.2 compliant & have EDID management. Should have 1 x embedded audio on HDMI input or better, 1x analog stereo, balanced/unbalanced output. It should present Full screen or four window Simultaneous display of content from 4 different sources through software app. Wired and wireless sources should be able to collaborate simultaneously. It should support 128-bit, security protocols to ensure that all content transmitted between BYOD devices and this unit is fully encrypted and secure. It should support Windows, Android & iOS or better. It should enable meeting content to display on a participant's mobile device. Should be PoE+ enabled. Should have control options of USB, LAN, CEC over HDMI cable or better.	Extron / Lightware / Liberty AV	1	Nos.			
18	Recorder & streaming processor	SITC of "Full HD Recorder & streaming processor" with below minimum specifications: Inputs to be 2 x HDMI / DVI digital video (HDCP compliant), 1x HDMI, 1x Component/Composite video, 1 HDMI loop out or better. Outputs to be 1 x HDMI for local output, 1 RJ45 streaming & network recording output & Simultaneous unicast and multicast streaming per encode. Should support resolution of 640x480 upto at least 1920x1200 including 1080p/60. Should have EDID management Should have 1 or more stereo Audio inputs. Should have an in-built DSP for audio management. Should have 80 GB or more SSD / through Memory card, USB for external drive and defined network storage directory & Record audio as separate m4a file. Should have two HD input PIP and picture by picture capability and have high quality inbuilt scaling. Should have flexibility to change background images and text for recording. Should support Record and stream simultaneously, Metadata can be assigned to make indexing and searching of recordings & Provision for Dual Recording. Should have flexibility to integrate with 3rd party video platform with help of additional license. Should have streaming capability with resolution support upto 1080p, H.264 or better compression supporting protocol RTP/RTSP/RTMP. Should have provisions for Horizontal Video Mirroring Upgrade with additional license Integration with Panapto or Kaltura with additional licenses. Should have I/O ports for AV system management. Should include HDMI cable lacing brackets. Should have control options of RS232/ Ethernet, Front button panel.	Extron / Lightware / Liberty AV	1	Nos.			
19	7" Touch Panel	SITC of "7 inch Wallmount Control touch panel interface" with below minimum specifications: Should be 7" or more Diagonal, TFT touch screen or better with tabletop mounting, of the same make of Control system for proper compatibility. Should be a capacitive touch or better, with Gorilla Glass screen protection. Should have 1024x600 resolution and 24-bit color depth or better. Brightness should be 420 nits (cd/m2) or better. Should have 65 degree viewing angle provides optimum viewing comfort while seated or standing. Contrast should be 700:1 or better. Backlight should be LED. Should have communication port of female RJ-45 connector 10/100/1000Base-T, half/full duplex with autotest. Should support Power over Ethernet supplied through network switch. Should have memory of SDRAM: 2GB or more, Flash: 4GB or more. Should comply with CE, UL, FCC, RoHS, UL, VCCI, and WEEE. It should be BIS & JISC certified.	Extron / Lightware / Liberty AV	1	Nos.			
20	USB Bridge device	SITC of HDMI and audio to USB bridge with inbuilt scaling, 1x HDMI input, 1x line input, 1x HDMI loop out, 1x scaled USB output for software based video conferencing, should support in-built AEC. Should be HDCP compliant. Support HDMI audio de-embedding, mic input with phantom power, built-in DSP features. Control: RS-232, Ethernet	Extron / Lightware / Liberty AV	1	Nos.			
21	PTZ Camera	SITC of Full HD IP PTZ Camera with frame rate of 60fps or better with 1/2.8" 2MP CMOS; 20x or better optical Zoom; 128 or better preset positions; 3G-SDI, HDMI, Ethernet video output support; RS-232 / RS-422 / Ethernet Camera control Interface; Pan Angle : -170° ~ +170° or better; Tilt Angle : -30° ~ +90° or better; Video S/N Ratio : >50dB or better; complete with all standard accessories as per the tender specification.	Sony / Lumens / Panasonic	3	Nos.			
22	Joystick Controller	SITC of Joystick Controller for PAN/Tilt/Zoom; Control upto 250 Camera or better; VISCA, Pelco P&D, VISCA Over IP, ONVIF Protocol Support; Interface : RS-232, RS-422, Ethernet or better; complete with all standard accessories as per the tender specification.	Sony / Lumens / Panasonic	1	Nos.			
<b>CABLES, CONDUITS, CONNECTORS AND ACCESSORIES</b>								
26	HDMI Cable- 6 Feet	SITC of "6ft HDMI Cable" with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K @60Hz. Should have 30-22 AWG or better. Should support ABC and CEC.	Extron / Crestron / Kramer	14	Nos.			
27	HDMI Cable- 3 Feet	SITC of "3ft HDMI Cable" with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K @60Hz. Should have 30-22 AWG or better. Should support ABC and CEC.	Extron / Crestron / Kramer	17	Nos.			
23	VGA Cable- 6 Feet	SITC of "6ft VGA with Audio" with below minimum specifications: Should be a Thin flexible VGA cable Terminated with high quality molded VGA (15-Pin HD) connectors and 3.5 mm connectors for audio. Should have overall foiled shield for EMI interference isolation.	Extron / Crestron / Kramer	2	Nos.			
24	DP Cable- 6 Feet	SITC of "6ft DisplayPort Cable" with below minimum specifications: Should be a DisplayPort 1.2 gold Plated Male to Male cables of data rate 21.6 Gbps, support the resolutions upto 4096x2160 @ 60 Hz. Should have 30-22 AWG or better.	Extron / Crestron / Kramer	1	Nos.			
25	STP Cable	SITC of "Shielded Twisted Pair cable" with below minimum specifications: Should be a Shielded twisted pair with 4 UTP cables. Should have 24 AWG or better. Shielding should be SF/UTP design with four unshielded twisted pairs inside an overall braid and foil shield. It should be best suitable for the proposed twisted pair extenders. Bandwidth should be 450 MHz or better.	Extron / Crestron / Kramer	2	Nos.			
26	STP Connector	SITC of "Shielded Twisted Pair Connector" with below minimum specifications: Should be a Shielded twisted pair connector for 4 UTP cables ( 24 AWG)	Extron / Crestron / Kramer	3	Nos.			
27	PVC Conduit	SITC of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	Custom	100	Mtrs.			
28	Network Switch	SITC of 8 Port Network switch with PoE for supporting the AV installation requirement	D-Link / Netgear / Cisco	2	Nos.			
29	Wireless Router	SITC of Wireless router for supporting the AV installation requirement	D-Link / Netgear / Cisco	1	Nos.			
30	ITC Charges	Installation, Testing and Commissioning of the system		1	Job.			

S.No.	Tender Specifications	Preferred makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	SITC of 150W High Quality LED Parcan Light complete with, Lamp source 3200K CCT Colour temperature CRI & TLCI Values above 95 DmX 512 dimming with 3 channel control Beam Angle of 9° / 25° / 45° Total Power Consumption of 165W 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 or 3 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 Brand embossed impact on the light body for genuine product	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	8	Nos			
2	SITC of 300W LED Profile Spot 19 Degree Light complete with, 3200K CCT Colour Temperature 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 12040 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 Brand embossed impact on the light body for genuine product	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	4	Nos			
3	SITC of 400W LED Blinder Light 30 Degree complete with 3200K CCT 4x100W Chip On Board LED Lamp source 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 420W 11.7KHz Refresh Rate In built preset's for effects Fuse and Internal safety protections Active Cooling with Low Noise Fan 5 Pin XLR or 3 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	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	6	Nos			
4	*SITC of 54 x 3W LED Par Light RGBW, Beam Angle 25° complete with RGBW 3W Lamp source x 54 Pcs DmX 512 dimming with 8 Channel High Bright Red, Green, Blue, White LED's Source Unlimited Color Mixing through DmX 0 ~ 100% Linear dimming In built presets for different colors Strobe Mode 20 times/Sec Data DmX through 3 / 5 Pin XLR's 65dB ~ 130dB Sound sensing capacity Power In and Out Connections High precision colors, IP20 protection Powder coated Black finish housing Having Sound Control	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	6	Nos			
5	SITC of 200W LED Fresnel Light having 3200K colour temperature High quality uniquely designed Fresnel Lens CRI, TLCI and R9 value above 96 LED COB Based Source No Multiple Shadows – Single Source illumination Total Power Consumption of 210W Linear dimming 0 ~ 100% Adjustment Flicker Free for High FPS, Power AC90-260V, 50/60HZ Working Temperature -40° ~ -30° Active Cooling with Low Noise Fan DmX & RDM Control options with latest technology Fixture provided with Yoke of Manual Adjustment Manual and DMX control Option mode through 5pin/3pin xlr Black powder coated fabricated housing with normal yoke. 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 Brand embossed impact on the light body for genuine product	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	6	Nos			
6	SITC of Light fixture mounting clamp Customized for suspending on fixed bars on stage Made up of Aluminium Die casted M5 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 / Markrich / Aultra Lighting / Canara Lighting	32	Nos			
7	SITC of Light Fixture dual safety Chain made up of GI wire rope Bundled and twisted together Having load bearing capacity above 200 Kgs Sieve on the rope. Carabiner Clip	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	32	Nos			

8	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 Suitable to hold various type grid & other rigging systems.	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	22	Nos			
9	SITC of Fixed on stage Curved Lighting bar/winch of 21 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 angle which 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 fastne Made out of 48mm Outer Dai, 40 Nominal Bore Mild Steel Pipe Dual Barrel Arrangement Dual Construction Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions End Caps on the Pipe end Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures	Custom	1	Nos			
10	SITC of Fixed FOH Curved Lighting bar/winch of 22Mtr 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 angle which 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 Mild Steel Pipe Dual Barrel Arrangement Dual Construction Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions End Caps on the Pipe end Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures	Custom	1	Nos			
11	SITC of Power Distribution Electrical panel having a Individual MCB control for 21 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. <del>Custom built as per specification and project requirement</del>	Seimens / Leksa Lighting / L&T / Canara Lighting	1	Nos			
12	SITC of High quality power junction box 4 way made up of MS Sheet metal fabricated housing 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	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	21	Nos			
13	SITC of High quality Dimming In junction box 1 way made up of MS Sheet metal fabricated housing 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	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	1	Nos			
14	SITC of High quality Dimming Out junction box 1 way made up of MS Sheet metal fabricated housing 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	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	6	Nos			
15	SITC of Internal Earthing System with copper bare conductors all along the cable trays, metal parts and Installation Hardwares	Custom	1	Nos			
16	SITC of Black Powder coated cable trays made out of MS Sheet fabricated for a size of 40 x 150 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	15	Mtrs			
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	55	Mtrs			
18	SITC of Dmx Male Female Connectors 5 Pin having rubber sheeth protection for Cross connecting Dmx wiring connections	Nuetrick / LL / Aultra Lighting	10	Nos			
19	SITC of Dmx Male Termination Connector 5 Pin soldered with required capacity of resistor for signal deframing	Nuetrick / LL / Aultra Lighting	8	Nos			
20	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 / Markrich / Aultra Lighting / Canara Lighting	1	Nos			
21	SITC of Dmx Controller consists of 24 Physical Faders to control atleast 96 channels 4 Individual page control switches Master control fader Black out mode Scene saving option upto 96 memories LCD display Smooth movement faders Easy access key pads Dmx 512 protocol, 5 Pin XLR Output Optional chase & multifunction keys Sequence mode select	Leksa Lighting / Avolite / Lite Puter	1	Nos			

22	SITC of MS sheet metal fabricated power junction box duly powder coated and fitted with 2 10amps 3 pin IEC socket, ON/OFF switch and necessary glands to power splitters and console, duly powder coated with Matt black texture finish.	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	1	Nos			
23	SITC of Opto isolated RDM enabled DmX splitter unit provided with, 8 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 Powder coated compartment finish Mounting brackets for grid mount.	Lite Puter / Leksa Lighting / Elation / Canara Lighting	1	Nos			
24	SITC of FRLS Copper unarmoured Flexible cable having 3 Core each of 1.5 Sq mm size.	Polycab / Walna / SBEE	825	Mtrs			
25	SITC of 5 Core DmX Cable with Sheathed housing on the cable, well designed insulation, low noise suitable to transmit DmX signal.	Falcon / Belden / Leksa	170	Mtrs			
26	SITC of Fixed Rear Curtain 22.5 Mtrs straight Centre parting as per design Made up of 1 Track for complete length Overlap of 0.5-0.9 Mtrs. Trolleys uniformly distributed along the track at every 200/250mm with a master trolley. Suspension through Suspenders as per site conditions 2 Wheeler trolley for curtain moment All metal parts are powder coated Black texture finish paint	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	1	Nos			
27	Fabric for Rear Curtain	Om Phile / Nexgen / Comrade	1	Nos			
28	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 Suitable to hold various type grid & other rigging systems.	Leksa Lighting / Markrich / Aultra Lighting / Canara Lighting	8	Nos			



S.No	Tender Specifications	Preferred makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	SITC of 5W per ft strip LED light with dimensions: 25mmx7xx and cutout of 17mmx5mm with each LED of 0.2W. LED Strip to be containing 39 LED's or better per foot, and supported on 12V constant voltage. Length of LED strip to be 1.5meter.	Hybec / Zumtobel / Schreder	56	Nos.			
2	SITC of 36Watts non dimmable driver to support the above mentioned	Hybec / Zumtobel / Schreder	56	Nos.			
3	SITC of main auditorium lights of 33Wattch LED, with a beam angle of 40 degrees. Colour temperature 3K/4k/5k with circular shape.	Hybec / Zumtobel / Schreder	48	Nos.			
4	SITC of 0-10 dimmable driver to support the above mentioned LED light strip	Hybec / Zumtobel / Schreder	48	Nos.			
5	Accent Lighting : SITC of 5W per ft strip LED light with dimensions:17mmx8mm with each LED of 0.2W. LED Strip to be containing 39 LED's or better per foot, and supported on 12V constant voltage. Length of LED strip to be 75meter.	Hybec / Zumtobel / Schreder	75	Nos.			
6	SITC of 196Watts non dimmable driver to support the above mentioned LED light strip	Hybec / Zumtobel / Schreder	8	Nos.			
7	16 on/off circuits actuator x 2 no's. 32 available circuits. We have 30 circuits in total. 16 Channel Combo Switch Actuator (16A/Ch. with Manual Override Option)	Hybec / Zumtobel / Schreder	2	Nos.			
8	6 channel dimming circuits. There are 6 rows of lights. 6 Channel 0-10V Dimmer (10A/Ch. with Manual Override Option) with P.S.	Hybec / Zumtobel / Schreder	1	Nos.			
9	8 Button Panel. We have 36 circuits so we have recommended 5 button panels. 8 Button Black Aluminium Keypad.	Hybec / Zumtobel / Schreder	5	Nos.			
10	Control of IR Devices like AC etc. IP to IR Controller (Max. 3 IR Devices)	Hybec / Zumtobel / Schreder	2	Nos.			
11	Control of RS-232 device. IP to Serial Controller (For 1 Serial Device)	Hybec / Zumtobel / Schreder	1	Nos.			
12	Power Supply. KNX Power Supply (640mA, 30VDC)	Hybec / Zumtobel / Schreder	1	Nos.			
13	IP interface with Licence for the I-pad. IP Interface with One Automation App License	Hybec / Zumtobel / Schreder	1	Nos.			
14	Supply and fixing of 4X14 way Flexi DB with all standard accessories	Legrand / Simens / L&T	4	Nos.			
15	Supply and laying of CAT 6E/ CAT 6A with all standard accessories	D-Link / Belden / Klotz	700	Mtrs			
16	Supply and fixing of 2 Module Metal Box with all standard accessories	Reputed	11	Nos.			
17	Supply and laying of 2.5 sqmm 4 core Copper cable (Red, Blue & Black) with all standard accessories	Finolex / Polycab / Havells	900	Mtrs			
18	Supply and laying of 1.5 sqmm 2 core Copper cable with all standard accessories	Finolex / Polycab / Havells	1200	Mtrs			
19	Supply and fixing of Insulation Tape with all standard accessories	Reputed	30	Nos.			
20	Supply and fixing of 250x50mm Cable Tray with all standard accessories	Reputed	40	Mtrs			
21	Supply and fixing of 100x50mm Cable Tray with all standard accessories	Reputed	200	Mtrs			
22	Supply and fixing of MS Flexible Hose 25mm with all standard accessories	Reputed	96	Mtrs			
23	Supply and fixing of MCB 20A with all standard accessories	Legrand / Simens / L&T	6	Nos.			
24	Supply and fixing of MCB 40A with all standard accessories	Legrand / Simens / L&T	2	Nos.			
25	Supply and fixing of MS Pipe 20mm with all standard accessories	Legrand / Honeywell / AKG	350	Nos.			
26	Supply and fixing of MS Junction Box's 20mm with all standard	Legrand / Honeywell / AKG	175	Nos.			
27	Supply and fixing of MS Bend 20mm with all standard accessories	Legrand / Honeywell / AKG	130	Nos.			
28	Supply and fixing of Clamp 20mm with all standard accessories	Reputed	60	Nos.			
29	Supply and fixing of 3 Module Metal Box with all standard accessories	Reputed	10	Nos.			
30	Supply and fixing of 3 Module Plate with all standard accessories	Legrand / Anker / Roma	11	Nos.			
31	Supply and fixing of 2 Module Plate with all standard accessories	Legrand / Anker / Roma	11	Nos.			
32	Supply and fixing of 6A 1 way switch with all standard accessories	Legrand / Anker / Roma	11	Nos.			
33	Supply and fixing of 16A 1 way switch with all standard accessories	Legrand / Anker / Roma	11	Nos.			
34	Supply and fixing of 6A 2 in 1 Socket with all standard accessories	Legrand / Anker / Roma	11	Nos.			
35	Supply and fixing of 16A 2 in 1 Socket with all standard accessories	Legrand / Anker / Roma	11	Nos.			
36	Supply and fixing of Blank Plate/Dummy switch with all standard accessories	Legrand / Anker / Roma	17	Nos.			
37	Supply and fixing of Pop up Box with all standard accessories	Legrand / Simens / L&T	5	Nos.			
38	Supply and fixing of 2-in-1 sockets with switches for charging distributed in the entire seating area including the required back boxes.	Legrand / Anker / Roma	75	Nos.			
39	PVC Conduit - 25mm - Supply and Laying of rigid PVC conduit, 25mm diameter, and accessories with ISI mark	Reputed	500	Mts			
40	Installation, Testing and Commissioning Charges		1	Job			

No	Specification	Qty	UOM	Preferred makes	Quoted Make & Model	Compliance Y/N
1	<p><u>Auditorium Chair Specification :</u> SITC of Standard Heavy Duty Auditorium chairs (Fixed type with writing table)</p> <p><u>Structural Frame:</u> <u>Back Rest frame</u> of ERW Tube / IS :3074-2005 GRADE 1-19 dia Round Pipe 1.2 mm OR Mild Steel of size 25 X 3 mm flat bend as per ergonomic contour " S " bend to suit the body shape. <u>Seat frame</u> of ERW Tube / IS :3074-2005 GRADE 1-20 mm square Pipe 1.2 mm OR Mild Steel of size 20 X 5 mm flat " C " bend type. <u>Note :</u> In main load bearing structure no Wood based frame is require. <u>WING COMPONENTS :</u> HRCA / CRCA Sheet Metal / IS: 1079-1994 Type C / U <u>Wing frame</u> " C " Channel 2 mm thk. Side wing frame plywood 6 mm with 3 mm fabric upholstery. Leg : Sq. tube IS :4923-1997- 80 X 40 mm , 1.63 Thickness.</p> <p><u>SPRINGS :</u> For tip up mechanism Coil Spring / Spring Steel IS : 4454 1981 GRADE 2 Tested for 1,00,000 Cycles. <u>Flexible PU FOAM :</u> Automotive Grade High Resilience-HR Polyurethane foam of density : 48 + / - { Plus – Minus } 5 kg / M3. As per JIS K 6401 It should be cfc free and fire retardant. Thickness Cushion : 130, +/- 20 mm; Backrest : 80, +/- 10 mm Hardness : Cushion : 120 (+ 30 / - 20) Newton; Backrest : 80 (+ 30 / - 20) Newton</p> <p><u>FINISH</u> All Fasteners zinc passivated. All exposed &amp; visible parts powder coated. <u>Writing table arrangement.</u> Wooden finish with sun mica laminated on both the side. Sheet metal pressed main writing mechanism with main loading bearing parts of 3 mm thick. The metal plate of 1.6 mm to be provided below the wooden writing table for support. The movable hinge parts of writing table should be metal. The writing table should be conceal type when not in use.</p>	260	Units	Monarch / Penworkers / Wipro / Featherlite		

Sl. No	DESCRIPTION	QTY	UNIT	Quoted Make & Model
1	Supply, Installation, Testing & Commissioning of <b>Floor Standing Double Skin Air Handling unit (AHU)</b> Filter section with 50 mm thick box type pre filter (MERV-8). Coil section with 6 row deep DX cooling coil. Fan section with DIDW centrifugal backward curved fan, motor, v-belt & drive set. Supply air manually operated AL damper considering 60 mm static. <b>Make:- Zeco / DRI / Waves</b>			
a	Capacity : 22000 CFM (55.0 TR) & 60 mm Static Pressure	1	No	
2	<b>Supply Of DX Condensing Unit</b>			
	<b>Outdoor Units</b>			
	Supply of nominal capacity air-cooled DX Units complete with Scroll Compressors, copper tube aluminium finned air cooled Condensers, propeller type Condenser Fans, Evaporator section with copper tube aluminium finned Cooling Coils, centrifugal blower with drive motors, refrigerant controls like expansion valves, shut off valves, solenoid valves, strainers etc;			
a)	11.0 TR Make:Daikin / Bluestar / General	5	Nos	
	<b>Total for High Side</b>			
	<b>Part-B(Low Side)</b>			
1	Supply and installation of AHU kit	5	Set	
2	Supply and fixing of Star Delta Starter with VFD for DX-CSU			
a)	55.0 TR(22000 CFM)	1	No	
3	Supply and fixing of Star Delta Starter without VFD for DX- CSU			
a)	55.0 TR(22000 CFM)	1	No's	
4	Supply and laying of 2.5 Sqmm 4 Core flexible communication cable with conduit between Starter panel to outdoor. (Considered 15 Rmtrs per circuit).	75	Rmtrs	
5	Supply and laying of 6 Sqmm 4 Core flexible cable from MCB located near to ODU .(Considered 10 Rmtrs per circuit).	50	Rmtrs	
6	Supply and laying of harddrawn refrigerant copper piping with nitrile rubber insulation for suction and discharge lane (Considered 12 Rmtrs per circuit).	60	Rmtrs	
7	Supply and laying of 2.5 Sqmm 6 Core flexible communication cable between Indoor & outdoor (Considered 14 Rmtrs per circuit).	70	Rmtrs	
8	Supply and laying of 2.5sqmmx4core copper flexible cable from Unit to Actuator (For Motorized VCD and Fire damper)	RO	Rmt	
9	Supply of CPVC drain pipe to drain the condensation drain water from drain tray to the nearest drain point			
a)	40mm dia	25	Rmtrs	
10	Supply and installation of flexible connections constructed of fire resistant flexible double between machine mouth to main duct canvas sleeve with zip provision.	2	No's	
11	Supply Fabrication, Installation and testing of sheet metal duct in accordance with the approved shop floor drawing.			
a)	24 G	350	Sqmt	
b)	22 G	195	Sqmt	
c)	20 G	85	Sqmt	
d)	18 G	RO	Sqmt	
12	Supply air plenums for air handling units with GI double skin construction with 25mm thick insulation as per specification duly factory fabricated and powder coated as follows:	RO	Sqmt	
13	Sound attenuators fabricated out of GI sheets duly powder coated with attenuation louvers, flanges and supports as per specification having the following quantities:			
a)	2000 x 650 x 1200 mm long	2	No's	
14	Aluminium Volume Control Damper with PVC gear and opposed blades as per specs	10	sqm	
15	Supply and fixing of Aluminium powder coated Continuous grill for return air.	RO	Sqmt	
16	Supply and Installation of powder coated Extruded Aluminium Supply air Eye Ball double skin jet diffuser / Circular Jet Diffusers with removable core (With opposed blade collar dampers) Outer size			
a)	250mm dia	RO	No's	
b)	315mm dia	RO	No's	
17	Galvanised factory made round ducts fabricated out of 24 G sheets with flanges, neoprene gaskets, factory made supports, with black painting as per specifications:			
a)	300mm dia	30	Rmt	
b)	250mm dia	45	Rmt	
18	Acoustic insulation of ducting			
	open cell nitrile rubber as per specification:			
a)	15mm thick	RO	Sqmt	
b)	25mm thick	85	Sqmt	
c)	50mm thick	RO	Sqmt	
19	Thermal insulation of ducting insulation			
	closed Nitrile rubber as per specifications:			
a)	15mm thick	RO	Sqmt	
b)	25mm thick	545	Sqmt	
c)	50mm thick	RO	Sqmt	
20	Supply and installation of 300 (w)x 100 (d) x1.6 (thickness) MS powder coated perforated Cable Tray with cover for Refrigerant copper piping outside the building. Colour to be approved by client/Architect	30	Rmt	
21	Flexible ducts with 25 mm thick fibre glass insulation suitable for fixing to the supply air insulation suitable for fixing to the supply plenums for diffusers and ducting with worm clamps as per specifications			
a)	300 mm dia	60	Rmt	
b)	250 mm dia	140	Rmt	
22	Acoustic insulation of air handling unit rooms with 50 mm thick crown fibre glass with 1.25 mm thick perforated aluminium sheet and frame work as per specifications	RO	Sqmt	

Daikin,  
Bluestar,  
General,  
Voltas



S.No	Tender Specifications	Preferred makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	Supply, installation, testing and commissioning of the 20 KVA UPS System with battery bank, necessary copper cabling between UPS and batteries /battery breaker etc., for Three phase input and Three phase output, with necessary hardware & software Degree of protection provided by enclosures, Static power converters, Radio interference suppression, Utilization category of electronic components, with output isolation transformer, harmonic filter & all accessories required to complete the system configuration specified elsewhere in this specification, less noise level, high performance, less wave form distortion hot standby operation, display/ control panel, non compensated LC filter, high efficiency, static bypass, output AC power distribution unit with all standard accessories.	Luminous / Emerson (Vertiv) / Numeric / Schneider / ABB / Socomec / Consul neowatt (Fujji Electric) / Eaton)	1	Sets			
2	Supply, installation, testing and commissioning of Sealed Maintenance free Battery Bank of suitable AH capacity as to provide with 30 Min backup time & with cabinet/rack, connecting cables between UPS and batteries and batteries interconnecting cables, shall be designed for continuous duty in an environment, high performance with all required accessories. UPS shall be housed in a sheet steel enclosure fabricated out of 2mm thick CRCA sheet, treated using 7 tank process with powder coated finish, etc complete with all standard accessories	Amaron / Exide / TATA					
Total Amount							

S.No	Description	Tender Specifications	Preferred Makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviation
<b>MAIN LR SPEAKERS</b>								
1	Main Speakers	SITC of 2-way, 6.5-inch or better IP55 rated surface mounted coaxial Music loudspeaker. The loudspeaker shall meet the following criteria: Frequency range (-10dB) of 60Hz to 20KHz or better; Power handling of 400Watt peak or more; Nominal dispersion of 125 degree conical or better; Sensitivity of 90 dB SPL and Max SPL of 116 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. The loudspeaker system shall be enclosed in engineered-plastics front baffle with integrated steel formed back can enclosure material, UL-1480A rated.	Bose / Martin Audio / D&B	2	Nos.			
2	Speaker mounting Brackets	SITC of OEM pan-and-tilt bracket that allows both pitch and yaw adjustment for above speaker	Bose / Martin Audio / D&B	2	Nos.			
3	Amplifier for the speakers	SITC of Two Channel Power amplifier 2 x 600 W @ 4/8 Ohms with 20Hz - 20KHz or better frequency response, with digital AmpLink Inputs/Outputs, LED Indicator, delivering as per OEM Guidelines, Amplifier Wattage should be 1.5 times the wattage of Speaker Driver with the system to make it functional.	Bose / Lab Gruppen / Powersoft	1	Nos.			
4	Volume Control	SITC of volume controllers provide volume control for loudspeaker for above amplifier, It shall have 2 RJ-45 connectors which allow daisy-chaining.	Bose / Lab Gruppen / Powersoft	1	Nos.			
<b>CONTROL ROOM EQUIPMENTS</b>								
6	6 Channel Mixer	SITC of an analog 6 channel mixer with atleast 2 XLR connectors	Behringer / Yamaha / Soundcraft	1	Nos.			
<b>MICROPHONES</b>								
7	Wireless handheld mic set	SITC of Wireless Handheld Microphone dynamic in nature and having cardioid pick up pattern or better, RF output power: 10 mW or more, Frequency response: 80 Hz-14 KHz or better, Sensitivity < 3 µV at 52 dB(A)rms S/N, with 8 frequency banks, each with up to 12 factory-preset channels or better, Switching bandwidth up to 24 MHz, Signal-to-noise ratio ≥ 103 dBA, 10 hrs or more Operating time, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	1	Nos.			
8	Wireless lapel mic set	SITC of Wireless Lapel Microphone Condenser in nature and having Omni-directional pick up pattern or better, RF output power: 10 mW or more, Frequency response: 50 Hz-16 KHz or better, Sensitivity < 3 µV at 52 dB(A)rms S/N, with 8 frequency banks, each with up to 12 factory-preset channels or better, Switching bandwidth up to 24 MHz, Signal-to-noise ratio ≥ 103 dBA, 10 hrs or more Operating time, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	1	Nos.			
9	Wireless headworn mic set	SITC of Wireless Headworn Microphone Condenser in nature and having cardioid pick up pattern or better, RF output power: 10 mW or more, Frequency response: 50 Hz-16 KHz or better, Sensitivity < 3 µV at 52 dB(A)rms S/N, with 8 frequency banks, each with up to 12 factory-preset channels or better, Switching bandwidth up to 24 MHz, Signal-to-noise ratio ≥ 103 dBA, 10 hrs or more Operating time, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	1	Nos.			
10	Podium gooseneck with base	SITC of Wired Gooseneck microphone with Frequency response: 50 Hz - 20 kHz or better, Transducer principle: pre polarised condenser microphone or better, Pick-up pattern: Cardioid/ Super- Cardioid, Equivalent noise level: 26 dB (A) or better, Gooseneck Microphone: 17 inches or better, Max SPL: 128dB or better, with Tablestand ON/OFF switch, complete with standard accessories.	Sennheiser / Shure / Beyerdynamic	1	Nos.			
11	CD/DVD Player	SITC of Professional CD Cum DVD Cum USB player complete with standard accessories.	Gemini / Sony / Denon	1	Nos.			
<b>CABLES, CONDUIT, CONNECTORS AND ACCESSORIES</b>								
12	Speaker Cable	SITC of 2 core 1.5 sqmm PVC insulated CU conduction loudspeaker cable, complete with standard accessories.	Belden / Liberty AV / Sommer	150	Mtrs.			
13	Microphone Cable	SITC of 2 core shielded PVC insulated Cu conduction microphone cable, complete with standard accessories.	Belden / Liberty AV / Sommer	100	Mtrs.			
14	PVC Conduit - 25mm	Supply and Laying of rigid PVC conduit, 25mm diameter, and accessories with ISI mark	Custom	R/O	Mtrs.			
15	PVC Conduit - 20mm	Supply and Laying of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	Custom	R/O	Mtrs.			
16	Equipment Rack	SITC of 12U Equipment Rack for housing all rack mountable equipments with internal wiring, front glass door; heat dissipation fans; movement wheels, power distribution units etc, complete with standard accessories.	Rittal / Valrack / D-Link / APC	1	Nos.			
17	Connectors & Patch cords	SITC of various type of connectors and patch cords as required at site	Reputed Miscellaneous	1	Lot.			
18	ITC Charges	Installation, Testing and Commissioning Charges		1	Job.			

S.No	Description	Tender Specifications	Preferred Makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
<b>PROJECTORS</b>								
1	Projector	SITC of DLP Laser Phosphor projector or better with Laser light source having 20,000 hrs life or more, Min. of 5000 ISO Lumens or brighter, WUXGA resolution (1920 x 1200) and Contrast ratio (dynamic) 18,000:1 or better. Inbuilt capability of Vertical & Horizontal Keystone correction, Digital Zoom. The projector should have 10-bit colour display. The projector should have capability of Streaming of video and audio content from a compatible mobile device. The projector should be Full HD 3D ready. Inputs: 1 x VGA in/out, 2 x HDMI, 1 x HDBaseT, Controls: 3D sync out, RS232, Audio in/out stereo. Control: Crestron RoomView, AMX & RS232 along with Suitable Lens.	Christie/ Digital Projection / Barco	1	Nos.			
2	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 50 lbs (22.7 kg) along with 9-11" Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	B-Tech / Liberty / Draper / Chief	1	Nos.			
3	Projection screen	SITC of Motorized Projection Screen: 164 inches diagonal Motorized screen with 16:10 aspect ratio With Tubular Motor and RF Controls.	Dalite / Draper / Stewart	1	Nos.			
<b>TRANSMITTER, RECEIVER AND MATRIX SWITCHER</b>								
4	Cable Cubby	SITC of Laptop connectivity enclosure with below minimum specifications: It should be flush mountable into a table or flat surface with tilt up lid, Anodized, metal enclosure. Should have a lid damper for smooth/quiet operations. It should have 2x Multi-region AC outlet for power option, 1x USB-A, 1x USB-C ports for charging. Should have option for 8x pass through holes/connectors for AV cables- VGA, Audio, HDMI, LAN, etc & Should have rectangular modular design for fast assembly and service. IT should be CE, UL, BIS certified	Extron / Lightware / AMX	1	Nos.			
5	Multi-Format switcher	SITC of "Multi-Format scaling switcher" with below minimum specifications: Inputs to be 1 x Display Port, 3x HDMI or more. Outputs to be 1 x Twisted pair / HDBaseT on RJ 45 and 1x HDMI parallel output or better. It should support built-in scaling with seamless transitions, audio de-embedding, embedding. Resolution should be 4K/60, 4:4:4 or more with minimum 18 Gbps data rate on single port. Should have an automatic switching feature between inputs, logo keying. It should support local power supply and it should provide remote power to connected receiver. Transmission Distance should be at least 100 mtrs. Should be HDCP 2.3 compliant & should support EDID management. Should include HDMI cable lacing brackets. Should be supplied with under table mounting kit.	Extron / Lightware / AMX	1	Nos.			
6	HDMI over twisted pair Receiver	SITC of "HDMI Receiver " with below minimum specifications: Inputs to be 1 x Twisted pair on RJ 45. Outputs to be HDMI, Analog Audio, Controls (RS 232/IR). Resolution should be 4K/60@4:4:4 or more with minimum 18 Gbps data rate on single port. It should support audio de-embedding, both local power supply and remote powering. Transmission Distance should be at least 100 mtrs. Should be HDCP 2.3 compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL rated for smoke and heat release installation within a plenum airspace above a drop ceiling.	Extron / Lightware / AMX	1	Nos.			
7	Button Control panel	SITC of PoE enabled wall/Furniture mounted control panel with built in control processor for managing, monitoring, and control of AV devices, Six or more customizable backlit buttons, 1x RS-232, 1x IR, 2x relay, 1x digital I/O port. Should have at least 512MB memory and 512 MB RAM. Shall meet regulatory compliances: CE, UL.	Extron / Lightware / AMX	1	Nos.			
<b>CABLES, CONDUITS, CONNECTORS AND ACCESSORIES</b>								
8	HDMI Cable- 6 Feet	SITC of "6ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps, Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	Extron / Crestron / Liberty AV	2	Nos.			
9	HDMI Cable- 3 Feet	SITC of "3ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps, Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	Extron / Crestron / Liberty AV	2	Nos.			
10	DP Cable- 6 Feet	SITC of "6ft DisplayPort Cable " with below minimum specifications: Should be a DisplayPort 1.2 gold Plated Male to Male cables of data rate 21.6 Gbps, support the resolutions upto 4096x2160 @ 60 Hz. Should have 30-22 AWG or better.	Extron / Crestron / Liberty AV	1	Nos.			
11	USB Cable- 6 Feet	SITC of "6ft USB-C to HDMI Cable " with below minimum specifications: Should be a flexible gold Plated USB-C Male to HDMI Male cable of data rate 18 Gbps, Should support the resolutions upto 4K@60Hz, 4:4:4. Should support HDCP compliant	Extron / Crestron / Liberty AV	1	Nos.			
12	STP Cable & Connectors	SITC of "Shielded Twisted Pair cable & Connector" with below minimum specifications: Should be a Shielded twisted pair with 4 UTP cables supplied with connector. Should have 24 AWG or better. Shielding should be SF/UTP design with four unshielded twisted pairs inside an overall braid and foil shield. It should be best suitable for the proposed twisted pair extenders. Bandwidth should be 450 MHz or better.	Extron / Crestron / Liberty AV	1	Lot.			
13	PVC Conduit	SITC of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	Custom	R/O	No			
14	ITC Charges	Installation, Testing and Commissioning of the system		1	Job.			

**CLASSROOM TYPE 1 - No Table, Chair with writing board flap**

**FURNITURE**

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	Classroom Table	SITC of 600mm X 450mm X 750mm ht classroom tables to host 1 person. Aluminum Powder coated end legs with die cast connectors and MS Powder coated 30x40mm beams are considered to support table top.	100	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
2	Classroom Chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	100	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
3	Whiteboard	SITC of manually operated vertical slideup boards consisting of one green board for chalk and one whiteboard for marker pens of size 1200 X 2400 each (total 2400 X 2400 mm)	2	Reputed	Units			
4	Instructor table	SITC of instructor table of size 2400mm length X 600mm width X 750mm height with aluminium powder coated legs and standard accessories with approved laminate finish.	2	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
5	Instructor chair	SITC of upholstered chair with fabric seat Size: 785mm Ht X 420mm Width Supply of standard wooden chairs incorporating 1. Wooden back and legs 2. Cushion Seat 3. No armrest 4. Under leg bushes	2	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			

**ACOUSTICS**

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	Ceiling Treatment	SITC of an acoustical false ceiling with gridwork of 600mm X 600mm with acoustical tiles of 0.9 NRC or better, white colour with 25mm rockwool insulation glued behind the tile.	160	Armstrong, Himalyan Acoustics, Chord, Anutone	SQM			
2	Wall Paneling - Acoustical Strips	SITC of 2.5 inch thick wall panels made with wooden framework with rockwool infill, closed ply backing and insulation held with chicken mesh/RP tissue and finished with approved foam and fabric. Length 35 meters total X 1m X 2.5 inch. Final size as per site conditions.	1	Armstrong, Himalyan Acoustics, Chord, Anutone	Set			
3	Electrical Re-work	SITC of rework and removal of existing ceiling fans and lights and re-positioning of them on the false ceiling for lights and extending the ceiling fans below the false ceiling. Rate to include all accessories and labour.	1	Job	Lumpsum			



CLASSROOM TYPE 2 - Table and Chair

FURNITURE

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance	Remarks/Deviations	
1	Classroom Table	SITC of 1200mm X 450mm X 750mm ht classroom tables to host 2 persons. Aluminum Powder coated end legs with die cast connectors and MS Powder coated 30x40mm beams are considered to support table top.	50	Wipro, Featherlite, Monarch, Godrej, Bonton	Units				
2	Classroom Chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	100	Wipro, Featherlite, Monarch, Godrej, Bonton	Units				
3	Whiteboard	SITC of manually operated vertical slideup boards consisting of one green board for chalk and one whiteboard for marker pens of size 1200 X 2400 each (total 2400 X 2400 mm)	2	Reputed	Units				
4	Instructor table	SITC of instructor table of size 2400mm length X 600mm width X 750mm height with aluminium powder coated legs and standard accessories with approved laminate finish.	2	Wipro, Featherlite, Monarch, Godrej, Bonton	Units				
5	Instructor chair	SITC of upholstered chair with fabric seat Size: 785mm Ht X 420mm Width Supply of standard wooden chairs incorporating 1. Wooden back and legs 2. Cushion Seat 3. No armrest 4. Under leg bushes	2	Wipro, Featherlite, Monarch, Godrej, Bonton	Units				

ACOUSTICS

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance	Remarks/Deviations	
1	Ceiling Treatment	SITC of an acoustical false ceiling with gridwork of 600mm X 600mm with acoustical tiles of 0.9 NRC or better, white colour with 25mm rockwool insulation glued behind the tile.	160	Armstrong, Himalyan Acoustics, Chord, Anutone	SQM				
2	Wall Paneling - Acoustical Strips	SITC of 2.5 inch thick wall panels made with wooden framework with rockwool infill, closed ply backing and insulation held with chicken mesh/RP tissue and finished with approved foam and fabric. Length 35 meters total X 1m X 2.5 inch. Final size as per site conditions.	1	Armstrong, Himalyan Acoustics, Chord, Anutone	Set				
3	Electrical Re-work	SITC of rework and removal of existing ceiling fans and lights and re-positioning of them on the false ceiling for lights and extending the ceiling fans below the false ceiling. Rate to include all accessories and labour.	1	Job	Lumpsum				

40 PAX CLASSROOMS

AUDIO SOLUTION

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	Mixer Amplifier	SITC of a 60 Watt RMS mixer amplifier capable of operating on low or high impedance with 4 mic/line inputs, On/off switch • Power on LED • LED VU meter for master output (LEDs for -18, -12 - 6, -3, 0 dB) • Master volume knob • Four volume knobs for microphone inputs • Volume knob for background music • Knob for treble level • Knob for bass level • Headphone socket	1	Bosch, Bose, Dynacord	Units			
2	Speakers	SITC of wall mounted black colour speakers with selectable 8 ohm and 70/100v inputs, with integrated adjustable wall mount, ABS body. Rated power of the speaker to be 30W RMS with provision of transformer tapping. Loudspeaker to have a 5" woofer and a 0.5" tweeter or better with an effective frequency range (-10dB) of 100Hz to 19Khz or better. Loudspeaker to weigh under 3 Kgs.	2	Bosch, Bose, Dynacord	Units			
3	Equipment Rack	SITC of a 9 U equipment rack to house amplifier and other miscellaneous items inside the classroom. To be complete with integrated power sockets within the cabinet.	1	Netrack, Rittal, Pixeless	Units			
4	Cables	SITC of 1.5 Sqmm loudspeaker cables to interconnect speakers with mixer amplifiers on phoenix connectors.	25	Belden, Sommer, Liberty AV	mts			
5	Custom connector/Patch cables	SITC of connectivity cables to allow connecting laptops and music sources to the mixer amplifier.	5	Custom made with above brands	Lot			
6	Installation	Installation of the above mentioned audio system complete with all elements as per approved design.	1	Job	Job			

S.No	Description	Tender Specifications	Preferred Makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
<b>PROJECTORS</b>								
1	Projector	Supply and Installation of projector with the following specifications: 3300 ANSI Lumens, WXGA, 3LCD projector, 0.46:1 Throw, HDMI X 1, VGA X 2, Video IN X 1, Monitor OUT X 1, RS232 IN X 1, LAN X 1, USB A X 1, USB B X 1, Audio IN X 2, Audio OUT X 2,	Hitachi/ Panasonic / Epson/	1	Nos.			
2	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 50 lbs (22.7 kg) along with 9-11' Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	B-Tech / Liberty / Draper / Chief	1	Nos.			
3	Projection screen	SITC of Motorized Projection Screen: 113 inches diagonal Motorized screen with 16:10 aspect ratio With Tubular Motor and RF Controls.	Dalite / Draper / Stewart/Elite	1	Nos.			
<b>TRANSMITTER, RECEIVER AND MATRIX SWITCHER</b>								
15	HDMI over twisted pair Transmitter	SITC of "HDMI Transmitter" with below minimum specifications: Inputs to be 1 x HDMI, Controls (RS 232/IR). Outputs to be 1 x Twisted pair on RJ 45. Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be J1TC Certified	Extron / Lightware / AMX	1	Nos.			
16	HDMI over twisted pair Receiver	SITC of "HDMI Receiver" with below minimum specifications: Inputs to be 1 x Twisted pair on RJ 45. Outputs to be HDMI, Analog Audio, Controls (RS 232/IR). Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be J1TC Certified	Extron / Lightware / AMX	1	Nos.			
<b>CABLES, CONDUITS, CONNECTORS AND ACCESSORIES</b>								
8	HDMI Cable- 6 Feet	SITC of "6ft HDMI Cable" with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps, Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	Extron / Crestron / Liverty AV	1	Nos.			
9	HDMI Cable- 3 Feet	SITC of "3ft HDMI Cable" with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps, Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	Extron / Crestron / Liverty AV	1	Nos.			
12	STP Cable & Connectors	SITC of "Shielded Twisted Pair cable & Connector" with below minimum specifications: Should be a Shielded twisted pair with 4 UTP cables supplied with connector. Should have 24 AWG or better. Shielding should be SF/UTP design with four unshielded twisted pairs inside an overall braid and foil shield. It should be best suitable for the proposed twisted pair extenders. Bandwidth should be 450 MHz or better.	Extron / Crestron / Liverty AV	1	Lot.			
13	PVC Conduit	SITC of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	Custom	R/O	No			
14	ITC Charges	Installation, Testing and Commissioning of the system		1	LS			

40 PAX CLASSROOMS

**FURNITURE**

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	Classroom Table	SITC of 1200mm X 450mm X 750mm ht classroom tables to host 2 persons. Aluminum Powder coated end legs with die cast connectors and MS Powder coated 30x40mm beams are considered to support table top.	20	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
2	Classroom Chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	40	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
3	Whiteboard	SITC of manually operated vertical slideup boards consisting of one green board for chalk and one whiteboard for marker pens of size 1200 X 2400 each (total 2400 X 2400 mm)	1	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
4	Instructor table	SITC of instructor table of size 1200mm length X 450mm width X 750mm height with aluminium powder coated legs and standard accessories with approved laminate finish.	1	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
5	Instructor chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	1	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			

**ACOUSTICS**

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	Ceiling Treatment	SITC of an acoustical false ceiling with gridwork of 600mm X 600mm with acoustical tiles of 0.9 NRC or better, white colour with 25mm rockwool insulation glued behind the tile.	56	Armstrong, Himalyan Acoustics, Chord, Anutone	SQM			
2	Wall Paneling - Acoustical Strips	SITC of 2.5 inch thick wall panels made with wooden framework with rockwool infill, closed ply backing and insulation held with chicken mesh/RP tissue and finished with approved foam and fabric. Length 25 meters total X 1m X 2.5 inch. Final size as per site conditions.	1	Armstrong, Himalyan Acoustics, Chord, Anutone	Set			
3	Electrical Re-work	SITC of rework and removal of existing ceiling fans and lights and re-positioning of them on the false ceiling for lights and extending the ceiling fans below the false ceiling. Rate to include all accessories and labour.	1	Job	Lumpsum			

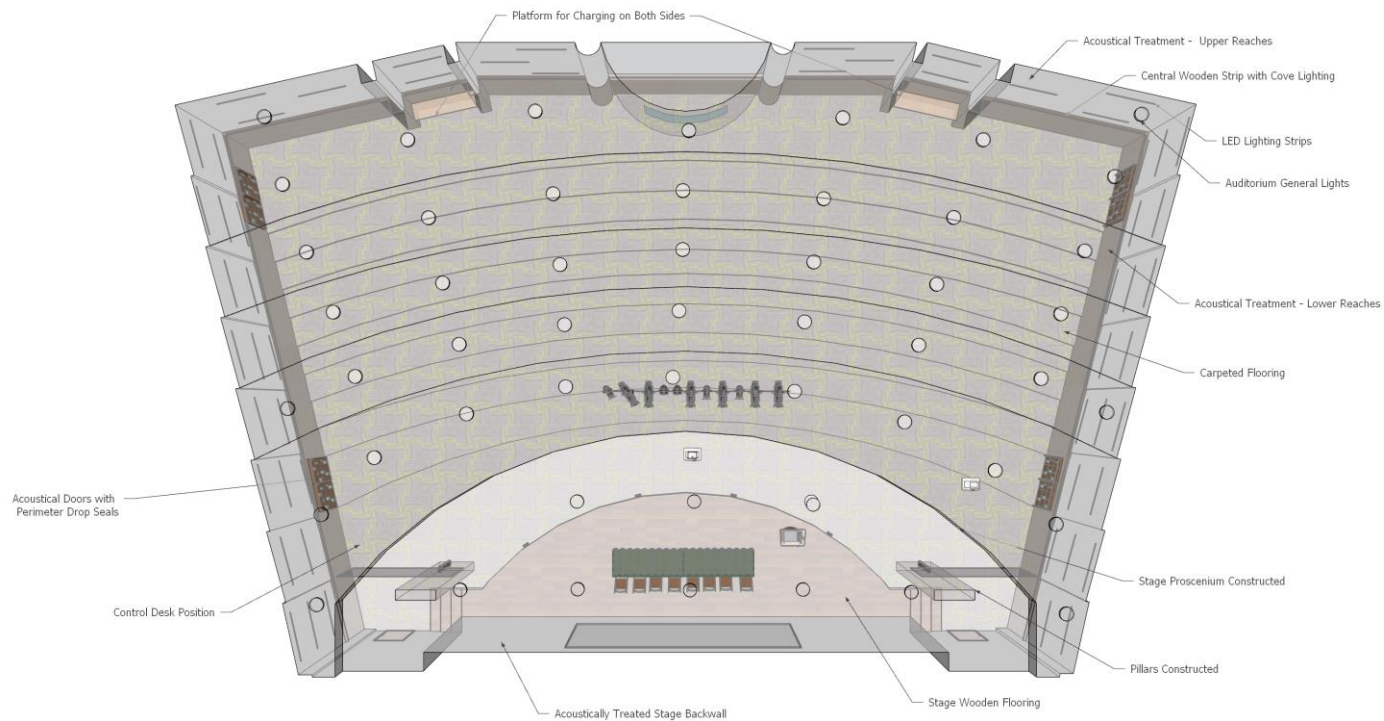
Sl.No	Description Of Product	Preferred Makes	Qty	UOM	ed Make & I	Compliance Y/N	Remarks/Deviations
ACOUSTIC WALL PANELLING							
1	Walls : SITC of painting of the VC room walls with premium emulsion , dual coat, white Colour.	Asian Paints, Dulux, Berger	100.00	SqM			
2	Veneer work: Veneer Paneling: SITC of premium grade veneer panelling for the VC ROOM walls as shown in the drawing areas, with specifications of the veneer to be as follows: Standard available size: 8ft height X 4ft Width with thickness of around 4mm (including face skin and backing ply layer). Cost to include cutting, professional polishing of the veneer panels upon application to arrive at the desired final outcome as prescribed by the architect. Samples to be provided for approval. UOM IN SQM	Armstrong, Himalyan Acoustics, Anutone / Chord	45.00	SQM			
3	Acoustical Paneling : SITC of prefabricated acoustical absorptive panels for the upper reaches of the VC Room, with dimensions of 1mX1.5m or around with thickness of 1 inch. NRC rating of 0.85 with increased absorption in the low frequencies upto 500Hz is to be met. Samples to ascertain the colour and finish must be provided to the approving authority. Cost to include Freight, handling and installation. UOM in Sqm	Armstrong, Himalyan Acoustics, Anutone / Chord	25.00	SQM			
ACOUSTICAL CEILING TREATMENT							
4	Acoustical Ceiling: Suppy and fining of acoustical ceiling tiles of NRC 0.9 with increased absorption around 500Hz and 2000Hz frequencies with dimensions of 600mmX1200mm and 15mmthickness in white colour. Samples to be approved by the architect or approving authority. Costs to include freight, handling, installation with all required additional accessories to complete the false ceiling. UOM in SQM	Armstrong, Himalyan Acoustics, Anutone / Chord	50.00	SQM			
FLOORING							
5	Providing and laying of Carpet Tile over the specified area with following specification. The floor which recieves the carpet to be thourougly cleaned as per manufacturer's specification. The carpet is to be laid over a bed of manufacturer's approved adhesive spread evenly over the entire floor. The rate shall include cutting, trimming, fixing and clearing away of residual material to a location as directed. The rate shall also include supplying and laying of a protective layer of PVC or HDPE sheet of 50 microns thickness, held together with scotch tape. The laid carpet to be vacuumed after the removal of protective cover/on commissioning. If after the protective layer is removed and stains observed in the carpet because of in adequate protection, the same shall be shampooed and made good to the satisfaction of the project managers. The measurements of carpet will be the actual laid area. UOM IN SQM	Armstrong, Himalyan Acoustics, Anutone / Chord	50.00	SQM			
DOORS							
6	ACOUSTICAL ENTRANCE DOORS : FIRE Rated Door: Wooden Door Frame of hard wood/teak wood section with size compliant to the door size below, with one coat of anti-termite fire retardant primer or paint and fitted with acoustic seal on all three sides. DOOR SHUTTER : SITC of a fire rated acoustic door of Double Leaf Format with size 2m X 2.4m and thickness of 100mm comprising of multilated treatment of 19mm ply on the faces on either sides with an internal bracing to compactly support 75mm of rockwool or equivalent. STC of the door to be 60, with one coat of anti-termite fire retardant primer or paint. UOM in Single Units	Armstrong, Himalyan Acoustics, Anutone / Chord	1.00	Units			
Windows							
7	SITC of providing window blinds to cover the 2 windows on the backwall. Height 3m X width 3.2m. Price to include costing of freight and handling, installation and all related accessories, frames to support the window blinds in its position. UOM in SqM. Curtain quantity - 1 set	Armstrong, Himalyan Acoustics, Anutone / Chord	13.00	SQM			

S.No	Description	Tender Specifications	Preferred Makes	Qty.	Unit	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
<b>AUDIO and VIDEO</b>								
1	Connectors & Patch cords	SITC of various type of connectors and patch cords as required at site	Reputed Miscellaneous	1	Lot.			
2	75" Displays	DISPLAYS : SITC of LED professional displays to be mounted side by side for video conferencing with specification of each of the displays being: 75" 4K UHD Display for local presentation with 3840 x 2160 (4K UHD) resolution, Brightness: 350 nits, Contrast Ratio: 4000:1, Viewing Angle(H/V): 178/178, Response Time: 8ms, Display Colors: 16.7M, Inputs: HDMI, DVI, USB with Audio input, and with having Audio output, External Control: RS232C, IR or better, working hour: 16/7, Built in Speaker(10W + 10W)	Samsung / Christie / LG	1	Nos.			
3	Cable Cubby	Supply and installation of "Laptop connectivity enclosure" with below minimum specifications: It should be Flush mountable into a table or flat surface with tilt up lid, Powder Coated, metal enclosure. It should have 1x Multi-region AC outlet for power option, 1x USB-A, 1x USB-C ports for charging. Should have option for pass through holes/connectors for AV cables- VGA, Audio, HDMI, LAN & Should have Modular design for fast assembly and service. IT should be CE, UL, BIS certified	Extron / Lightware / Liberty AV	1	Nos.			
4	Conference Hardware	SITC of a video conferencing kit with 2 additional mics, PTZ camera and a speaker phone capable of running a VC solution for 15 people with the following specifications: CAMERA Smooth motorized pan, tilt and zoom controlled from remote or console Pan +/- 90° Tilt +35° / -45 10x lossless HD zoom Field of View: 70 degrees or better Full HD 1080p 30fps H.264 UVC 1.5 with Scalable Video Coding (SVC) Autofocus	Logitech / Konftel / Yamaha	1	Nos.			
<b>CABLES, CONDUITS, CONNECTORS AND ACCESSORIES</b>								
5	HDMI Cable- 50 Feet	Supply and installation of "50ft HDMI Cable" with below minimum specifications: Should be a premium high speed HDMI gold Plated Male to Male cables of data rate 18 Gbps with an active circuitry in the cable to convert the electrical video signal to fiber and transmit and reconvert it into electrical signal to receive at sink device. Should support the resolutions upto 4K@60Hz, 4:4:4. Should have 30-22 AWG or better. Should support CEC.	Extron / Crestron / Liberty AV	1	Nos.			
6	ITC Charges	Installation, Testing and Commissioning of the system		1	Job.			

## VIDEO CONFERENCE ROOM

**FURNITURE**

No	Product	Specification	Quantity	Preferred Makes	UOM	Quoted Make & Model	Compliance Y/N	Remarks/Deviations
1	SIDE TABLES	SITC of side table for placing of printer/stationery etc with dimensions 1800mm lengthX450mm depth X 750mm height	2	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
2	MAIN BOARD ROOM TABLE	SITC of board room / conference room table with curved edges as per drawing with dimensions - length 5800mm X depth 1400mm X 750mm height. 25mm thick E1 grade PLPB table top with matching edgebanding and Dual side openable flip up provision of size:- 600mm(W) x 600mm(D) only anodized finish. 25 mm thick PLB Gable end and 18mm thick PLB Modesty is to be considered. MS-Powder coated wire tray with switch plate and vertical cable raisers / PVC wireguard are considered for wire management	1	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			
3	CHAIRS	SITC of fabric upholstered seats on wheels for board room applications with the following specifications : Dimensions 480mm seat width X 1070mm max height X 450mm seat depth without headrest, dual armrests and 5 wheel polypropylene base. Back mesh to be made with polyester mesh of approved colour with lumbar support.	15	Wipro, Featherlite, Monarch, Godrej, Bonton	Units			



## Acoustics

### GENERAL NOTES

PROJECT NAME:  
IISC Chemical  
Sciences Building

DRAWING TITLE:  
AUDITORIUM

DRAWN BY:  
GND

CHECKED BY:  
AV

APPROVED BY:  
AV

DATE:  
24/03/2022

CLIENT  
Indian Institute of Science  
Department of Organic Chemistry  
Bengaluru - 560012

ACOUSTICS, A-V, LIGHTING & FURNITURE CONSULTING:  
  
M/S DEIM Consultants  
Rajajinagar, Bengaluru  
www.deimconsultants.in

UNIT:  
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SCALE:  
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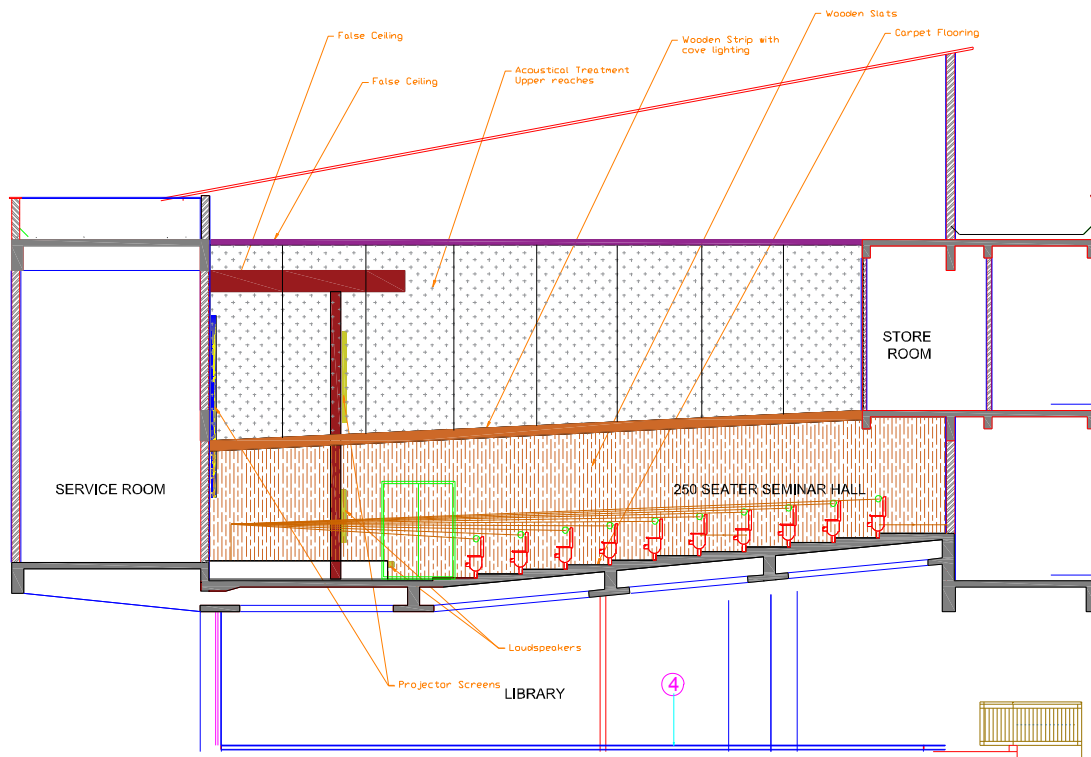
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Acoustics - Section

GENERAL NOTES

PROJECT NAME:  
IISC Chemical  
Sciences Building

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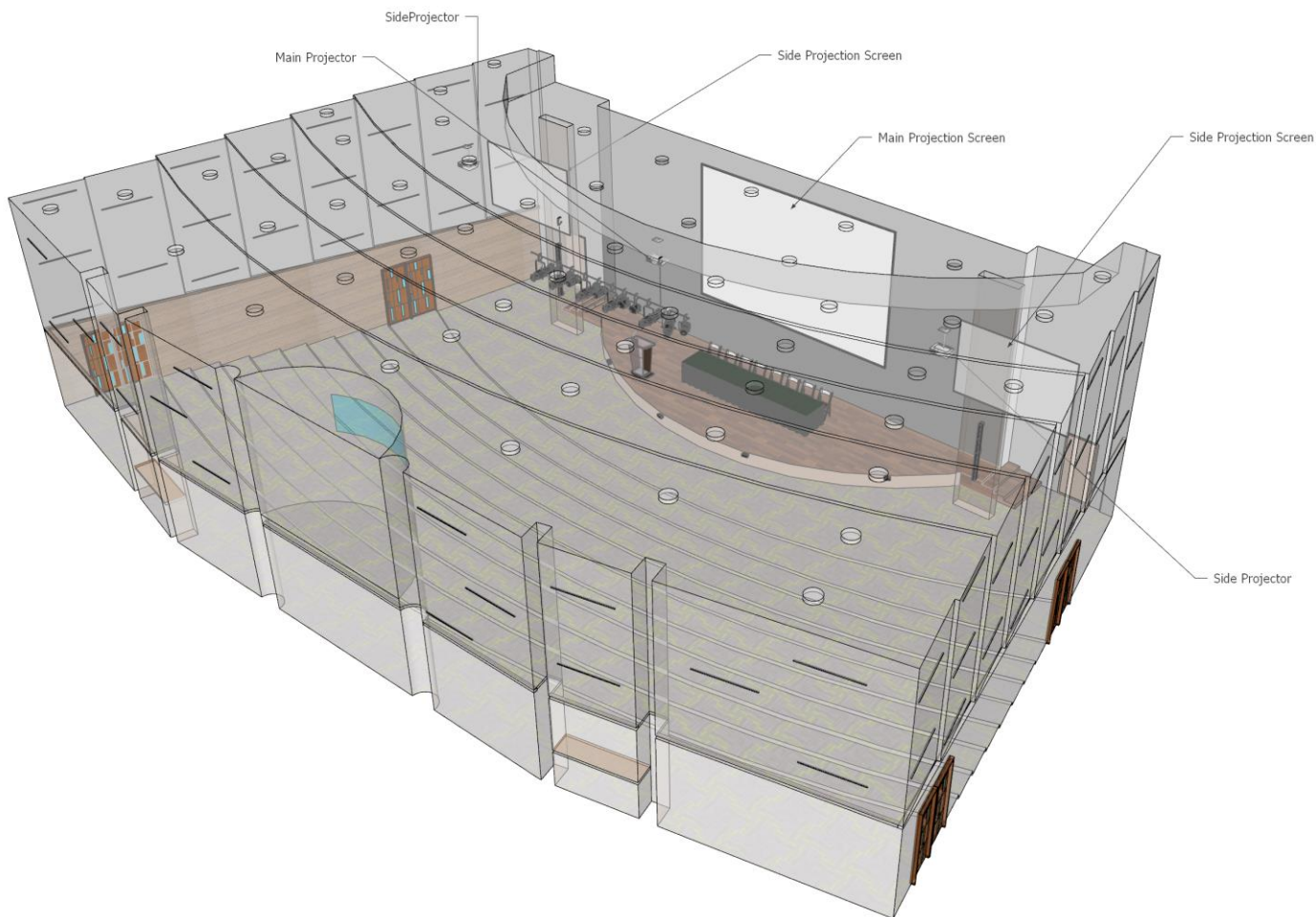
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1 OF 1

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Projection System

GENERAL NOTES

PROJECT NAME:  
IISC Chemical  
Sciences Building

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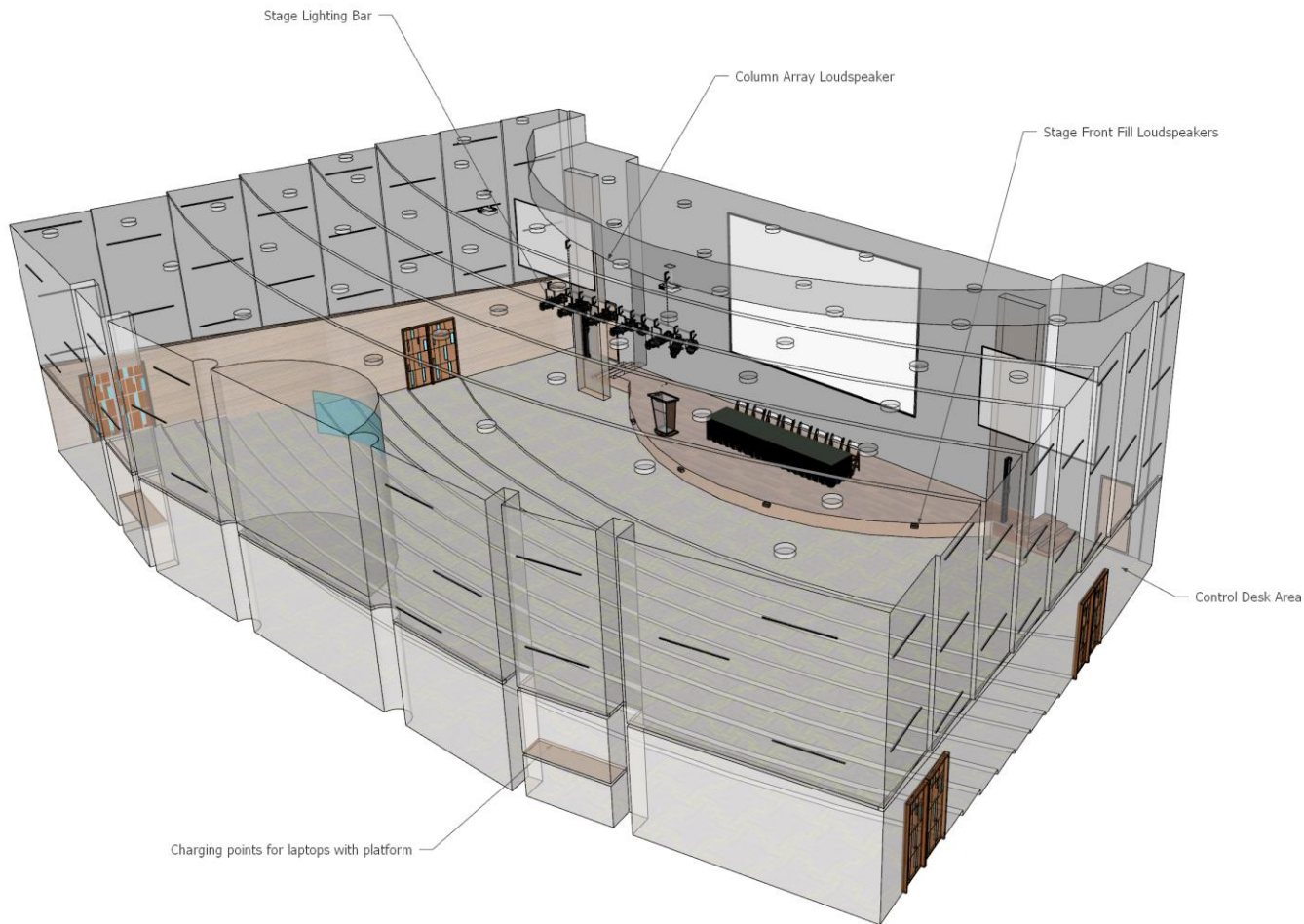
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## Audio System

### GENERAL NOTES

PROJECT NAME:  
IISC Chemical  
Sciences Building

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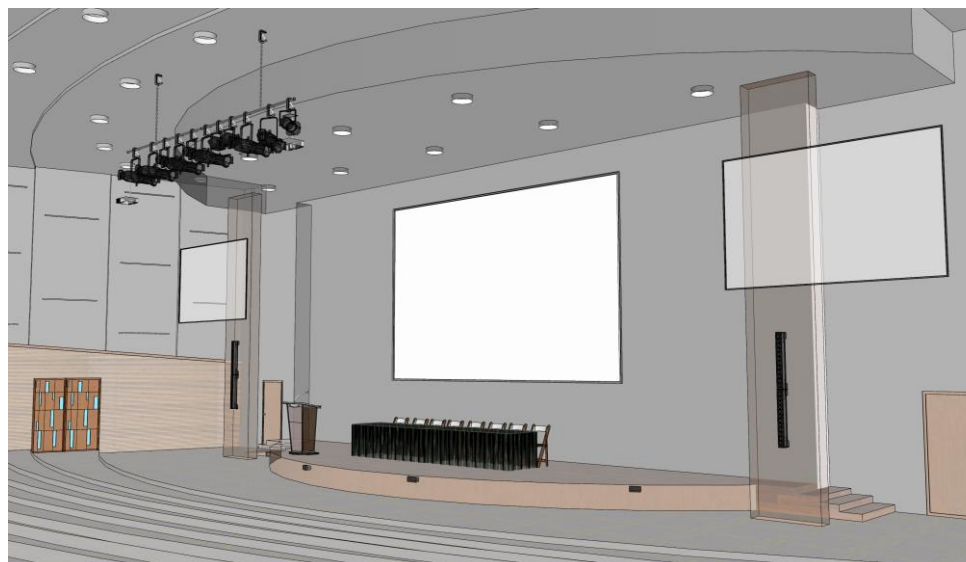
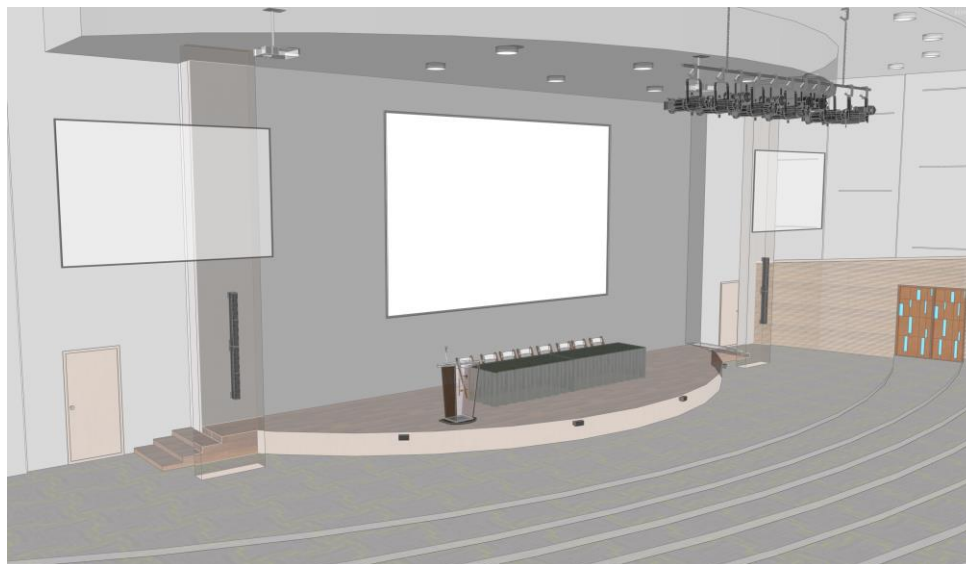
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1 OF 1

REV:	DESCRIPTION:	BY:	DATE:



Stage View

#### GENERAL NOTES

PROJECT NAME:  
IISC Chemical  
Sciences Building

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AUDITORIUM

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SCALE:  
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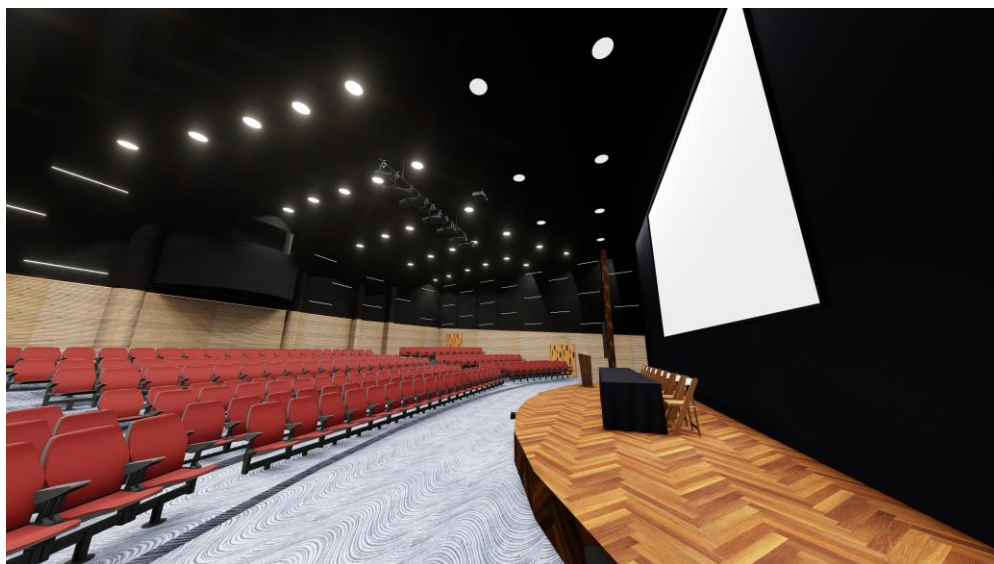
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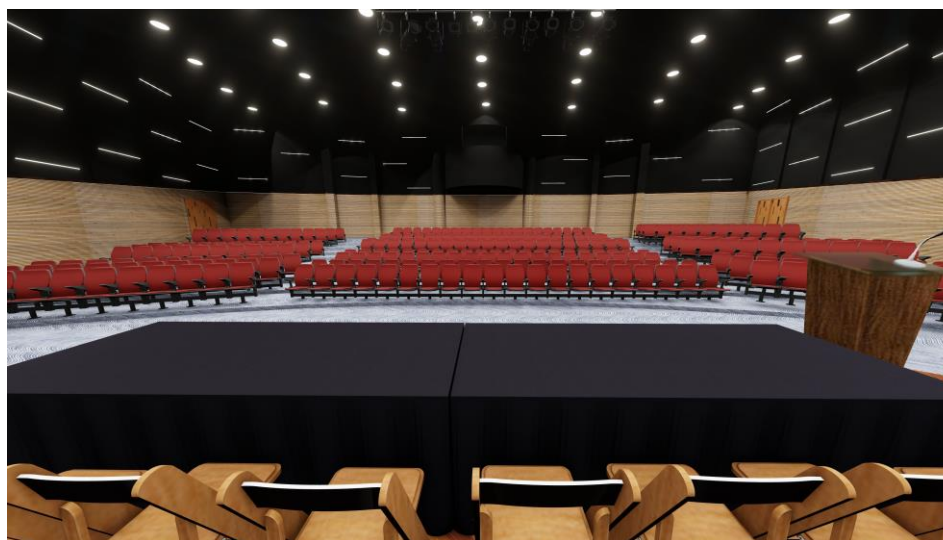
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REV:	DESCRIPTION:	BY:	DATE:





## Colour Scheme and Finishes Intent



### GENERAL NOTES

PROJECT NAME:  
IISC Chemical  
Sciences Building

DRAWING TITLE:  
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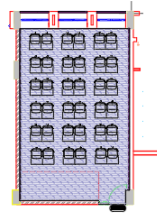
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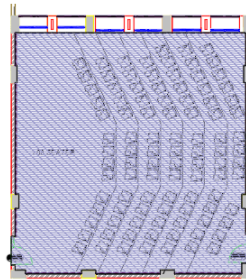
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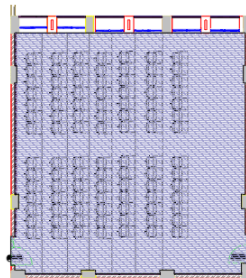
False Ceiling



40 Seater Classroom

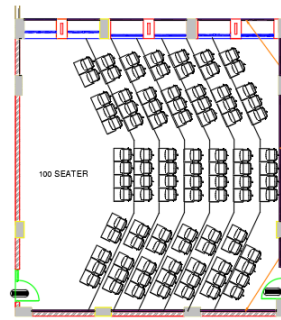


100 Seater Auditorium - False Ceiling

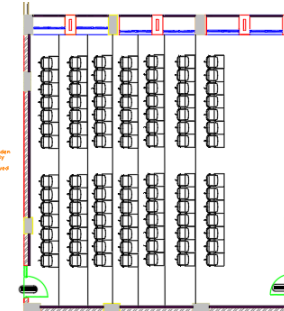


100 Seater Auditorium - False Ceiling

Acoustical Wall Paneling



100 Seater Auditorium - Seating Type 1

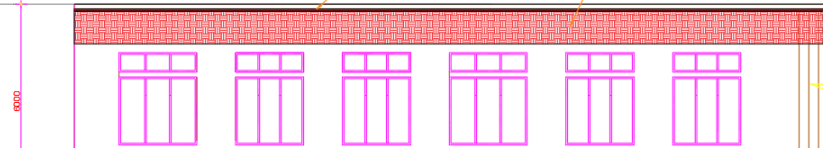


100 Seater Auditorium - Seating Type 2

ACOUSTICAL TREATMENT  
25 inch track wall panels made with wooden  
frames with rockwool batts, closed ply  
backing and insulation held with chicken  
mesh/BP tissue and finished with approved  
fawn and fabric.

CEILING TREATMENT  
False Ceiling as per specifications

ACOUSTICAL TREATMENT  
25 inch track wall panels made with wooden  
frames with rockwool batts, closed ply  
backing and insulation held with chicken  
mesh/BP tissue and finished with approved  
fawn and fabric.



Acoustical Wall Paneling & False Ceiling Section Indication

GENERAL NOTES

PROJECT NAME:

IISC Chemical  
Sciences Building

DRAWING TITLE:

100 & 40 Pax Rooms

DRAWN BY:

GND

CHECKED BY:

AV

APPROVED BY:

AV

DATE:

24/03/2022

CLIENT

Indian Institute of Science

Department of Organic Chemistry  
Bengaluru - 560012

ACOUSTICS, A-V, LIGHTING & FURNITURE CONSULTANT:



M/S DEIM Consultants

Rajajinagar, Bengaluru  
www.deimconsultants.in

UNIT:

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SCALE:

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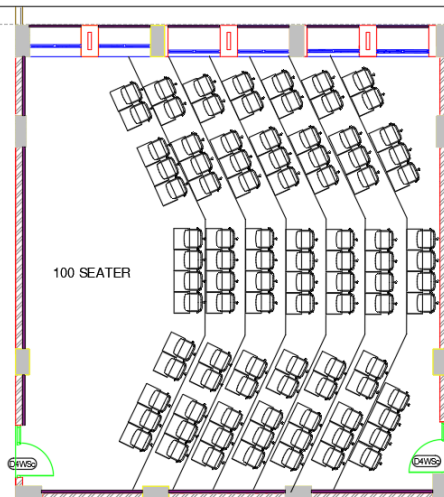
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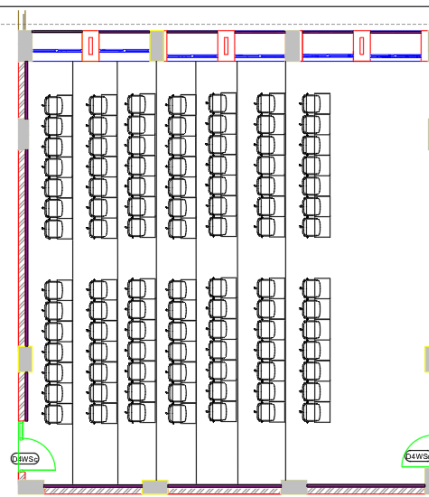
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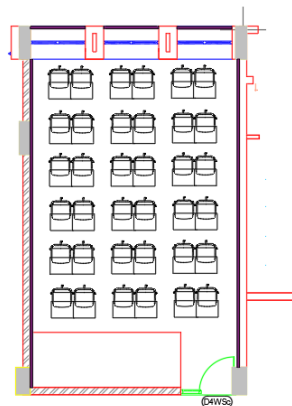
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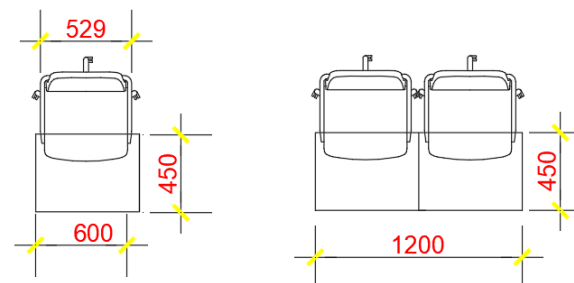
100 (96) Seater Auditorium - Seating Type 1



100 Seater Auditorium - Seating Type 2



40 Seater Classroom



Furniture Dimensions

#### GENERAL NOTES

PROJECT NAME:  
IISC Chemical  
Sciences Building

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100 & 40 Pax Rooms

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UNIT:  
mm

SCALE:  
NTS

SHEET SIZE:  
A4

DRAWING NO:  
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SHEET NO:  
1 OF 1

REV	DESCRIPTION	BY	DATE

**Supply and Installation of Acoustics, Audio-Visual, HVAC, Lighting & Furniture for Auditorium, Classrooms and Video Conferencing Room at IISc Chemical Sciences Building.**

**Indian Institute of Science  
Bangalore-560012**

**Annexure-1:**

Bidder details

The bidder must provide the following mandatory information & attach copies wherever mentioned:

<b>Details of the Bidders</b>		
<b>No</b>	<b>Description</b>	<b>Particulars</b>
1	Name of the Bidder	
2	Nature of Bidder  (Pvt Ltd or Public Ltd Co/ Partnership firm etc)  (Attach attested copy of Certificate of Incorporation/ Partnership Deed)	
3	Registration No/ Trade License, (if any attach copy)	
4	Registered Office Address	
5	Address for Communication	



6	Contract person Name  Designation							
7	Telephone No							
8	Email ID  Website							
9	PAN No. (attach copy)							
10	CST/VAT No. (attach copy)							
11	G.S.T. registration No. (attach copy)							
12	Annual Turnover (attach audit reports) 2021-20 2020-19 2019-18 2018-17 2017-16							
13	Tender Cost	<table border="1"> <tr> <td>Demand Draft No.</td> <td></td> </tr> <tr> <td>Name Of The Bank</td> <td></td> </tr> <tr> <td>Date</td> <td></td> </tr> </table>	Demand Draft No.		Name Of The Bank		Date	
Demand Draft No.								
Name Of The Bank								
Date								

(Signature of the Bidder)  
Printed Name

Designation, Seal

**Annexure-2:**

Details of the Purchase Orders executed of a minimum value of Rs 300 lakhs (Rupees Three Hundred Lakhs only) in each year, during any 3 of the last 5 years.

SI No	Order Number and date	Items	Value	Name of Organization	Contact Person Name and Designation	Contact Details with E-mail	Date of Completion

Enclose copy of purchase order and corresponding order completion certificate.

(Signature of the Bidder)

Printed Name

**Annexure-3:**

Declaration regarding experience

To,

Office of the Divisional Deans  
Indian Institute of Science  
Bangalore-560012

**Ref: Tender No: IISc/CSB-AV/2022-23**

**Dated: 20.05.2022**

**Supply and Installation of Acoustics, Audio-Visual, HVAC, Lighting & Furniture for Auditorium, Classrooms and Video Conferencing Room at IISc Chemical Sciences Building.**

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has more than five years of experience in supplying, and installing interiors, audio visual, stage, HVAC system for auditorium to Central/State Govt. Departments/ PSUs/Banks/ reputed IT and other establishments.

Yours faithfully

(Signature of the Bidder)  
Printed Name

Designation, Seal

Date :

#### Annexure-4:

Declaration regarding clean track by bidder

To,  
Office of the Divisional Deans  
Indian Institute of Science  
Bangalore-560012

Ref: Tender No: IISc/CSB-AV/2022-23

Dated: 20.05.2022

**Supply and Installation of Acoustics, Audio-Visual, HVAC, Lighting & Furniture for Auditorium, Classrooms and Video Conferencing Room at IISc Chemical Sciences Building.**

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has not been debarred / black listed by any Government / Semi Government Organizations / Institutions in India or abroad. I further certify that I'm competent officer in my company / firm to make this declaration.

Or

I declare the following

No	Country in which the company is debarred /blacklisted / case is pending	Black listed / debarred by Government / Semi Government/Org	Reason	Since when and for how long

Yours faithfully

(Signature of the Bidder)  
Printed Name

Designation, Seal

Date :

**Annexure – 5:**

Declaration for acceptance of terms and conditions

To,  
Office of the Divisional Deans  
Indian Institute of Science  
Bangalore-560012

Ref: Tender No: IISc/CSB-AV/2022-23 Dated: 20.05.2022

**Supply and Installation of Acoustics, Audio-Visual, HVAC, Lighting & Furniture for Auditorium, Classrooms and Video Conferencing Room at IISc Chemical Sciences Building.**

Sir,

I've carefully gone through the Terms & Conditions mentioned in the above referred RFP document. I declare that all the provisions of this RFP are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)  
Printed Name

Designation, Seal

Date :

<b>General Conditions for Acoustics, Audio-Visual, HVAC, Lighting &amp; Furniture</b>
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1	Based on the GFC drawings issued by the consultant, the selected bidder shall submit final shop drawings for approval from the consultants before commencing work at site.
2	Scaffolding and other charges shall be borne by the selected bidder. All safety measures relevant to the execution shall be followed by the bidder.
3	Final approval on quantity, finishes etc by client before execution
4	Modifications due to special site/ ground conditions to be brought to the notice of the client before installation and appropriate solution arrived at with submission of any cost variation due to site condition
5	The Client may modify (add or delete) scope of work before execution
6	The project is spread across multiple floors.
7	All specifications are as per general specifications
8	The plans and views attached are schematic/indicative and may be modified, following the approval from the client/ client representative
9	Prices should be inclusive of transportation, installation and all applicable taxes (percentage of tax to be specified)
10	Prices should be inclusive of the mockup cost.
11	Cost to include complete installation, cleaning & house keeping (Pre packed covering etc., complete) upto handover.
12	Final colour scheme will be decided at the time of final approval / mock up before manufacturing
13	All Fabrics, Laminates, (Powder) coating colours and finishes will be of standard quality and specs
14	Fabric shade & finishes to be strictly as per Client or Client Representative
15	All powder coated materials, fabric and glass to be prepacked and removed from site after installation
16	Pre approved template / cutouts for electrical and other provisions to be included in the costing.
17	Key sets on desks with locks if any to be 3nos each
18	Powder coating to be Epoxy Polyester for Interior Grade.
19	Powder Coat Colours are Standard and NON METALIC and to be approved by the client or client representative.
20	Fixing of one member (unit) to other members (units) only through clamps, brackets and no direct screwing allowed.
21	Cost should be inclusive of Shop drawing preparation/getting approval from Client or Clients Representative/ Mockups/ Handing over documents (3sets) that includes as built drawings, Manufacturers warranty & Guarantee certificate, user manuals, products catalogues, contact details etc.
22	Vendor to quote for the product matching to the above specifications in the BOQ and if there is any variation, same to be informed to the client / client representative. The decision of the client is final.
23	Measurements in drawings of furnitures and storages are indicative, all measurements are to be verified on site and necessary improvements to be made before execution. The same must be intimated to the client/client representative.
24	The complete work should be carried out as per specification and as described by the Engineer-in- Charge of work.
25	Quality Test reports of all relevant line items pertaining to the technical standards mentioned in the specification to be provided.
26	Consultants shall ask for any simulation reports for any line item at any stage of the project.
27	Quoted cost shall also include testing and commissioning along with tuning & programming of the system along with training for the end user.
28	<b>Acoustic Works:</b> 1. In house capability to submit 2D and 3D simulations for the proposed treatment before the start of works, by a certified acoustician. The vendor shall also furnish 3D renders to show the finishes of the auditorium. 2. In house capability to submit test reports for Reverberation time and Speech Transmission Index. 3. Letter from OEM of the acoustical materials supplied stating the genuineness of the materials.
29	<b>Sound System:</b> 1. Letter from OEM for providing supply and spare support. 2. Only authorised System Integrators of the OEM should participate in the tender 3. In house capability to test SPL by certified personnel. 4. Capability to provide training to personnel handling the system after installation by OEM certified trainers 5. OEM trained personnel to be present at site and should supervise the installation
30	<b>Stage Lighting System:</b> 1. Letter from OEM for providing supply and spare support.

31	<p><b>Projection &amp; Control System:</b></p> <ol style="list-style-type: none"><li>1. Letter from OEM for providing supply and spare support.</li><li>2. Only authorised System Integrators of the OEM should participate in the tender</li><li>3. In house capability to program the control system by certified personnel.</li><li>4. Capability to provide training to personnel handling the system after installation by OEM certified trainers</li><li>5. OEM trained personnel to be present at site and should supervise the installation</li></ol>
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**Section 5 : Commercial Bid**

No	Room Type	Vertical	No of such Units	Total rate	GST	Total With GST
1	Auditorium	Acoustics	1			
2		Audio System	1			
3		Video & Switching	1			
4		Stage Lighting	1			
5		General Lighting	1			
6		Seating	1			
7		HVAC	1			
8		UPS	1			
					<b>TOTAL</b>	



Sl.No	Description Of Product	Area	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply + GST Amount
<b>ACOUSTIC WALL PANELLING</b>												
1	Auditorium Walls, Bottom Strip Area : 2" thick Slotted Wood Finish Wall Panel system on Masonry - Providing and fixing wall panelling on existing masonry, with 50mm x 50mm SALWOOD framework of size 600mmx600mm grids and filled with of acoustical insulation of 50 mm thickness as defined. The framework and acoustical infill is to be concealed behind the 15mm Slotted finish wood finish MDF panels from Topkaustik, Wood Fit, Armstrong, Sound Slats, RPG or equivalent approved vendors. The perforated wood finish panels must have a minimum perforation area of 12% or higher and is to be supplied with black RP Tissue or equivalent of approved quality. This should be completed as per details and diagrams provided. Rate shall be inclusive of installation on the frame work arrangements. Works will be inclusive of scaffolding and staging at all levels. Rate shall include the preparation of detailed shop drawings as per site conditions, which shall be approved before commencement of works. UOM IN SQM	195										
2	Central Wooden Strip: SITC of 3" width running across the length of the entire auditoriums seating areas on 3 walls with an underside groove to support cove lighting via LED strips. The entire lenth of wood must be covered with a laminate of wooden finish. UOM in meters. thickness 3".	75										
3	Auditorium Walls, Top Area: "Auditorium Walls, Top Strip Area: Acoustical Wall Panels - Gripper system - Providing and installing Acoustical treatment to the walls, including 2"x2" SALWOOD framework and 50 mm thick Acoustical Insulation of 1000 gsm density from Star Insulation or Prime Insulation 9 mm thick Plywood strips-100 mm wid strips with 20 mm air gaps in between, fixed over acoustical insulation. The plywood strips are to be faced with 6 mm thk fire retardent polyester wadding and gripper system from Walltracts, Chisel Interiors INTER DIMENSION or equivalent system) pressure stapped over Plywood strips and selected FINAL Fabric is to be approved by Client and tested by vendor for dimensional stability etc installed in the gripper system, all done in accordance to the recommendation and the specs Rate quoted includes all the materials, labor, scaffolding, lead, lift, finishing, cleaning, hardwares, etc complete. Contractor shall submit the samples and the Shop drawings to the architect prior to the commencement of the work for approval. UOM IN SQM	340										
4	Auditorium Proscenium Areas: Veneer Paneling: SITC of premium grade veneer panelling for the auditorium walls as shown in the drawing areas, with specifications of the veneer to be as follows: Standard available size: 8ft height X 4ft Width with thickness of around 4mm (including face skin and backing ply layer). Cost to include professional polishing of the veneer panels upon application to arrive at the desired final outcome as prescribed by the architect. Samples to be provided for approval. The entire paneling to be supported on an MS framework proscenium horizontal fascia and dual pillars as per drawings, which is to be created with 50mmX30mm X 3mm thick square tube as per site conditionsUOM IN SQM	97										
5	Stage Back Wall Area: SITC of 12mm woodwool board fixed on to the masonry wall 25mm frame work of 600mmX600mm and 25mm rockwool infill, with required accessories, painted. UOM IN SQM	130										
<b>ACOUSTICAL CEILING TREATMENT</b>												
6	SITC of an Acoustical Ceiling with 0.9 NRC acoustical tiles of thickness 12mm with a 50 mm polysynthetic wool (1000gsm) insulation behind. Insulation to be secured to the rear of the wood wool board via approved adhesive. This is to be installed over a 600mm x 600mm powdercoated gridwork constructed in the hall area.	500										
<b>AUDITORIUM FLOORING</b>												
7	SITC of Providing vitrified glazed tiles 60 cms x 60 cms size of Jonson, Kajaria, Naveen or equivalent approved make, shade for flooring laid on a bed of 12mm thick cement mortar 1:3 mix, flush pointing with white cement using colour pigment, including cost of materials, labour,curing, with all lead and lift etc., complete as directed by the Engineer-in-charge. Basic Rate: Rs 1000. UOM IN SQM	525										
<b>STAGE FLOORING</b>												
8	Supply & Fixing of 50mm X 50mm Sal Wood Frame work of 600 X 600 mm size filled with 32 kg/ cum 50mm Glass wool, surface finish made of 12mm Ply & Teak wood pieces of size 35mm X 100mm arranged to form a pattern. UOM IN SQM	60										
<b>DOOR SEALS</b>												
9	Painting: SITC of painting of certain areas in the auditorium such as the side walls beside the stage and the curved areas of the control room and adjoining pillars with dual coat premium emulsion from reputed manufacturers. UOM in square meters.	125										
10	Door perimeter drop seals and gaskets - 1055mm retrofit drop seals on the bottom and gaskets on 3 sides for ~50 dB isolation with necessary modifications on the existing shutters to make it sound proof.	8										
11	providing and fixing of ledge for charging with depth of 2 ft X 12ft width between pillars on either sides as indicated in the drawing, with required support accessories.	2										
<b>Control Room</b>												

12	SITC of providing a partitioned area with lockable door of height 4.5ft , providing an area of 24Sqft near the stage for creation of a control room/desk. The area shall contain the necessary desk and chair for control room operation along with 4 X 15A and 8 x 6A sockets. UOM in 1 complete functional unit.	1											

S.No	Description	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
<b>MAIN SPEAKERS</b>																
1	Main Array Speakers	SITC of Active steerable Installed Column array Loudspeaker with at least 12 full range drivers. Offered freq Range shall be 80Hz - 18 kHz or better & shall have 12 built-in amplifiers of 50W each for a total power upto 600W or better. The Loudspeaker shall have a Max. SPL (Peak) of >=101 dB or better at 30m. Horizontal dispersion pattern of 160° or better, Vertical dispersion shall be adjustable with both beam steering and spreading options. It shall be able to store upto 10 presets of beam positions for easy recall, shall offer analog as well Dante digital audio connectivity. It shall be possible to have loudspeakers stacked for increased SPL and effective throw range. Shall support beam modes for flat floor optimization, rake seating and dual beams with separate Equalizations. Shall include OEM wall/stacking bracket and other necessary hardware.	4	Nos.												
2	Digital Signal Processor with Dante	SITC of Digital Audio DSP with 32-bit fixed/floating-point DSP 456 MHz/ARM Cortex-A8 600MHz Processor, Balanced Analog I/O – 12 inputs (routable to AEC), 8 outputs, GPIO – 5x5 expandable general-purpose control, ControlSpace Network Port – Interfaces with Bose and 3rd party control, Dante Network Port – 64 x 64 channel, 1 Gbps, 2-Line VoIP – SIP 2.0-Compliant IT web configuration page, USB Port – Micro-B USB for PC soft codecs with stereo input and output, Bose® Amplink – 8-channel uncompressed, ultra-low latency digital audio, Serial Port – 3-wire RS-232C (DTE) serial interface connection, CC-16 – Supports Bose® CC-16 user controls, PSTN (RJ-11) – Supports worldwide analog telephone connection, Dynamic Range > 115 dB, A-weighted 20 Hz – 20 kHz, analog input to analog output; Maximum Input Level +24 dBu; Equivalent Input Noise -118 dB at 48 dB gain setting; Phantom Power +48 VDC, 10 mA, selectable per input; Output Channels 8 balanced, line level	1	Nos.												
3	Front Fills Speaker System	SITC 5-inch, two-way loudspeaker, with 100° x 100° Coverage Pattern, Sensitivity 92 dB, 118 dB maximum SPL, long-term continuous Power Handling : 100 Watt, Frequency Response (-3 dB) : 100 Hz to 16 kHz, Exterior-grade plywood Enclosure Material with Two-part spray polyurea coating finishing, complete with standard accessories as required.	4	Nos.												
4	Subwoofers (Powered)	SITC of Dual 10" powered Subwoofer, Nominal dispersion is Omnidirectional, Frequency Response (-3 dB) : 40 Hz - 250 Hz ; Frequency Range (-10 dB) : 38 Hz - 250 Hz ; Maximum SPL @ 1 m : 130 dB SPL (peak 6 dB CF) ; Rated Power: 1,000 W (500+500) ; Wood cabinet with high impact composite end caps complete with standard accessories	2	Nos.												
5	Amplifier for front fills	SITC of Two Channel Power amplifier 2 x 600 W @ 4/8 Ohms with 20Hz - 20kHz or better frequency response, with digital Amplink Inputs/Outputs, LED Indicator, delivering as per OEM Guidelines, Amplifier Wattage should be 1.5 times the wattage of Speaker Driver with the system to make it functional.	1	Nos.												
6	Stage Monitors	SITC of a compact portable powered stage monitor with multiple monitor positions with a wide dispersion angle of 10 x 40 deg, and generating a peak of 109 dB SPL. Multiple monitor positions should also allow the monitor to be placed on the floor, a table or even a tripod for various types of shows. Inputs to contain 2 XLR ports with an EQ on the speaker to control bass and treble.	4	Nos.												
<b>CONTROL ROOM EQUIPEMENTS</b>																
7	Digital Mixer with digital stage box	SITC of 40 Channels Digital mixing console with the following minimum specifications. 32 Microphone Inputs with 8 XLR/1/4" Combi-jacks for line inputs and instruments, 40 DSP input channels (32 mono inputs and 4 stereo channels/returns), 31 Output busses all with full DSP processing and GEQ. Up to 80 channels to mix. 4-band Fully Parametric EQ on each channel and bus. 8 VCAs + 8 Mute groups. 26 motorised faders (24 input + LR/Mono), 4 fully customisable Fader Layers, Built-in Stage box Connectivity, 5" touch screen display, 4 studio-grade Effects engines and dedicated FX busses, Graphic Equalisers on every bus, 20 sub-group / aux busses, 4 mono/stereo matrix busses along with 32 channel stage box with 32 remote controlled mic inputs, 12 XLR analog line level outputs, RJ45 Connectivity to Mixing Console complete with standard accessories as required.	1	Nos.												
8	Tablet for wireless control	SITC of a 32GB tablet running on iOS platform with screen size of approx 10 inches.	1	Nos.												
9	Wifi Router	SITC of a wifi router to enable wireless connection on the tab as well as for the speakers	2	Nos.												
<b>MICROPHONES</b>																

10	Wireless handheld mic set	SITC of UHF Wireless Cardioid dynamic handheld microphone system with Frequency Response of 80 Hz to 18 kHz, RF Sensitivity < 2.5 µV for 52 dBA eff S/N, S/N ratio : ≥ 110 dBA or better, Total Harmonic Distortion ≤ 0.9 % or better, Operating range 100 mtrs or better, RF Power Output High: 30 mW or better, with Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodulation 1 frequency bank with up to 12 programmable channels, Audio output : 6.3 mm jack socket (unbalanced): +12 dBu & XLR socket (balanced): +18 dBu, with integrated mute switch.	4	Nos.															
11	Wireless lapel mic set	SITC of UHF Wireless condenser lavalier microphone system with omni-directional Pick-up pattern, Frequency Response of 50 Hz to 18 kHz, RF Sensitivity < 2.5 µV for 52 dBA eff S/N or better, Total Harmonic Distortion ≤ 0.9 % or better, Operating range 100 mtrs or better, RF Power Output High: 30 mW or better, with Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodulation 1 frequency bank with up to 12 programmable channels, Audio output : 6.3 mm jack socket (unbalanced): +12 dBu & XLR socket (balanced): +18 dBu.	2	Nos.															
12	Wireless Headworn mic set	SITC of UHF Wireless Cardioid condenser headworn microphone system with Frequency Response of 80 Hz to 18 kHz, RF Sensitivity < 2.5 µV for 52 dBA eff S/N or better, Total Harmonic Distortion ≤ 0.9 % or better, Operating range 100 mtrs or better, RF Power Output High: 30 mW or better, with Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodulation 1 frequency bank with up to 12 programmable channels, Audio output : 6.3 mm jack socket (unbalanced): +12 dBu & XLR socket (balanced): +18 dBu.	2	Nos.															
<b>Podium Gooseneck</b>																			
13	Podium gooseneck with base	SITC of Wired Goosneck microphone with Frequency response: 50 Hz - 20 kHz or better, Transducer principle: pre polarised condenser microphone or better, Pick-up pattern: Cardioid/ Super- Cardioid, Equivalent noise level: 26 dB (A) or better, Goosneck Microphone: 17 inches or better, Max SPL: 128dB or better, with Tablestand ON/OFF switch, complete with standard accessories.	2	Nos.															
<b>Vocal Microphone</b>																			
14	Wired Vocal Mic	SITC of Corded Vocal Microphone with Dynamic Transducer principle, Pick-up pattern: cardioid, Sensitivity in free field, no load (1kHz): 2.7 mV/Pa, Nominal impedance: 350 Ohm, Frequency response 40 -16000 Hz, complete with standard accessories.	2	Nos.															
<b>Wireless Antenna Distribution</b>																			
15	Antenna Splitter	SITC of Active antenna splitter support Up to 4 true diversity receivers can be used with two external antennas, complete with standard accessories.	2	Nos.															
16	Passive directional Antennas	SITC of Passive directional antenna with Frequency range: 450 - 960 MHz, Impedance: 50 Ohm, Antenna gain- 4 dBi, along with Antenna Booster complete with standard accessories.	2	Nos.															
17	100M Antenna cable	SITC of coaxial Antenna Cable 50 Ohms cable, complete with standard accessories.	2	Nos.															
18	CD/DVD Player	SITC of Professional CD Cum DVD Cum USB player complete with standard accessories.	1	Nos.															
19	Recorder	SITC of an audi recorder with stereo recording capability, complete with standard accessories.	1	Nos.															
20	DI Box	SITC of Active DI Box , complete with standard accessories.	4	Nos.															
<b>CABLES, CONDUIT, CONNECTORS AND ACCESSORIES</b>																			
21	Speaker Cable	SITC of 2 core 2.5 sqmm PVC insulated CU conduction loudspeaker cable, complete with standard accessories.	350	Mtrs.															
22	Microphone Cable	SITC of 2 core shielded PVC insulated Cu conduction microphone cable, complete with standard accessories.	180	Mtrs.															
23	CAT 6 Cable	SITC of UTP CAT6 Cable	180	Mtrs.															
23	CAT 6A Cable	SITC of UTP CAT6A Cable for networking	305	Mtrs.															
24	PVC Conduit - 25mm	Supply and Laying of rigid PVC conduit, 25mm diameter, and accessories with ISI mark for the AV system as well as for Networking	200	Mtrs.															
25	PVC Conduit - 20mm	Supply and Laying of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	200	Mtrs.															
26	Equipment Rack	SITC of 27U Equipment Rack for housing all rack mountable equipments with internal wiring, front glass door; heat dissipation fans; movement wheels, power distribution units etc, complete with standard accessories.	1	Nos.															
27	Mic Stand - Floor	SITC of Floor Stand for Microphone	8	Nos.															
28	Mic Stand - Table	SITC of Table Stand for Microphone	8	Nos.															
29	Connectors	SITC of various type of connectors as required at site	1	LS															
30	ITC Charges	Installation, Testing and Commissioning Charges	1	Job.															
										-									
																		<b>TOTAL</b>	

S.No	Description	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installati on Rate	Installati on Amount	GST Supply Rate	GST Supply Amount	GST Installati on Rate	GST Installati on Amount	TOTAL Supply+ GST Amount	TOTAL Installati on+ GST Amount	TOTAL Amount
<b>PROJECTORS</b>																
1	Main Projector	Supply of DLP Laser Phosphor projector or better with dust protection , Min. 11,000 ISO Lumens or brighter,Laser light source having 20,000 hrs. life, WUXGA (1920 x 1200) display resolution or better,Contrast ratio(Dynamic) min. 10,000:1 or better, 24/7 operation ,PC 3D ready,Anamorphic ready,PC configurable OEM software for control & monitoring of projector from control room. Inputs: 1 x Display port, , 2 x HDMI , 1 x HDBaseT, 3G-SDI in/out Controls: 3D sync in/out, RS232,Control: Crestron RoomView, along with Suitable Lens as per site., along with Suitable Lens for a Screen Size of 335" diagonal from approx distance of 18ft or less.	1	Nos.												
2	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 150 lbs (68 kg) along with 9-11' Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	1	Nos.												
3	Left & Right Projectors	"Supply of DLP Laser Phosphor projector or better with Laser light source having 20,000 hrs life or more, Min. of 6000 ISO Lumens or brighter,WUXGA resolution(1920 x 1200) and Contrast ratio(dynamic) 18,000:1 or better. Inbuilt capability of Vertical & Horizontal Keystone correction, Digital Zoom.The projector should have 10-bit colour display or better.The projector should have capability of Streaming of video and audio content from a compatible mobile device. The projector should be Full HD 3D ready. Inputs: 1 x VGA in/out, , 2 x HDMI , 1 x HDBaseT, 3G-SDI in/out Controls: 3D sync in/out, RS232, Audio in/out stereo.Control: Crestron RoomView, AMX & RS232 along with Suitable short throw Lens for a Screen Size of 192"" diagonal from approx distance of 15ft-16ft. "	2	Nos.												
4	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 50 lbs (22.7 kg) along with 9-11' Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	2	Nos.												
5	Main Projection screen	SITC of Fixed Projection Screen: 335 inches diagonal with 16:10 aspect ratio With MS supports as per site conditions. SIZE : 23.6 Feet x 14.79 Feet	1	Nos.												
6	Left & Right Projection screen	SITC of Motorized Projection Screen: 164 inches diagonal Motorized screen with 16:10 aspect ratio With Tubular Motor and RF Controls.	2	Nos.												
7	Confidence Monitor	SITC of confidence monitor 50" 4K UHD Display for local presentation with 3840 x 2160 (4K UHD) resolution, Brightness: 350 nits, Contrast Ratio: 4000:1, Viewing Angle(H/V): 178/178, Response Time: 8ms, Display Colors: 16.7M, Inputs: HDMI, DVI, USB with Audio input, and with having Audio output, External Control: RS232C, IR or better,working hour: 16/7,Built in Speaker(10W + 10W).	1	Nos.												
8	Floor stand for Confidence monitor	SITC of Confidence monitor mount with the following specifications: floor mount bracket for supporting display panel up to 55".	1	Nos.												
9	Control room display	SITC of Control room monitor 32" Full HD Display monitor with 1920 x 1080 (Full HD) resolution, Brightness: 330 nits, Contrast Ratio: 5000:1, Viewing Angle(H/V): 178/178, Response Time: 8ms, Display Colors: 16.7M, Inputs: HDMI, DVI, USB with Audio input, and with having Audio output, External Control: RS232C, IR or better,working hour: 16/7, Built in Speaker(10W + 10W).	1	Nos.												

TRANSMITTER, RECEIVER AND MATRIX SWITCH																
10	Podium	SITC of Customised Podium with Space for Interactive Panel, Mouse, 19" rack Space, Provision for Gooseneck Microphone, Top Connectivity Plate with following provisions i.e. Power for External Laptop, VGA and HDMI Input, USB Ports for Pen Drive and sliding Table top, 22"-24" Pen Interactive Panel, Battery free Pen with Eraser Switch, DVI/HDMI Input and Output, 16ms response time along with mini PC of i3 processor, 500GB HDD and windows 10 OS complete with standard accessories.	1	Nos.												
11	Cable Cubby on Podium	SITC of Laptop connectivity enclosure with below minimum specifications: It should be flush mountable into a table or flat surface with tilt up lid, Anodized, metal enclosure. Should have a lid damper for smooth/quiet operations. It should have 2x Multi-region AC outlet for power option, 1x USB A, 1x USB-C ports for charging, Should have option for 8x pass through holes/connectors for AV cables- VGA, Audio, HDMI, LAN, etc & Should have rectangular modular design for fast assembly and service. IT should be CE, UL, BIS certified	1	Nos.												
12	Matrix Switcher	SITC of "All in one Digital Matrix switcher" with below minimum specifications: Inputs to be Min 6 x HDMI, 4 x Twisted pair / HDBaseT, Outputs to be Min 4 x HDMI, 4 x Twisted pair / HDBaseT independent outputs, Should have min 2 x mirrored HDMI outputs for local monitors/Preview purpose, Resolution to be 4K or better. Audio Input: Six stereo balanced/unbalanced audio inputs & four mic/line audio inputs. Audio Output: Minimum four variable audio outputs. The unit to have Logo Keying - logo graphic may be placed at any position on any scaled video output. Should have seamless switching between connected inputs with Selectable seamless switching transitions. Should perform at 4:4:4 chroma sampling - Resolution range should be from 640x480 to 4K. Support HDMI audio de-embedding with S/PDIF audio output options. Should have in-built energy efficient Class D stereo or mono amplifier for direct speaker connections. Should be HDCP compliant & have inbuilt EDID management. Should support transmission of audio, video, control & power up to 70mtrs or 100mtrs over single shielded twisted pair cable. Should power up the select transmitters and receivers remotely without additional power adaptor. Should have inbuilt audio DSP to manage and manipulate the audio inputs with AEC feature enabled and this should allow 16x16 I/O channel to expand. For controls, the unit should have front panel buttons with indication,	1	Nos.												
13	Multi-Format transmitter	SITC of "Multi-Format switcher transmitter" with below minimum specifications: Inputs to be 1 x Display Port, 1x HDMI, 1 x VGA or more. Outputs to be 1 x Twisted pair/ HDBaseT on RJ 45 or better. It should have 1 x stereo analog audio, embedded audio on HDMI/Display port input. Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. Should have an automatic switching feature between inputs. It should support local power supply and it should provide remote power to connected receiver. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. It should be JITC Certified, Should be supplied with under table mounting kit	1	Nos.												

14	Wallplate Transmitter	SITC of "Wallplate Transmitter" with below minimum specifications: Inputs to be 1x HDMI, 1x VGA or more. Outputs to be 1 x Twisted pair on RJ 45 or better. Resolution to be 4K or better. It Should have 2 x stereo analog audio or more, embedded audio on HDMI port input. Should have an automatic switching feature between inputs. It should support both local power supply and remote powering. Transmission Distance should be atleast 100 mtrs. Should be HDCP compliant & should support EDID management.	2	Nos.												
15	HDMI over twisted pair Transmitter	SITC of "HDMI Transmitter " with below minimum specifications: Inputs to be 1 x HDMI, Controls (RS 232/IR). Outputs to be 1 x Twisted pair on RJ 45. Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be JITC Certified	4	Nos.												
16	HDMI over twisted pair Receiver	SITC of "HDMI Receiver " with below minimum specifications: Inputs to be 1 x Twisted pair on RJ 45. Outputs to be HDMI, Analog Audio, Controls (RS 232/IR). Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be JITC Certified	7	Nos.												
17	Wireless Presentation system	SITC of "Wireless Presentation system " with below minimum specifications: Outputs to be 1 x HDMI/ Display port or better. It should have Pass-through mode port with 4K resolution support or Better & Window mode with 1080p or better. Should have fully customizable welcome screen & Video screen saver & Should enable the moderator to select which user can access the display and how the content is displayed. Should be HDCP2.2 compliant & have EDID management. Should have 1 x embedded audio on HDMI input or better, 1x analog stereo, balanced/unbalanced output. It should present Full screen or four window Simultaneous display of content from 4 different sources through software app. Wired and wireless sources should be able to collaborate simultaneously. It should support 128-bit, security protocols to ensure that all content transmitted between BYOD devices and this unit is fully encrypted and secure. It should support Windows, Android & iOS or better. It should enable meeting content to display on a participant's mobile device. Should be PoE+ enabled. Should have control options of USB, LAN, CEC over HDMI cable or better.	1	Nos.												

18	Recorder & streaming processor	SITC of "Full HD Recorder & streaming processor " with below minimum specifications: Inputs to be 2 x HDMI / DVI digital video (HDCP compliant), 1x HDMI, 1x Component/Composite video, 1 HDMI loop out or better. Outputs to be 1 x HDMI for local output, 1 RJ45 streaming & network recording output & Simultaneous unicast and multicast streaming per encode. Should support resolution of 640x480 upto at least 1920x1200 including 1080p/60. Should have EDID management Should have 1 or more stereo Audio inputs. Should have an in-built DSP for audio management. Should have 80 GB or more SSD / through Memory card, USB for external drive and defined network storage directory & Record audio as separate m4a file. Should have two HD input PIP and picture by picture capability and have high quality inbuilt scaling. Should have flexibility to change background images and text for recording. Should support Record and stream simultaneously, Metadata can be assigned to make indexing and searching of recordings & Provision for Dual Recording. Should have flexibility to integrate with 3rd party video platform with help of additional license. Should have streaming capability with resolution support upto 1080p, H.264 or better compression supporting protocol RTP/RTSP/RTMP. Should have provisions for Horizontal Video Mirroring Upgrade with additional license Integration with Panapto or Kaltura with additional licenses. Should have I/O	1	Nos.												
19	7" Touch Panel	SITC of "7 inch Wallmount Control touch panel interface" with below minimum specifications: Should be 7" or more Diagonal, TFT touch screen or better with table top mounting, of the same make of Control system for proper compatibility. Should be a capacitive touch or better, with Gorilla Glass screen protection. Should have 1024x600 resolution and 24-bit color depth or better. Brightness should be 420 nits (cd/m2) or better. Should have 65 degree viewing angle provides optimum viewing comfort while seated or standing. Contrast should be 700:1 or better. Backlight should be LED. Should have communication port of female RJ-45 connector 10/100/1000Base-T, half/full duplex with autotdetect. Should support Power over Ethernet supplied through network switch. Should have memory of SDRAM: 2GB or more, Flash: 4GB or more. Should compliance with CE, UL, FCC, RoHS, UL, VCCI, and WEEE. It should be BIS & JISC certified.	1	Nos.												
20	USB Bridge device	SITC of HDMI and audio to USB bridge with inbuilt scaling, 1x HDMI input, 1x line input, 1x HDMI loop out, 1x scaled USB output for software based video conferencing, should support in-built AEC. Should be HDCP compliant. Support HDMI audio de-embedding, mic input with phantom power, built-in DSP features. Control: RS-232, Ethernet	1	Nos.												
21	PTZ Camera	SITC of Full HD IP PTZ Camera with frame rate of 60fps or better with 1/2.8" 2MP CMOS; 20x or better optical Zoom; 128 or better preset positions; 3G-SDI, HDMI, Ethernet video output support; RS-232 / RS-422 / Ethernet Camera control Interface; Pan Angle : -170° ~ +170° or better; Tilt Angel : -30° ~ +90° or better; Video S/N Ratio : >50dB or better; complete with all standard accessories as per the tender specification.	3	Nos.												
22	Joystick Controller	SITC of Joystick Controller for PAN/Tilt/Zoom; Control upto 250 Camera or better; VISCA, Pelco P&D, VISCA Over IP, ONVIF Protocol Support; Interface : RS-232, RS-422, Ethernet or better; complete with all standard accessories as per the tender specification.	1	Nos.												
CABLES, CONDUITS, CONNECTORS AND ACCESSORIES																



26	HDMI Cable- 6 Feet	SITC of "6ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	14	Nos.												
27	HDMI Cable- 3 Feet	SITC of "3ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	17	Nos.												
23	VGA Cable- 6 Feet	SITC of "6ft VGA with Audio " with below minimum specifications: Should be a Thin flexible VGA cable Terminated with high quality molded VGA (15-Pin HD) connectors and 3.5 mm connectors for audio. Should have overall foiled shield for EMI interference isolation.	2	Nos.												
24	DP Cable- 6 Feet	SITC of "6ft DisplayPort Cable " with below minimum specifications: Should be a DisplayPort 1.2 gold Plated Male to Male cables of data rate 21.6 Gbps ,support the resolutions upto 4096x2160 @ 60 Hz. Should have 30-22 AWG or better.	1	Nos.												
25	STP Cable	SITC of "Shielded Twisted Pair cable" with below minimum specifications: Should be a Shielded twisted pair with 4 UTP cables. Should have 24 AWG or better. Shielding should be SF/UTP design with four unshielded twisted pairs inside an overall braid and foil shield. It should be best suitable for the proposed twisted pair extenders. Bandwidth should be 450 MHz or better.	2	Nos.												
26	STP Connector	SITC of "Shielded Twisted Pair Connector" with below minimum specifications: Should be a Shielded twisted pair connector for 4 UTP cables ( 24 AWG)	3	Nos.												
27	PVC Conduit	SITC of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	100	Mtrs.												
28	Network Switch	SITC of 8 Port Network switch with PoE for supporting the AV installation requirement	2	Nos.												
29	Wireless Router	SITC of Wireless router for supporting the AV installation requirement	1	Nos.												
30	ITC Charges	Intsallation, Testing and Commissioning of the system	1	Job.												
															TOTAL	

S.No.	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installat ion Rate	Installat ion Amount	GST Supply Rate	GST Supply Amount	GST Installat ion Rate	GST Installat ion Amount	TOTAL Supply+ GST Amount	TOTAL Installat ion+ GST Amount	TOTAL Amount	
1	SITC of 150W High Quality LED Parcan Light complete with, Lamp source 3200K CCT Colour temperature CRI & TLCI Values above 95 DmX 512 dimming with 3 channel control Beam Angle of 9° / 25° / 45° Total Power Consumption of 165W 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 or 3 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 Brand embossed impact on the light body for genuine product	8	Nos													
2	SITC of 300W LED Profile Spot 19 Degree Light complete with, 3200K CCT Colour Temperature 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 12040 suitable to illuminate the key presentor 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 Brand embossed impact on the light body for genuine product	4	Nos													

3	<p>SITC of 400W LED Blinder Light 30 Degree complete with  3200K CCT 4x100W Chip On Board LED Lamp source  DmX 512 dimming with 4 / 8 Channel modes  CRI &amp; TLCI Value &gt; 90  Strobe option Adjustable 1 ~ 25 times / Sec Variable  Beam Angle 30 Degree  Total Power Consumption of 420W  11.7KHz Refresh Rate  In built preset's for effects  Fuse and Internal safety protections  Active Cooling with Low Noise Fan  5 Pin XLR or 3 Pin XLR for DmX  High quality well designed inbuilt reflector  Flicker Free 100% for Tv &amp; 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</p>	6	Nos											
4	<p>"SITC of 54 x 3W LED Par Light RGBW, Beam Angle 25° complete with  RGBW 3W Lamp source x 54 Pcs  DmX 512 dimming with 8 Channel  High Bright Red, Green, Blue, White LED's Source  Unlimited Color Mixing through DmX  0 ~ 100% Linear dimming  In built presets for different colors  Strobe Mode 20 times/Sec  Data DmX through 3 / 5 Pin XLR's  65dB ~ 130dB Sound sensing capacity  Power In and Out Connections  High precision colors, IP20 protection  Powder coated Black finish housing  Having Sound Control</p>	6	Nos											

5	<p>SITC of 200W LED Fresnel Light having 3200K colour temperature High quality uniquely designed Fresnel Lens CRI, TLCI and R9 value above 96 LED COB Based Source No Multiple Shadows – Single Source illumination Total Power Consumption of 210W Linear dimming 0 ~ 100% Adjustment Flicker Free for High FPS, Power AC90-260V, 50/60HZ Working Temperature - +40° ~ -30° Active Cooling with Low Noise Fan DmX &amp; RDM Control options with latest technology Fixture provided with Yoke of Manual Adjustment Manual and DMX control Option mode through 5pin/3pin xlr Black powder coated fabricated housing with normal yoke. 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 Brand embossed impact on the light body for genuine product</p>	6	Nos											
6	<p>SITC of Light fixture mounting 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</p>	32	Nos											
7	<p>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</p>	32	Nos											
8	<p>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 Suitable to hold various type grid &amp; other rigging systems.</p>	22	Nos											

9	<p>SITC of Fixed on stage Curved Lighting bar/winch of 21 Mtr length constructed with an dual contruction 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 fastne</p> <p>Made out of 48mm Outer Dai, 40 Nominal Bore Mild Steel Pipe Dual Barrel Arrangement Dual Construction Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions End Caps on the Pipe end Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures</p>	1	Nos											
10	<p>SITC of Fixed FOH Curved Lighting bar/winch of 22Mtr length constructed with an dual contruction 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</p> <p>Made out of 48mm Outer Dai, 40 Nominal Bore Mild Steel Pipe Dual Barrel Arrangement Dual Construction Powder coated with Matt black Texture Fixing Through Suspenders as per site conditions End Caps on the Pipe end Upper pipe of dual construction is used to anchor the bar lower pipe is effectively used to hang the light fixtures</p>	1	Nos											

11	SITC of Power Distribution Electrical panel having a Individual MCB control for 21 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.	1	Nos											
12	SITC of High quality power junction box 4 way made up of MS Sheet metal fabricated housing 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	21	Nos											
13	SITC of High quality Dimming In junction box 1 way made up of MS Sheet metal fabricated housing 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	1	Nos											
14	SITC of High quality Dimming Out junction box 1 way made up of MS Sheet metal fabricated housing 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	6	Nos											
15	SITC of Internal Earthing System with copper bare conductors all along the cable trays, metal parts and Installation Hardwares	1	Nos											
16	SITC of Black Powder coated cable trays made out of MS Sheet fabricated for a size of 40 x 150 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.	15	Mtrs											
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.	55	Mtrs											
18	SITC of DmX Male Female Connectors 5 Pin having rubber sheeth protection for Cross connecting DmX wiring connections	10	Nos											
19	SITC of DmX Male Termination Connector 5 Pin soldered with required capacity of resistor for signal deframing	8	Nos											

20	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	1	Nos											
21	SITC of DmX Controller consits of 24 Physical Faders to control atleast 96 channels 4 Individual page control switches Master control fader Black out mode Scene saving option upto 96 memories LCD display Smooth movement faders Easy access key pads DmX 512 protocol, 5 Pin XLR Output Optional chase & multifunction keys Sequence mode select	1	Nos											
22	SITC of MS sheet metal fabricated power junction box duly powder coated and fitted with 2 10amps 3 pin IEC socket, ON/OFF switch and necessary glands to power splitters and console, duly powder coated with Matt black texture finish.	1	Nos											
23	SITC of Opto isolated RDM enabled DmX splitter unit provided with, 8 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 Powder coated compartment finish Mounting brackets for grid mount.	1	Nos											
24	SITC of FRLS Copper unarmoured Flexible cable having 3 Core each of 1.5 Sq mm size.	825	Mtrs											
25	SITC of 5 Core DmX Cable with Sheathed housing on the cable, well designed insulation, low noise suitable to transmet DmX signal.	170	Mtrs											
26	SITC of Fixed Rear Curtain 22.5 Mtrs straight Centre partting as per design Made up of I Track for complete length Overlap of 0.5~0.9 Mtrs. Trollies uniformly distributed along the track at every 200/250mm with a master trolley. Suspension through Suspenders as per site conditions 2 Wheeler trolly for curtain moment All metal parts are powder coated Black texture finish paint	1	Nos											

27	Fabric for Rear Curtain	1	Nos												
28	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 Suitable to hold various type grid & other rigging systems.	8	Nos												
														TOTAL	



S.No	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount		
1	SITC of 5W per ft strip LED light with dimensions: 25mmx7xx and cutout of 17mmX5mm with each LED of 0.2W. LED Strip to be containing 39 LED's or better per feet, and supported on 12V constant voltage. Length of LED strip to be 1.5meter.	56	Nos.														
2	SITC of 36Watts non dimmable driver to support the above mentioned LED light strip	56	Nos.														
3	SITC of main auditorium lights of 33Wattch LED, with a beam angle of 40 degrees. Colour temperature 3K/4k/5k with circular shape.	48	Nos.														
4	SITC of 0-10 dimmable driver to support the above mentioned LED light strip	48	Nos.														
5	Accent Lighting : SITC of 5W per ft strip LED light with dimensions:17mmX8mm with each LED of 0.2W. LED Strip to be containing 39 LED's or better per feet, and supported on 12V constant voltage. Length of LED strip to be 75meter.	75	Nos.														
6	SITC of 196Watts non dimmable driver to support the above mentioned LED light strip	8	Nos.														
7	16 on/off circuits actuator x 2 no's. 32 available circuits. We have 30 circuits in total. 16 Channel Combo Switch Actuator (16A/Ch. with Manual Override Option)	2	Nos.														
8	6 channel dimming circuits. There are 6 rows of lights. 6 Channel 0-10V Dimmer (10A/Ch. with Manual Override Option) with P.S.	1	Nos.														
9	8 Button Panel. We have 36 circuits so we have recommended 5 button panels. 8 Button Black Aluminium Keypad.	5	Nos.														
10	Control of IR Devices like AC etc. IP to IR Controller (Max. 3 IR Devices)	2	Nos.														
11	Control of RS-232 device. IP to Serial Controller (For 1 Serial Device)	1	Nos.														
12	Power Supply. KNX Power Supply (640mA, 30VDC)	1	Nos.														
13	IP interface with Licence for the I-pad. IP Interface with One Automation App License	1	Nos.														
14	Supply and fixing of 4X14 way Flexi DB with all standard accessories	4	Nos.														
15	Supply and laying of CAT 6E/ CAT 6A with all standard accessories	700	Mtrs														
16	Supply and fixing of 2 Module Metal Box with all standard accessories	11	Nos.														
17	Supply and laying of 2.5 sqmm 4 core Copper cable (Red, Blue & Black) with all standard accessories	900	Mtrs														
18	Supply and laying of 1.5 sqmm 2 core Copper cable with all standard accessories	1200	Mtrs														
19	Supply and fixing of Insulation Tape with all standard accessories	30	Nos.														
20	Supply and fixing of 250x50mm Cable Tray with all standard accessories	40	Mtrs														
21	Supply and fixing of 100x50mm Cable Tray with all standard accessories	200	Mtrs														
22	Supply and fixing of MS Flexible Hose 25mm with all standard accessories	96	Mtrs														
23	Supply and fixing of MCB 20A with all standard accessories	6	Nos.														
24	Supply and fixing of MCB 40A with all standard accessories	2	Nos.														
25	Supply and fixing of MS Pipe 20mm with all standard accessories	350	Nos.														
26	Supply and fixing of MS Junction Box's 20mm with all standard accessories	175	Nos.														
27	Supply and fixing of MS Bend 20mm with all standard accessories	130	Nos.														
28	Supply and fixing of Clamp 20mm with all standard accessories	60	Nos.														
29	Supply and fixing of 3 Module Metal Box with all standard accessories	10	Nos.														
30	Supply and fixing of 3 Module Plate with all standard accessories	11	Nos.														

31	Supply and fixing of 2 Module Plate with all standard accessories	11	Nos.											
32	Supply and fixing of 6A 1 way switch with all standard accessories	11	Nos.											
33	Supply and fixing of 16A 1 way switch with all standard accessories	11	Nos.											
34	Supply and fixing of 6A 2 in 1 Socket with all standard accessories	11	Nos.											
35	Supply and fixing of 16A 2 in 1 Socket with all standard accessories	11	Nos.											
36	Supply and fixing of Blank Plate/Dummy switch with all standard accessories	17	Nos.											
37	Supply and fixing of Pop up Box with all standard accessories	5	Nos.											
38	Supply and fixing of 2-in-1 sockets with switches for charging distributed in the entire seating area including the required back boxes.	75	Nos.											
39	PVC Conduit - 25mm - Supply and Laying of rigid PVC conduit, 25mm diameter, and accessories with ISI mark	500	Mts											
40	Installation, Testing and Commissioning Charges	1	Job											
													<b>TOTAL</b>	

No	Specification	Qty	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	<p><u>Auditorium Chair Specification :</u> SITC of Standard Heavy Duty Auditorium chairs (Fixed type with writing table )</p> <p><u>Structural Frame:</u></p> <p><u>Back Rest frame</u> of ERW Tube / IS :3074-2005 GRADE 1-19 dia Round Pipe 1.2 mm OR Mild Steel of size 25 X 3 mm flat bend as per ergonomic contour " 5 " bend to suit the body shape.</p> <p><u>Seat frame</u> of ERW Tube / IS :3074-2005 GRADE 1-20 mm square Pipe 1.2 mm OR Mild Steel of size 20 X 5 mm flat " C " bend type.</p> <p><u>Note :</u> In main load bearing structure no Wood based frame is require.</p> <p><u>WING COMPONENTS:</u> HRCA / CRCA Sheet Metal / IS: 1079-1994 Type C / U</p> <p><u>Wing frame</u> " C " Channel 2 mm thk. Side wing frame plywood 6 mm with 3 mm fabric upholstery. Leg : Sq. tube IS : 4923-1997-80 X 40 mm , 1.63 Thickness.</p> <p><u>SPRINGS:</u> For tip up mechanism Coil Spring / Spring Steel IS : 4454 1981 GRADE 2 Tested for 1,00,000 Cycles.</p> <p><u>Flexible PU FOAM:</u> Automotive Grade High Resilience-HR Polyurethane foam of density : 48 + / - ( Plus – Minus ) 5 kg / M3. As per JIS K 6401 It should be cfc free and fire retardant.</p> <p>Thickness Cushion : 130, +/- 20 mm; Backrest : 80, +/- 10 mm Hardness : Cushion : 120 (+ 30 / - 20) Newton; Backrest : 80 (+ 30 / - 20) Newton</p> <p><u>FINISH</u></p> <p>All Fasteners zinc passivated. All exposed &amp; visible parts powder coated.</p> <p><u>Writing table arrangement.</u></p> <p>Wooden finish with sun mica laminated on both the side.</p> <p>Sheet metal pressed main writing mechanism with main loading bearing parts of 3 mm thick.</p> <p>The metal plate of 1.6 mm to be provided below the wooden writing table for support.</p> <p>The movable hinge parts of writing table should be metal.</p> <p>The writing table should be conceal type when not in use.</p>	260	Units												
														TOTAL	

Sl. No	DESCRIPTION	QTY	UNIT	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Supply, Installation, Testing & Commissioning of <b>Floor Standing Double Skin Air Handling unit (AHU)</b> Filter section with 50 mm thick box type pre filter (MERV-8).Coil section with 6 row deep DX cooling coil.Fan section with DIDW centrifugal backward curved fan, motor, v-belt & drive set.Supply air manually operated AL damper considering 60 mm static. <b>Make:- Zeco / DRI / Waves</b>														
a	Capacity : 22000 CFM (55.0 TR) & 60 mm Static Pressure	1	No												
2	<b>Supply Of DX Condensing Unit</b>														
	<b>Outdoor Units</b>														
	Supply of nominal capacity air-cooled DX Units complete with Scroll Compressors, copper tube aluminium finned air cooled Condensers, propeller type Condenser Fans, Evaporator section with copper tube aluminium finned Cooling Coils, centrifugal blower with drive motors, refrigerant controls like expansion valves, shut off valves, solenoid valves, strainers etc;														
a)	11.0 TR <b>Make:Daikin / Bluestar / General</b>	5	Nos												
	<b>Total for High Side</b>														
	<b>Part-B(Low Side)</b>														
1	Supply and installation of AHU kit	5	Set												
2	Supply and fixing of Star Delta Starter with VFD for DX-CSU														
a)	55.0 TR(22000 CFM)	1	No												
3	Supply and fixing of Star Delta Starter without VFD for DX- CSU														
a)	55.0 TR(22000 CFM)	1	No's												
4	Supply and laying of 2.5 Sqmm 4 Core flexible communication cable with conduit between Starter panel to outdoor.(Considered 15 Rmtrs per circuit).	75	Rmtrs												
5	Supply and laying of 6 Sqmm 4 Core flexible cable from MCB located near to ODU .(Considered 10 Rmtrs per circuit).	50	Rmtrs												
6	Supply and laying of harddrawn refrigerant copper piping with nitrile rubber insulation for suction and discharge lane (Considered 12 Rmtrs per circuit).	60	Rmtrs												
7	Supply and laying of 2.5 Sqmm 6 Core flexible communication cable between Indoor & outdoor (Considered 14 Rmtrs per circuit).	70	Rmtrs												
8	Supply and laying of 2.5sqmmx4core copper flexible cable from Unit to Actuator (For Motorized VCD and Fire damper)	RO	Rmt												
9	Supply of CPVC drain pipe to drain the condensation drain water from drain tray to the nearest drain point														
a)	40mm dia	25	Rmtrs												
10	Supply and installation of flexible connections constructed of fire resistant flexible double between machine mouth to main duct canvas sleeve with zip provision.	2	No's												
11	Supply Fabrication, Installation and testing of sheet metal duct in accordance with the approved shop floor drawing.														
a)	24 G	350	Sqmt												
b)	22 G	195	Sqmt												
c)	20 G	85	Sqmt												
d)	18 G	RO	Sqmt												
12	Supply air plenums for air handling units with GI double skin construction with 25mm thick insulation as per specification duly factory fabricated and powder coated as follows:	RO	Sqmt												
13	Sound attenuators fabricated out of GI sheets duly powder coated with attenuation louvers, flanges and supports as per specification having the following quantities:														
a)	2000 x 650 x 1200 mm long	2	No's												
14	Aluminium Volume Control Damper with PVC gear and opposed blades as per specs	10	sqm												
15	Supply and fixing of Aluminium powder coated Continuous grill for return air.	RO	Sqmt												
16	Supply and Installation of powder coated Extruded Aluminium Supply air Eye Ball double skin jet diffuser / Circular Jet Diffusers with removable core (With opposed blade collar dampers) Outer size														
a)	250mm dia	RO	No's												



S.No	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount	
1	Supply, installation, testing and commissioning of the 20 KVA UPS System with battery bank, necessary copper cabling between UPS and batteries /battery breaker etc., for Three phase input and Three phase output, with necessary hardware & software Degree of protection provided by enclosures, Static power converters, Radio interference suppression, Utilization category of electronic components, with output isolation transformer, harmonic filter & all accessories required to complete the system configuration specified elsewhere in this specification, less noise level, high performance, less wave form distortion hot standby operation, display/ control panel, non compensated LC filter, high efficiency, static bypass, output AC power distribution unit with all standard accessories.	1	Sets													
2	Supply, installation, testing and commissioning of Sealed Maintenance free Battery Bank of suitable AH capacity as to provide with 30 Min backup time & with cabinet/rack, connecting cables between UPS and batteries and batteries interconnecting cables, shall be designed for continuous duty in an environment, high performance with all required accessories. UPS shall be housed in a sheet steel enclosure fabricated out of 2mm thick CRCA sheet, treated using 7 tank process with powder coated finish, etc complete with all standard accessories															
Total Amount														TOTAL		

No	Room Type	Vertical	No of such Units	Total rate	GST	Total With GST
1	100 PAX Classroom	Audio	2			
		Video & Switching	2			
		Furniture & Acoustics	2			
2	40 Pax Classroom	Audio	4			
		Video & Switching	4			
		Furniture & Acoustics	4			
					<b>TOTAL</b>	

S.No	Description	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
<b>MAIN LR SPEAKERS</b>																
1	Main Speakers	SITC of 2-way, 6.5-inch or better IP55 rated surface mounted coaxial Music loudspeaker. The loudspeaker shall meet the following criteria: Frequency range (-10dB) of 60Hz to 20kHz or better; Power handling of 400Watt peak or more; Nominal dispersion of 125 degree conical or better; Sensitivity of 90 dB SPL and Max SPL of 116 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. The loudspeaker system shall be enclosed in engineered-plastics front baffle with integrated steel formed back can enclosure material, UL-1480A rated.	2	Nos.												
2	Speaker mounting Brackets	SITC of OEM pan-and-tilt bracket that allows both pitch and yaw adjustment for above speaker	2	Nos.												
3	Amplifier for the speakers	SITC of Two Channel Power amplifier 2 x 600 W @ 4/8 Ohms with 20Hz - 20kHz or better frequency response, with digital Amplink Inputs/Outputs, LED Indicator, delivering as per OEM Guidelines, Amplifier Wattage should be 1.5 times the wattage of Speaker Driver with the system to make it functional.	1	Nos.												
4	Volume Control	SITC of volume controllers provide volume control for loudspeaker for above amplifier, It shall have 2 RJ-45 connectors which allow daisy-chaining.	1	Nos.												
<b>CONTROL ROOM EQUIPEMENTS</b>																
6	6 Channel Mixer	SITC of an analog 6 channel mixer with atleast 2 XLR connectors	1	Nos.												
<b>MICROPHONES</b>																
7	Wireless handheld mic set	SITC of Wireless Handheld Microphone dynamic in nature and having cardioid pick up pattern or better, RF output power: 10 mW or more, Frequency response: 80 Hz-14 KHz or better, Sensitivity < 3 µV at 52 dB(A)rms S/N, with 8 frequency banks, each with up to 12 factory-preset channels or better, Switching bandwidth up to 24 MHz, Signal-to-noise ratio ≥ 103 dBA, 10 hrs or more Operating time, complete with standard accessories.	1	Nos.												
8	Wireless lapel mic set	SITC of Wireless Lapel Microphone Condenser in nature and having Omni-directional pick up pattern or better, RF output power: 10 mW or more, Frequency response: 50 Hz-16 KHz or better, Sensitivity < 3 µV at 52 dB(A)rms S/N, with 8 frequency banks, each with up to 12 factory-preset channels or better, Switching bandwidth up to 24 MHz, Signal-to-noise ratio ≥ 103 dBA, 10 hrs or more Operating time, complete with standard accessories.	1	Nos.												
9	Wireless headworn mic set	SITC of Wireless Headworn Microphone Condenser in nature and having cardioid pick up pattern or better, RF output power: 10 mW or more, Frequency response: 50 Hz-16 KHz or better, Sensitivity < 3 µV at 52 dB(A)rms S/N, with 8 frequency banks, each with up to 12 factory-preset channels or better, Switching bandwidth up to 24 MHz, Signal-to-noise ratio ≥ 103 dBA, 10 hrs or more Operating time, complete with standard accessories.	1	Nos.												
10	Podium gooseneck with base	SITC of Wired Goosneck microphone with Frequency response: 50 Hz - 20 kHz or better, Transducer principle: pre polarised condenser microphone or better, Pick-up pattern: Cardioid/ Super- Cardioid, Equivalent noise level: 26 dB (A) or better, Goosneck Microphone: 17 inches or better, Max SPL: 128dB or better, with Tablestand ON/OFF switch, complete with standard accessories.	1	Nos												



11	CD/DVD Player	SITC of Professional CD Cum DVD Cum USB player complete with standard accessories.	1	Nos.												
<b>CABLES, CONDUIT, CONNECTORS AND ACCESSORIES</b>																
12	Speaker Cable	SITC of 2 core 1.5 sqmm PVC insulated CU conduction loudspeaker cable, complete with standard accessories.	150	Mtrs.												
13	Microphone Cable	SITC of 2 core shielded PVC insulated Cu conduction microphone cable, complete with standard accessories.	100	Mtrs.												
14	PVC Conduit - 25mm	Supply and Laying of rigid PVC conduit, 25mm diameter, and accessories with ISI mark	R/O	Mtrs.												
15	PVC Conduit - 20mm	Supply and Laying of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	R/O	Mtrs.												
16	Equipment Rack	SITC of 12U Equipment Rack for housing all rack mountable equipments with internal wiring, front glass door; heat dissipation fans; movement wheels, power distribution units etc, complete with standard accessories.	1	Nos.												
17	Connectors & Patch cords	SITC of various type of connectors and patch cords as required at site	1	Lot.												
18	ITC Charges	Installation, Testing and Commissioning Charges	1	Job.												
															<b>TOTAL</b>	

S.No	Description	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
PROJECTORS																
1	Projector	SITC of DLP Laser Phosphor projector or better with Laser light source having 20,000 hrs life or more, Min. of 5000 ISO Lumens or brighter,WUXGA resolution(1920 x 1200) and Contrast ratio(dynamic) 18,000:1 or better. Inbuilt capability of Vertical & Horizontal Keystone correction, Digital Zoom. The projector should have 10-bit colour display.The projector should have capability of Streaming of video and audio content from a compatible mobile device. The projector should be Full HD 3D ready. Inputs: 1 x VGA in/out, , 2 x HDMI , 1 x HDBaseT, Controls: 3D sync out, RS232, Audio in/out stereo. Control: Crestron RoomView, AMX & RS232 along with Suitable Lens.	1	Nos.												
2	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 50 lbs (22.7 kg) along with 9'11" Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	1	Nos.												
3	Projection screen	SITC of Motorized Projection Screen: 164 inches diagonal Motorized screen with 16:10 aspect ratio With Tubular Motor and RF Controls.	1	Nos.												
TRANSMITTER,RECEIVER AND MATRIX SWITCHER																
4	Cable Cubby	SITC of Laptop connectivity enclosure with below minimum specifications: It should be flush mountable into a table or flat surface with tilt up lid, Anodized, metal enclosure. Should have a lid damper for smooth/Quiet operations. It should have 2x Multi-region AC outlet for power option, 1x USB-A, 1x USB-C ports for charging, Should have option for 8x pass through holes/connectors for AV cables- VGA, Audio, HDMI, LAN, etc & Should have rectangular modular design for fast assembly and service. IT should be CE, UL, BIS certified	1	Nos.												
5	Multi-Format switcher	SITC of “Multi-Format scaling switcher” with below minimum specifications: Inputs to be 1 x Display Port, 3x HDMI or more. Outputs to be 1 x Twisted pair/HDBaseT on RJ 45 and 1x HDMI parallel output or better. It should support built in scaling with seamless transitions, audio de-embedding, embedding. Resolution should be 4K/60, 4:4:4 or more with minimum 18 Gbps data rate on single port. Should have an automatic switching feature between inputs, logo keying. It should support local power supply and it should provide remote power to connected receiver. Transmission Distance should be atleast 100 mtrs. Should be HDCP 2.3 compliant & should support EDID management. Should include HDMI cable lacing brackets. Should be supplied with under table mounting kit.	1	Nos.												
6	HDMI over twisted pair Receiver	SITC of “HDMI Receiver ” with below minimum specifications: Inputs to be 1 x Twisted pair on RJ 45. Outputs to be HDMI, Analog Audio, Controls (RS 232/IR). Resolution should be 4K/60@4:4:4 or more with minimum 18 Gbps data rate on single port. It should support audio de-embedding, both local power supply and remote powering. Transmission Distance should be atleast 100 mtrs. Should be HDCP 2.3 compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL rated for smoke and heat release installation within a plenum airspace above a drop ceiling.	1	Nos.												

7	Button Control panel	SITC of PoE enabled wall/Furniture mounted control panel with built in control processor for managing, monitoring, and control of AV devices, Six or more customizable backlit buttons, 1x Rs-232, 1x IR, 2x relay, 1x digital I/O port. Should have atleast 512MB memory and 512 MB RAM. Shall meet regulatory compliances: CE, UL.	1	Nos.												
<b>CABLES, CONDUITS, CONNECTORS AND ACCESSORIES</b>																
8	HDMI Cable- 6 Feet	SITC of "6ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	2	Nos.												
9	HDMI Cable- 3 Feet	SITC of "3ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	2	Nos.												
10	DP Cable- 6 Feet	SITC of "6ft DisplayPort Cable " with below minimum specifications: Should be a DisplayPort 1.2 gold Plated Male to Male cables of data rate 21.6 Gbps ,support the resolutions upto 4096x2160 @ 60 Hz. Should have 30-22 AWG or better.	1	Nos.												
11	USB Cable- 6 Feet	SITC of "6ft USB-C to HDMI Cable " with below minimum specifications: Should be a flexible gold Plated USB-C Male to HDMI Male cable of data rate 18 Gbps , Should support the resolutions upto 4K@60Hz, 4:4:4. Should support HDCP compliant	1	Nos.												
12	STP Cable & Connectors	SITC of "Shielded Twisted Pair cable & Connector" with below minimum specifications: Should be a Shielded twisted pair with 4 UTP cables supplied with connector. Should have 24 AWG or better. Shielding should be SF/UTP design with four unshielded twisted pairs inside an overall braid and foil shield. It should be best suitable for the proposed twisted pair extenders. Bandwidth should be 450 MHz or better.	1	Lot.												
13	PVC Conduit	SITC of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	R/O	No												
14	ITC Charges	Intsallation, Testing and Commissioning of the system	1	Job.												
															<b>TOTAL</b>	

CLASSROOM TYPE 1 - No Table, Chair with writing board flap

FURNITURE

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Classroom Table	SITC of 600mm X 450mm X 750mm ht classroom tables to host 1 person. Aluminum Powder coated end legs with die cast connectors and MS Powder coated 30x40mm beams are considered to support table top.	100	Units												
2	Classroom Chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	100	Units												
3	Whiteboard	SITC of manually operated vertical slideup boards consisting of one green board for chalk and one whiteboard for marker pens of size 1200 X 2400 each (total 2400 X 2400 mm)	2	Units												
4	Instructor table	SITC of instructor table of size 2400mm length X 600mm width X 750mm height with aluminium powder coated legs and standard accessories with approved laminate finish.	2	Units												
5	Instructor chair	SITC of upholstered chair with fabric seat Size: 785mm Ht X 420mm Width Supply of standard wooden chairs incorporating 1. Wooden back and legs 2. Cushion Seat 3. No armrest 4. Under leg bushes	2	Units												
															TOTAL	

ACOUSTICS

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Ceiling Treatment	SITC of an acoustical false ceiling with gridwork of 600mm X 600mm with acoustical tiles of 0.9 NRC or better, white colour with 25mm rockwool insulation glued behind the tile.	160	SQM												
2	Wall Paneling - Acoustical Strips	SITC of 2.5 inch thick wall panels made with wooden framework with rockwool infill, closed ply backing and insulation held with chicken mesh/RP tissue and finished with approved foam and fabric. Length 35 meters total X 1m X 2.5 inch. Final size as per site conditions.	1	Set												
3	Electrical Re-work	SITC of rework and removal of existing ceiling fans and lights and re-positioning of them on the false ceiling for lights and extending the ceiling fans below the false ceiling. Rate to include all accessories and labour.	1	Lumpsum												
															TOTAL	

CLASSROOM TYPE 2 - Table and Chair

FURNITURE

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Classroom Table	SITC of 1200mm X 450mm X 750mm ht classroom tables to host 2 persons. Aluminum Powder coated end legs with die cast connectors and MS Powder coated 30x40mm beams are considered to support table top.	50	Units												
2	Classroom Chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	100	Units												
3	Whiteboard	SITC of manually operated vertical slideup boards consisting of one green board for chalk and one whiteboard for marker pens of size 1200 X 2400 each (total 2400 X 2400 mm)	2	Units												
4	Instructor table	SITC of instructor table of size 2400mm length X 600mm width X 750mm height with aluminium powder coated legs and standard accessories with approved laminate finish.	2	Units												
5	Instructor chair	SITC of upholstered chair with fabric seat Size: 785mm Ht X 420mm Width Supply of standard wooden chairs incorporating 1. Wooden back and legs 2. Cushion Seat 3. No armrest 4. Under leg bushes	2	Units												
															TOTAL	

ACOUSTICS

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Ceiling Treatment	SITC of an acoustical false ceiling with gridwork of 600mm X 600mm with acoustical tiles of 0.9 NRC or better, white colour with 25mm rockwool insulation glued behind the tile.	160	SQM												
2	Wall Paneling - Acoustical Strips	SITC of 2.5 inch thick wall panels made with wooden framework with rockwool infill, closed ply backing and insulation held with chicken mesh/RP tissue and finished with approved foam and fabric. Length 35 meters total X 1m X 2.5 inch. Final size as per site conditions.	1	Set												
3	Electrical Re-work	SITC of rework and removal of existing ceiling fans and lights and re-positioning of them on the false ceiling for lights and extending the ceiling fans below the false ceiling. Rate to include all accessories and labour.	1	Lumpsum												
															TOTAL	

40 PAX CLASSROOMS

AUDIO SOLUTION

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Mixer Amplifier	SITC of a 60 Watt RMS mixer amplifier capable of operating on low or high impedance with 4 mic/line inputs, On/off switch• Power on LED• LED VU meter for master output (LEDs for -18, -12 -6;-3; 0 dB)• Master volume knob• Four volume knobs for microphone inputs• Volume knob for background music• Knob for treble level• Knob for bass level• Headphone socket	1	Units												
2	Speakers	SITC of wall mounted black colour speakers with selectable 8 ohm and 70/100v inputs, with integrated adjustable wall mount, ABS body. Rated power of the speaker to be 30W RMS with provision of transformer tapping. Loudspeaker to have a 5" woofer and a 0.5" tweeter or better with an effective frequency range (-10dB) of 100Hz to 19Khz or better. Loudspeaker to weigh under 3 Kgs.	2	Units												
3	Equipment Rack	SITC of a 9 U equipment rack to house amplifier and other miscellaneous items inside the classroom. To be complete with integrated power sockets within the cabinet.	1	Units												
4	Cables	SITC of 1.5 Sqmm loudspeaker cables to interconnect speakers with mixer amplifiers on phoenix connectors.	25	mts												
5	Custom connector/Patch	SITC of connectivity cables to allow connecting laptops and music sources to the mixer amplifier.	5	Lot												
6	Installation	Installation of the above mentioned audio system complete with all elements as per approved design.	1	Job												
															TOTAL	

S.No	Description	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
<b>PROJECTORS</b>																
1	Projector	Supply and Installation of projector with the following specifications: 3300 ANSI Lumens, WXGA, 3LCD projector, 0.46:1 Throw, HDMI X 1, VGA X 2, Video IN X 1, Monitor OUT X 1, RS232 IN X 1, LAN X 1, USB A X 1, USB B X 1, Audio IN X 2, Audio OUT X 2,	1	Nos.												
2	Projector mount	SITC of projector mount with the following specifications: Ceiling mount kit shall be capable to mount projectors of Weight Capacity 50 lbs (22.7 kg) along with 9-11' Adjustable Extension Column and 6" (152 mm) Speed-Connect Ceiling Plate as required.	1	Nos.												
3	Projection screen	SITC of Motorized Projection Screen: 113 inches diagonal Motorized screen with 16:10 aspect ratio With Tubular Motor and RF Controls.	1	Nos.												
<b>TRANSMITTER, RECEIVER AND MATRIX SWITCHER</b>																
4	HDMI over twisted pair Transmitter	SITC of "HDMI Transmitter " with below minimum specifications: Inputs to be 1 x HDMI, Controls (RS 232/IR). Outputs to be 1 x Twisted pair on RJ 45. Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be JITC Certified	1	Nos.												
5	HDMI over twisted pair Receiver	SITC of "HDMI Receiver " with below minimum specifications: Inputs to be 1 x Twisted pair on RJ 45. Outputs to be HDMI, Analog Audio, Controls (RS 232/IR). Resolution should be 4K or more with minimum 10.2 Gbps data rate on single port. It should support both local power supply and remote powering. Transmission Distance should be atleast 70 mtrs. Should be HDCP compliant & should support EDID management. Should include HDMI cable lacing brackets. Should have UL 2043 rated for smoke and heat release installation within a plenum airspace above a drop ceiling. It should be JITC Certified	1	Nos.												
<b>CABLES, CONDUITS, CONNECTORS AND ACCESSORIES</b>																
6	HDMI Cable- 6 Feet	SITC of "6ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	1	Nos.												
7	HDMI Cable- 3 Feet	SITC of "3ft HDMI Cable " with below minimum specifications: Should be a Ultra flexible HDMI gold Plated Male to Male cables of data rate 18 Gbps , Should support the resolutions upto 4K@60Hz. Should have 30-22 AWG or better. Should support ARC and CEC.	1	Nos.												

8	STP Cable & Connectors	SITC of "Shielded Twisted Pair cable & Connector" with below minimum specifications: Should be a Shielded twisted pair with 4 UTP cables supplied with connector. Should have 24 AWG or better. Shielding should be SF/UTP design with four unshielded twisted pairs inside an overall braid and foil shield. It should be best suitable for the proposed twisted pair extenders. Bandwidth should be 450 MHz or better.	1	Lot.												
9	PVC Conduit	SITC of rigid PVC conduit, 20mm diameter, and accessories with ISI mark	R/O	No												
10	ITC Charges	Intsallation, Testing and Commissioning of the system	1	LS												
															<b>TOTAL</b>	



40 PAX CLASSROOMS

**FURNITURE**

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Classroom Table	SITC of 1200mm X 450mm X 750mm ht classroom tables to host 2 persons. Aluminum Powder coated end legs with die cast connectors and MS Powder coated 30x40mm beams are considered to support table top.	20	Units												
2	Classroom Chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	40	Units												
3	Whiteboard	SITC of manually operated vertical slideup boards consisting of one green board for chalk and one whiteboard for marker pens of size 1200 X 2400 each (total 2400 X 2400 mm)	1	Units												
4	Instructor table	SITC of instructor table of size 1200mm length X 450mm width X 750mm height with aluminium powder coated legs and standard accessories with approved laminate finish.	1	Units												
5	Instructor chair	SITC of a low mesh back chair, suitable for classrooms with fabric upholstered cushion seats, integrated with 4 legs with castor wheels. Tablet shell to be made in black ABS and mechanism in diecast aluminium with black powdercoated finish. Total height 865mm X 415mm seat width and 440mm depth	1	Units												
															<b>TOTAL</b>	

**ACOUSTICS**

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
1	Ceiling Treatment	SITC of an acoustical false ceiling with gridwork of 600mm X 600mm with acoustical tiles of 0.9 NRC or better, white colour with 25mm rockwool insulation glued behind the tile.	56	SQM												
2	Wall Paneling - Acoustical	SITC of 2.5 inch thick wall panels made with wooden framework with rockwool infill, closed ply backing and insulation held with chicken mesh/RP tissue and finished with approved foam and fabric. Length 25 meters total X 1m X 2.5 inch. Final size as per site conditions.	1	Set												
3	Electrical Re-work	SITC of rework and removal of existing ceiling fans and lights and re-positioning of them on the false ceiling for lights and extending the ceiling fans below the false ceiling. Rate to include all accessories and labour.	1	Lumpsum												
															<b>TOTAL</b>	

No	Room Type	Vertical	No of such Units	Total rate	GST	Total With GST
1	Video Conference Room	Acoustics	1			
2		Audio Visual System	1			
3		Furniture	1			
					<b>TOTAL</b>	

Sl.No	Description Of Product	Qty	UOM	Unit Price	Supply Rate	Supply Amount	Installati on Rate	Installati on Amount	GST Supply Rate	GST Supply Amount	GST Installati on Rate	GST Installati on Amount	TOTAL Supply+ GST Amount	TOTAL Installati on+ GST Amount	TOTAL Amount
ACOUSTIC WALL PANELLING															
1	Walls : SITC of painting of the VC room walls with premium emulsion , dual coat, white Colour.	100.00	SqM												
2	Veneer work: Veneer Paneling: SITC of premium grade veneer panelling for the VC ROOM walls as shown in the drawing areas, with specifications of the veneer to be as follows: Standard available size: 8ft height X 4ft Width with thickness of around 4mm (including face skin and backing ply layer). Cost to include cutting, professional polishing of the veneer panels upon application to arrive at the desired final outcome as prescribed by the architect. Samples to be provided for approval. UOM IN SQM	45.00	SQM												
3	Acoustical Paneling : SITC of prefabricated acoustical absorptive panels for the upper reaches of the VC Room, with dimensions of 1mX1.5m or around with thickness of 1 inch. NRC rating of 0.85 with increased absorption in the low frequencies upto 500Hz is to be met. Samples to ascertain the colour and finish must be provided to the approving authority. Cost to include Freight, handling and installation. UOM in Sqm	25.00	SQM												
ACOUSTICAL CEILING TREATMENT															
4	Acoustical Ceiling: Suppy and fining of acoustical ceiling tiles of NRC 0.9 with increased absorption around 500Hz and 2000Hz frequencies with dimensions of 600mmX1200mm and 15mmthickness in white colour. Samples to be approved by the architect or approving authority. Costs to include freight, handling, installation with all required additional accessories to complete the false ceiling. UOM in SQM	50.00	SQM												
FLOORING															
5	Providing and laying of Carpet Tile over the specified area with following specification. The floor which recieves the carpet to be thouroughly cleaned as per manufacturer's specification. The carpet is to be laid over a bed of manufacturer's approved adhesive spread evenly over the entire floor. The rate shall include cutting, trimming, fixing and clearing away of residual material to a location as directed. The rate shall also include supplying and laying of a protective layer of PVC or HDPE sheet of 50 microns thickness, held together with scotch tape. The laid carpet to be vacuumed after the removal of protective cover/on commissioning. If after the protective layer is removed and stains observed in the carpet because of in adequate protection, the same shall be shampooed and made good to the satisfaction of the project managers. The measurements of carpet will be the actual laid area. UOM IN SQM	50.00	SQM												
DOORS															
6	ACOUSTICAL ENTRANCE DOORS : FIRE Rated Door: DOOR FRAME : Wooden Door Frame of hard wood/teak wood section with size compliant to the door size below, with one coat of anti-termite fire retardant primer or paint and fitted with acoustic seal on all three sides. DOOR SHUTTER : SITC of a fire rated acoustic door of Double Leaf Format with size 2m X 2.4m and thickness of 100mm comprising of multilated treatment of 19mm ply on the faces on either sides with an internal bracing to compactly support 75mm of rockwool or equivalent. STC of the door to be 60, with one coat of anti-termite fire retardant primer or paint. UOM in Single Units	1.00	Units												
Windows															
7	SITC of providing window blinds to cover the 2 windows on the backwall. Height 3m X width 3.2m. Price to include costing of freight and handling, installation and all related accessories, frames to support the window blinds in its position. UOM in SqM. Curtain quantity- 1 set	13.00	SQM												
														TOTAL	

S.No	Description	Tender Specifications	Qty.	Unit	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+ GST Amount	TOTAL Installation+ GST Amount	TOTAL Amount
<b>AUDIO and VIDEO</b>																
1	Connectors & Patch cords	SITC of various type of connectors and patch cords as required at site	1	Lot.												
2	75" Displays	DISPLAYS : SITC of LED professional displays to be mounted side by side for video conferencing with specification of each of the displays being: 75" 4K UHD Display for local presentation with 3840 x 2160 (4K UHD) resolution, Brightness: 350 nits, Contrast Ratio: 4000:1, Viewing Angle(H/V): 178/178, Response Time: 8ms, Display Colors: 16.7M, Inputs: HDMI, DVI, USB with Audio input, and with having Audio output, External Control: RS232C, IR or better, working hour: 16/7, Built in Speaker(10W + 10W).	1	Nos.												
3	Cable Cubby	Supply and installation of "Laptop connectivity enclosure " with below minimum specifications: It should be Flush mountable into a table or flat surface with tilt up lid, Powder Coated, metal enclosure. It should have 1x Multi-region AC outlet for power option, 1x USB-A, 1x USB-C ports for charging. Should have option for pass through holes/connectors for AV cables- VGA, Audio, HDMI, LAN & Should have Modular design for fast assembly and service. IT should be CE, UL, BIS certified	1	Nos.												
4	Conference Hardware	SITC of a video conferencing kit with 2 additional mics, PTZ camera and a speaker phone capable of running a VC solution for 15 people with the following specifications : CAMERA Smooth motorized pan, tilt and zoom controlled from remote or console Pan +/- 90° Tilt +35° / -45 10x lossless HD zoom Field of View:70 degrees or better Full HD 1080p 30fps H.264 UVC 1.5 with Scalable Video Coding (SVC) Autofocus 5 camera presets Far-end control (PTZ) of ConferenceCam product (with supported services) Kensington security slot Video mute/unmute LED indicator Standard tripod thread REMOTE CONTROL Camera, speakerphone, and call control 5 camera presets Docks on speakerphone IR 8.5 m	1	Nos.												
<b>CABLES, CONDUITS, CONNECTORS AND ACCESSORIES</b>																

5	HDMI Cable- 50 Feet	Supply and installation of "50ft HDMI Cable " with below minimum specifications: Should be a premium high speed HDMI gold Plated Male to Male cables of data rate 18 Gbps with an active circuitry in the cable to convert the electrical video signal to fiber and transmit and reconvert it into electrical signal to receive at sink device. Should support the resolutions upto 4K@60Hz, 4:4:4. Should have 30-22 AWG or better. Should support CEC.	1	Nos.												
6	ITC Charges	Intsallation, Testing and Commissioning of the system	1	Job.												
															TOTAL	

## VIDEO CONFERENCE ROOM

## FURNITURE

No	Product	Specification	Quantity	UOM	Unit Price	Supply Rate	Supply Amount	Installation Rate	Installation Amount	GST Supply Rate	GST Supply Amount	GST Installation Rate	GST Installation Amount	TOTAL Supply+GST Amount	TOTAL Installation+GST Amount	TOTAL Amount
1	SIDE TABLES	SITC of side table for placing of printer/stationery etc with dimensions 1800mm lengthX450mm depth X 750mm height	2	Units												
2	MAIN BOARD ROOM TABLE	SITC of board room / conference room table with curved edges as per drawing with dimensions - length 5800mm X depth 1400mm X 750mm height. 25mm thick E1 grade PLPB table top with matching edgebanding and Dual side openable flip up provision of size:- 600mm(W) x 600mm(D) only anodized finish. 25 mm thick PLB Gable end and 18mm thick PLB Modesty is to be considered. MS-Powder coated wire tray with switch plate and vertical cable raisers / PVC wireguard are considered for wire management	1	Units												
3	CHAIRS	SITC of fabric upholstered seats on wheels for board room applications with the following specifications : Dimensions 480mm seat width X 1070mm max height X 450mm seat depth without headrest, dual armrests and 5 wheel polypropylene base. Back mesh to be made with polyester mesh of approved colour with lumbar support.	15	Units												
															TOTAL	

## SECTION 6 – CHECK LIST

(This sheet should also be enclosed)

**The following items must be checked before the Bid is submitted:**

1 Technical Bid

a) MSME certificate

b) Section 5 Technical Bid (each pages duly sealed and signed by the authorized signatory)

Annexure 1: Bidders details

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Annexure 2: Details of purchase orders

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Annexure 3: Declaration regarding experience

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Annexure 4: Declaration regarding clean track

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Annexure 5: Declaration for acceptance of tender terms and conditions

☐

c) Copy of this tender document duly sealed and signed by the authorized signatory on every page.

☐

d) Checklist

☐

2 Commercial Bid

Section 6: Commercial Bid: (Price to be quoted in Indian Rupees INR)

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Your quotation must be submitted in a sealed envelope with both **Technical Bid and Commercial Bid super scribing the Tender no. and due date**