



तेजपुर विश्वविद्यालय / TEZPUR UNIVERSITY

(केंद्रीय विश्वविद्यालय / A Central University)

कुल सचिव का कार्यालय / OFFICE OF THE REGISTRAR

तेजपुर-784028 :: असम / TEZPUR-784028 :: ASSAM

NOTICE INVITING QUOTATION (NIQ)

ET-NIQ-2825-DT-18/12/2020

Online Tenders in 02 Bid System (Technical and Financial) are invited from reputed manufacturers/authorized dealers for supply, installation & commissioning etc. of the following items required for Tezpur University.

Please read the NIQ document carefully before participating. It shall be deemed that submission of bid by the bidder has been done after their careful study and examination of the NIQ terms with full understanding to its implications. Any lack of information shall not in any way relieve the bidder of its responsibility to fulfill its obligations under the Bid.

The University will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for, or in executing, the Purchase Order. Fraudulent Practice means a misrepresentation of facts in order to influence a procurement process and includes collusive practice among bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive Tezpur University of the benefits of free and fair competition. Corrupt Practice means offering, giving, receiving or soliciting of anything of value, pressurizing to influence the action of a public official in the process of this purchase execution.

For any queries/doubt please contact the Stores & Purchase Section (e-mail: snp@tezu.ernet.in).

Items:

Sl. No	Item	Quantity
1	Recording Studio Facility	01 no.

(Detail Technical Specification/Compliance Sheet and BoQ are attached/uploaded separately)

General Information about the NIQ

Last date and time for submission of Bids: 11.01.2021 (2.00 PM)

Date and Time of opening of Bids: 12.01.2021 (2.00 PM)

Place of Opening of Bids: Tezpur University

GENERAL TERMS & CONDITIONS:

1. No separate tender paper will be issued from the office; one should only download the specifications from the CPP Portal of Govt. of India or the Tezpur University website (www.tezu.ernet.in).
2. **GST: As per Gol Notification dated 14.11.2017 GST % for Public Funded Research Institution or a University has been reduced to 5% for certain goods and services. Hence, reduced rate of GST shall be paid if applicable on the tendered items. Exemption Certificate will be provided on request.**

Handwritten signature and date: 18/12/20



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3. **Rates:** Rates quoted should be on **FOR Tezpur University, Napam, Tezpur, Door Delivery Basis**, for indigenous items and **CIP Tezpur University, Napam, Tezpur or Delivered Duty Paid**, for imported item. Failure to comply with this term may lead to rejection of the quotation.
4. **Quotations should be accompanied by** i) A non-refundable application (quotation/participation) fee of ₹5000.00 (Rupees Five Thousand) only must be paid only by Demand Draft/Banker Cheque drawn in favour of Registrar, Tezpur University payable at Tezpur. ii) **The original copies of the Quotation/Participation Fee should be deposited/submitted/reach the office of the undersigned before opening of the Bids in an envelope superscribed as "Quotation/Participation Fee for ET-NIQ-...2825.....DT-...18/12/2020" addressed to the Assistant Registrar-GA, Tezpur University. Failure to do so may result in rejection of the bid.** iii) **EMD/Bid Security Deposit- As per Government of India office memorandum no. (F.9/4/2020-PPD) dated 12.11.2020) bidders may submit "Bid Security Declaration" as per format at Annexure-I in lieu of EMD/Bid Security Deposit.**
5. The rates should be exclusive of taxes and applicable tax % should be clearly indicated.
6. **Validity of Quotation:** Quoted rates must be valid for at least **180 days** from the last date of submission of quotation.
7. Applicable levies, surcharge and discounts should be clearly indicated item wise.
8. The rates should be quoted along with supporting documents of specifications and technical features and list of users, wherever applicable.
9. The system must be installed at the laboratory wherever applicable, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
10. **Literature a must:** All the quotations must be supported by technical leaflet/literature and the specifications mentioned in the quotation must be reflected/ supported by such technical leaflet/ literature. The model and specifications quoted should **invariably be highlighted** in the leaflet/literature for easy reference.
11. **Technical Evaluation:** Technical bids will be evaluated and ranked by the award ACCEPT & REJECT. The price bids of ACCEPTED vendors would then be considered by the concerned Purchase Committee of the institute.
12. **After Sales Service Guidelines:** In case of imported goods, bidders should clearly state the detailed address, contact number and email ids of 'after sales service centre' preferably in Tezpur/Guwahati, India or any place in Assam without which their offers shall be liable for rejection. Service against any complaint must be provided within 24 hours.
13. **Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must upload valid dealership certificate.
14. **Quality Certificates:** Valid certificate to prove that the products are genuine and of International standard, as mentioned below, must be uploaded: (a) Manufacturer's certificate; (b) ISO/ISI certificate.
15. **Performance Bank Guarantee:** If PO value is above Rs.5 Lakhs, the successful bidder, to whom the PO is placed, shall furnish an unconditional Performance Bank Guarantee from a scheduled Bank of India, for 10% of the Purchase Order value, alongwith the Bill/Invoice. The format for PBG if required; will be provided on request. In case of foreign purchase, the local Agent shall submit the PBG. Where the PBG is to be necessarily given by a foreign bank it shall be endorsed by its

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counterpart in India. Validity of the PBG, which shall be effective from the date mentioned therein, shall be *warranty period + 2 months before and 3 months after the warranty period.*

- a. **By submitting the PBG, the vendor is understood to have guaranteed that,**
 - i. The Purchase Order (PO) shall be executed as per terms and conditions mentioned therein.
 - ii. The vendor shall at his/their own cost rectify/replace the defects, if any, during the guarantee period.
 - iii. The guarantee is to the extent of 10% of the order value.
- b. **Condition for invoking PBG:** In case of failure to comply with the guarantees above, Tezpur University, Napam, Tezpur may terminate the contract / purchase order in whole or in part and forfeit the PBG. In addition, Tezpur University, Napam, Tezpur, at its discretion, procure upon such terms and in such manner as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier/vendor shall be liable to compensate Tezpur University, Napam, Tezpur for any extra expenditure involved."
16. **Genuine Pricing:** Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold, particularly to Universities/IITs/Institutes and other Government Organization.
17. **Payment:** 100% payment after successful delivery, installation and commissioning and acceptance by the user. **Please note that as per University's norm advance payment is not allowed for indigenous purchase.**
18. **PENALTY FOR DELAYED DELIVERY:** The date of delivery should be strictly adhered to. In the event of delayed delivery, installation & commissioning, the vendor shall be liable for a penalty deduction as per prevailing rule
19. Demonstration may be sought from the vendors for authentication of quoted specification.
20. The University is exempted from paying Custom and Excise duty.
21. Warranty/Guarantee period should be specifically mentioned in the quotation.
22. No Advance payment will be made. However, for foreign supplies, advance payment will be made either by LoC. In such cases 10% Performance Bank Guarantee should be submitted before opening of the LoC.
23. Items of Foreign origin should have Insurance up to installation on site.
24. The University reserves the right to accept or reject any or all the quotations without assigning any reason.
25. Irresponsive/incomplete quote will be rejected.
26. **Award:** The Final Award will be given to the vendor, selected by the Purchase Committee on the lowest quote basis.
27. **Conditional tenders not acceptable:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional tenders shall not be accepted on any ground and shall be rejected straightway. Printed conditions mentioned in the tender bids submitted by vendors will not be binding on Tezpur University.
28. **Enquiry during the course of evaluation not allowed:** No enquiry shall be made by the bidder(s) during the course of evaluation of the tender till final decision is conveyed to the successful bidder(s). However, the Purchase Committee or its authorized representative (Tezpur University) can make any enquiry/seek clarification from the bidders. In such a situation, the agency shall extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period notice, as such the bidders have to be ready for the same.

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29. Force Majeure:

If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows:

- I) any law, statute or ordinance, order action or regulations of the Government of India,
- II) Any kind of natural disaster, and
- III) Strikes acts of the Public enemy, war, insurrections, riots, lockouts, sabotage.

Termination for default: Default is said to have occurred

- a. If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.
- b. If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by Tezpur University.
- c. If the supplier fails to perform any other obligation(s) under the contract.
- d. Under the above circumstances Tezpur University may terminate the contract / purchase order in whole or in part and forfeit the EMD/PBG as applicable. In addition to above, Tezpur University may at its discretion also take the following actions: Tezpur University may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier shall be liable to compensate Tezpur University for any extra expenditure involved towards goods and services obtained. Besides, the Vice-Chancellor, Tezpur University, reserves the right to impose any other form of penalty as deemed fit including blacklisting of the vendor.

30. Selection criteria:

i. Evaluation Criteria:

To ensure that each bidder has the necessary qualifications and resources to fulfil its obligations under the contract, the following criteria shall be evaluated. The Eligibility, Financial, Experience & Support criteria should be passed before the technical criteria. Technical criteria will be evaluated and ranked by the award of ACCEPT and/or REJECT. Only the ACCEPTED vendors will be considered for price bid. In case a joint venture makes a bid, any one of the members of the joint venture need to be qualified for each of the criteria mentioned below.

ii. Eligibility Criteria:

- a. The bidder or the OEM should not be blacklisted by Tezpur University or any other Educational /R&D/ PSU/ Govt organizations. A certificate or undertaking to this effect must be submitted.

Note: The bidders should provide sufficient documentary evidence to support the eligibility criteria.

iii. Support Criteria:

The Bidder must have experience of supply and maintenance facilities and must have qualified support staff and resident engineers that can provide maintenance support for the hardware and software items concerned and all the items quoted must be covered by these facilities. List of spare items should be mentioned in the quotation. Similarly, all partnerships for maintenance shown as part of the above qualifying criteria must be in existence before the publication of this tender.

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Documentary proof of this must be provided. The purchaser reserves the right to reject a bid as non-responsive if not satisfied with the level of support as detailed above.

iv. Manufacturer's Authorization Certificate:

The OEM should authorize the bidder to participate in the quote. Original copy of the MAF specific to the NIQ has to be submitted along with the tender.

v. Technical Criteria

Technical bids will be evaluated and ranked by the award Accepted & Rejected. The price bids of Accepted vendors would then be considered by the concerned Purchase Committee of the institute.

31. ADDITIONAL TERMS FOR IMPORTED GOODS:

Following additional terms will be applicable in case of foreign supply:

- a) **Rates:** Rates quoted should be on **DELIVERED DUTY PAID basis**, with break-ups as per details given in the BOQ,
- b) **Exchange rate:** Rate of foreign exchange shall be the rate prevailing on the date of Purchase Committee Meeting.
- c) While transshipment will be allowed, **part shipment will not be allowed.**
- d) **Payment:** By an irrevocable Letter of Credit at CIF/CIP Kolkata value negotiable through any overseas branch of State Bank of India with unrestricted provision. 90% of payment will be released on receipt of the shipping document and balance 10% after receipt of consignment. LoC will be established on receipt of Order acknowledgment, Proforma Invoice and Performance Bank Guarantee (PBG).
- e) **Agency Commission:** The percentage of ex-works value to be paid to Indian agent in equivalent Indian currency as agency commission as applicable if any will have to be clearly stated in the quotation.
- f) **Country of Origin:** While Country of Origin will have to be stated in the Original Invoice for payment through LoC.
- g) **LoC Amendment:** LoC amendment charges due to mistake on the part of the supplier, if any, will have to be borne by the supplier.
- h) Any query related to Technical Specifications, Instruction to Bidders and Terms & Conditions must be made before 7 working days of last date of submission of bids to Stores & Purchase Section, Tezpur University.

32. Applications for release of EMD should be submitted to the Registrar/ Joint Registrar-GA/Assistant Registrar-GA, Tezpur University. A copy of the Bank Mandate/Bank Details as per **Annexure-I** shall have to be enclosed with the letter enabling to release/refund the EMD amount.

33. Apart from the above terms and conditions the University has the right to include any other terms and conditions as and when felt necessary.

INSTRUCTIONS TO BIDDERS FOR ONLINE BID SUBMISSION

Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e Procurement at <http://eprocure.gov.in/eprocure/app>

1. Possession of valid Digital Signature Certificate (DSC) and enrollment/registration of the agencies/bidders on the e-Procurement/e-tender portal is a prerequisite for e-tendering.
2. Bidder should do the enrollment in the e-Procurement site using the "Online Bidder Enrollment" option available on the home page. Portal enrollment is generally free of charge. During enrollment/registration, the bidders should

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- provide the correct/true information including valid email id. All the correspondence shall be made directly with the agency/bidder through email id provided.
3. Bidder need to login to the site through their user ID/ password chosen during enrollment/registration.
 4. Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by SIFY/TCS/nCode/eMudra or any Certifying Authority recognized by CCA India on eToken/SmartCard, should be registered.
 5. The DSC that is registered only should be used by the bidder and should ensure safety of the same.
 6. Agency/Bidder may go through the tenders published on the site and download the required tender documents/schedules for the tenders he/she is interested.
 7. After downloading / getting the tender document/schedules, the Bidder should go through them carefully and then submit the documents as asked, otherwise bid will be rejected.
 8. If there are any clarifications, this may be obtained online through the tender site, or through the contact details. Bidder should take into account the corrigendum published before submitting the bids online.
 9. Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of e-Token/Smartcard to access DSC.
 10. Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my tenders' folder.
 11. From my tender folder, he selects the tender to view all the details indicated.
 12. It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the bid will be rejected.
 13. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender documents/schedule and generally, they can be in PDF/xls/rar/jpg/dwf formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Bidders Bid documents may be scanned with 100 dpi with black and white option. It is advisable that each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through rar and the same can be uploaded, if permitted. However, if the file size is less than 1 MB the transaction uploading time will be very fast.
 14. If there are any clarifications, this may be obtained through the site. Bidder should take into account the corrigendum published from time to time before submitting the online bids.
 15. The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
 16. Bidder should submit the Tender Fee/EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender or as indicated in the tender. Scanned copy of the instrument should be uploaded as part of the offer.
 17. While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.
 18. The bidder has to select the payment option as offline to pay the Tender Fee/EMD as applicable and enter details of the instruments.
 19. The details of the DD/ any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable or liable for rejection.
 20. The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
 21. The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid will be rejected.
 22. If the price bid format is provided in a spread sheet file like BoQ_xxxx.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price-bid BOQ template must not be

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- modified/replaced by the bidder; else the bid submitted is liable to be rejected for this tender.
23. The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The **TIA will** not be held responsible for any sort of delay or the difficulties faced during the submission of bid online by the bidders at the eleventh hour.
 24. After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.
 25. The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
 26. All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.
 27. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
 28. The confidentiality of the bids is maintained since the secured Socket Layer 128-bit encryption technology is used. Data storage encryption of sensitive fields is done.
 29. The bidder should logout of the tendering system using the normal logout option available at the top right-hand corner and not by selecting the (X) exit option in the browser.
 30. For any queries regarding e-tendering process, the bidders are requested to contact as provided in the tender document. Parallely for any further queries, the bidders are asked to contact over phone: 180030702232 or send a mail over to cphp-nic@nic.in.



Assistant Registrar-GA
Tezpur University

Bidders Eligibility Criteria

S. No.	Pre-Qualification Criteria	Compliance (Y/N)	Documentary proof (Page Nos.)
1	Bidder must be a Company/Firm incorporated under the Indian Companies Act 1956 or Indian Partnership Act 1932 or a registered Sole Proprietor .		
2	Bidder should be in the business of Information Technology/ System Integration for the last 5 years in India.		
3	The Bidder must have valid ISO Certifications (Copies of valid ISO certificates to be enclosed).		
4	The bidder must have valid GST Registration and PAN .		
5	The bidder should be financially sound to undertake the project and provide efficient after sales support. Average Annual turnover of the bidder from IT Sales & services, should be not less than Rs. 2 Crore (each year) during last three financial years ending March 2020. (The audited statement of Accounts to be furnished)		
6	It is essential that the bidder is well acquainted with the working condition of Assam and should be able to provide after sales support for next 5 years as per requirement of Tezpur University. (The bidder must submit an affidavit confirming that the bidder will provide support during the warranty and AMC period)		
7	The bidder should have its own IT Service or IT enabled Service Office in the North-East India for at least last 3 years. (relevant valid Govt. documentary evidence like Trade license, GST Registration etc. from respective Govt. agency should be submitted). The bidder should clearly mention Land Line Telephone Nos of their Service office(s) in North-East India.		
8	The bidder must have its own technical manpower posted in their Services Centre(s) / Office(s) in the North-East India. The technical staff posted in North East India must be under bidder's payroll for the last 03(three) years. (List must be provided)		
9	The bidder should not have been blacklisted or debarred by any organization in India or abroad for any reason. The bidder must submit an affidavit / notary specifying that the bidder has not been blacklisted or debarred by any organization in India or abroad.		
10	<p>Bidder should have previous experience of executing Recording Studio/ Virtual Classroom with recording facility projects in any Govt. Educational / Govt. R&D Institute / Govt. Organization or any Broadcasting Industry for last 3 years. Work completion certificates from such Institutes/organizations must be provided. Bidders should have successfully completed or substantially completed similar works of either of the following during last three years prior to the date of floating of this NIT: -</p> <p>(a) Three similar completed works costing not less than the amount equal to 40(forty) percent of the estimated cost; or</p> <p>(b) Two similar completed works costing not less than the amount equal to 50 (fifty) percent of the estimated cost; or</p> <p>(c) One similar completed work costing not less than the amount equal to 80 (eighty) percent of the estimated cost.</p>		


 15/12/22

Part-1: Recording Studio Equipment and Accessories

Bill of Quantity (BoQ)

S/N	Items	Qty.	UOM
1.1	HD-SDI PTZ CAMERA	1	No.
1.2	BLOCK CAMERA	1	No.
1.3	PTZ CAMERA CONTROL UNIT	1	No.
1.4	TRIPOD FOR CAMERA	2	Nos.
1.5	VIDEO SWITCHER	1	No.
1.6	H.264 USB RECORDER / PLAYER	1	No.
1.7	CONVERTER	2	Nos.
1.8	VIDEO DISTRIBUTION AMPLIFIER	1	No.
1.9	4-PORT HDMI SPLITTER	1	No.
1.10	LIVE GRAPHICS SOFTWARE	1	No.
1.11	HD / SD CHARACTER GENERATOR KIT	1	No.
1.12	LAPTOP FOR HD / SD CHARACTER GENERATOR KIT	1	No.
1.13	43" FHD DISPLAY WITH HDMI INPUT	1	No.
1.14	TELEPROMPTER	1	No.
1.15	I-PAD	1	No.
1.16	16-CHANNEL AUDIO MIXER (DIGITAL)	1	No.
1.17	WIRELESS LAPEL MICROPHONE	2	Nos.
1.18	STUDIO TALKBACK SYSTEM	4	Nos.
1.19	STUDIO AUDIO MONITOR	2	Nos.
1.20	AUDIO DISTRIBUTION PROCESSOR UNIT/ DSP (DIGITAL SIGNAL PROCESSOR)	1	No.
1.21	ROOM SPEAKERS	4	Nos.
1.22	EDITING SUITE	1	No.
1.23	PROFESSIONAL SOFTWARE FOR VIDEO EDITING	1	No.
1.24	ACCESSORIES		No.
1.24.1	24 PORT NETWORK SWITCH	1	No.
1.24.2	8 PORT POE+ NETWORK SMART SWITCH	1	No.
1.24.3	LIGHT STAND	1	No.
1.24.4	EQUIPMENT RACK	1	No.
1.24.5	CABLES, CONNECTORS, ACCESSORIES	1	No.
1.24.6	CROMA SCREEN	1	No.

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1.25	STORAGE SERVER 50 TB (NAS)	1	1
1.26	85" INTERACTIVE DISPLAY	1	1
1.27	DESKTOP WITH CAMERA AND GRAPHICS ANNOTATE SLATE	1	1
1.28	DESKTOP VIDEO CONFERENCING LICENSE WITH UNLIMITED VIDEO CALL FOR ONE YEAR FROM THE DATE OF ACTIVATION. (4 SEAT LICENSE INCLUDING 100 INVITES) 1 YEAR	1	1
1.29	RESIDENT TECHNICAL MANPOWER ON 8x5 BASIS	1	1
1.30	INSTALLATION AND COMMISSIONING	1	1

Specifications

S/N	Technical Specifications		Compliance (Y/N)	Remarks if any;
1.1	HD-SDI PTZ CAMERA			
1	Video format:	1080p 60/59.94/50/30/29.97/25 1080i 60/59.94/50 720p 60/59.94/50		
2	Video Output:	HDMI x 1 SDI x 1		
3	Tally LED:	Dual colour (Red, Green)		
4	Image Sensor:	1/2.8-inch-high quality HD CMOS sensor		
5	Effective Pixels (approx.):	2.07 Mega pixels		
6	S/N Ratio:	>55dB		
7	Min. Illumination	0.5Lux (F1.8, AGC ON)		
8	Electronic Shutter:	Auto / Manual		
9	Zoom Ratio:	20x Optical zoom and 10X Digital Zoom		
10	Gamma Control:	Off / Normal		
11	Iris Control:	Auto/Manual		
12	Digital Noise Reductions:	yes		
13	On-Screen Display (OSD):	English		
14	White Balance:	AWB / MWB / One push WB / Outdoor / Indoor / Fluorescent		
15	AGC / Gain Control:	Auto / Manual Max. Gain Limit		
16	Mirror/ Flip Image	Yes		

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17	Preset	255 Position		
18	Focal Length	f=5.2 (wide) to 98 (tele) mm F1.6 to F3.5		
19	Focus Mode:	Auto / Manual		
20	Panning/Tilting Range	Pan: 340°, Tilt: +90° to -30°		
21	Panning/Tilting Speed	Manual: 1~60°/Sec Swing: 1~30°/Sec		
22	Field of View (Horizontal, Wide):	Approx. 54.7° (WIDE END) / 3.3° (TELE END)		
23	Image Compensation:	Backlight Compensation		
24	Protocol:	VISCA/Pelco-D/ Pelco-P; Baud Rate:115200/38400/9600/4800/2400bps DVIP 15000		
25	Live Video Streaming Protocol	RTMPS. RTMP, RTM-Multicast		
26	Remote Control Interface and Transmit Distance	RJ-45: for IP control (DVIP) RS-232: Mini DIN 8-pin (IN) Mini DIN 8-pin (OUT) RS-485		
27	Minimum No. of Concurrent live Video Stream to	2-RTMP Platforms must be supported		
28	Power Supply:	Provide power cable for operations on Indian standard power supply condition		
29	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.2	BLOCK CAMERA			
1	Video format:	1080p 59.94/50/29.97/25 1080i 59.94/50 720p 59.94/50		
2	Video Output:	HDMI (V1.3) x 1 3G-SDI x 1		
3	Tally LED:	Dual colour (Red, Green)		
4	Image Sensor:	1/2.8" type progressive scan CMOS sensor		
5	Effective Pixels (approx.):	2.14 Mega pixels		
6	S/N Ratio:	50 dB		
7	Min. Illumination	Colour: 0.4 lx (F1.6, 1/30 sec, 50IRE, Gain: High) B/W: 0.03 lx (F1.6, 1/30 sec, 50IRE, Gain: High)		
8	Electronic Shutter:	1/25 (1/30), 1/50 (1/60), 1/75(1/90), 1/100, 1/120 (1/125), 1/150(1/180), 1/215(1/250), 1/300(1/350), 1/425(1/500), 1/600(1/725), 1/1000, 1/1250(1/1500)		
9	Zoom Ratio:	30 x Optical Zoom		
10	Gamma Control:	Off / Normal / Standard Mode 1-4		
11	Iris Control:	Auto/Manual		
12	Digital Noise Reductions:	Yes		
13	On-Screen Display (OSD):	English		
14	White Balance:			
15	AGC / Gain Control:	Auto / Manual (0 to 28 step) Max. Gain Limit (6 to 28 step)		
16	Mirror/ Flip Image	Yes		
17	Preset	10 Position		
18	Focal Length	F=4.3 mm (WIDE) to 129 mm (TELE) F1.6 to F4.7		
19	Focus Mode:	Auto / Manual		

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	20	Field of View (Horizontal, Wide):	Approx. 63.7° (WIDE END) / 2.3° (TELE END)		
	21	Image Compensation:	Day & Night function		
	22	Protocol:	VISCA / DVI Protocol		
	23	Power Supply:	Provide power cable for operations on Indian standard power supply condition		
	24	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.3	PTZ CAMERA CONTROL UNIT				
	1	Number of Camera to be controlled Control	4		
	2	Shortcut Hardware camera Preset Keys	4 for each camera		
	3	Control Protocol	Sony VISCA		
	4	Connection to Cameras	Point to Point		
	5	Dimension should not be more than	312 x 175 x 128 mm		
	6	Weight should not be more than	1.5 kg		
	7	Operating Temp. Range	0~40 °C		
	8	Power consumption	DC 12V, 0.5A		
	9	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.4	TRIPOD FOR CAMERA				
	1	Weight	Less than 7Kg		
	2	Top Attachment	1/4" screw, 3/8" screw		
	3	Ball Flat	Flat		
	4	Counterbalance System:	Variable Continuous		
	5	Safety Payload Weight:	12 Kg or more		
	6	Powered By (Batteries):	Lithium		
	7	Counterbalance Weight:	4 → 12 kg		
	8	Base Diameter	75-80 mm		
	9	Bubble Spirit Level:	1 or more		
	10	Centre Of Gravity:	55 mm		
	11	Carrying Bag:	Required		
	12	Closed Length:	89 cm or less		
	13	Easy Link:	Required		
	14	Front Tilt:	-70° / +90° or better		
	15	Head Type:	Video/Fluid Head		
	16	Leg Type:	Twin		
	17	Leg Lock Type	Flip Lock		
	18	Legs Tube Diameter:	16, 25 mm		
	19	Material	Aluminium		
	20	Maximum Height:	165-175 cm		
	21	Min Height	45-50 cm		

	22	Pan Bar:	Required		
	23	Pan Drag:	continuously adjustable from 0 to max level		
	24	Panoramic Rotation:	360 °		
	25	Quick Release:	Required		
	26	Spreader	low level - variable arm length		
	27	Tilt Drag:	continuously adjustable from 0 to max level		
	28	Warranty	1 Year		
1.5	VIDEO SWITCHER				
	1	Video Standard	HD		
	2	Video Input	4 x HD-SDI 2 x HDMI		
	3	Computer Graphic Interface	2 via HDMI		
	4	Video Output	3x HDMI 2x SDI assignable: AUX 1-6, PGM, PVW, PGM Clean or Multiview		
	5	Audio Input	2x Balanced XLR		
	6	Embedded Audio Support	2 Ch. Audio embedded		
	7	USK	2x USK support Chromakey		
	8	DSK	2x DSK support Lumakey & Linear key (Key / Fill)		
	9	Built-in Professional Monitor	17.3-inch Built in Monitor		
	10	Built-in Video Streaming Encoder	Stream to any RTMPS/RTMP platform		
	11	Audio Output	1x Stereo headphone		
	12	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.6	H.264 USB RECORDER/ PLAYER				
	1	Video Standard	HD & SD		
	2	Video Format	1080p 25/30 1080i 50/60 720p 50/60 480i/480p/576i/576p		
	3	Supported Video Input Signal	1x HDMI		
	4	Monitoring/ Playback output	1x HDMI		
	5	Embedded Audio	2CH PCM		
	6	Storage Medium	USB Flash Drive		
	7	Estimated Record Time (min per 10GB)	SD 16GB: 4.2Hr (7.5Mbps) ~ 10Hr (3Mbps) HD 16GB: 1.5Hr (20Mbps) ~ 2Hr (15Mbps)		
	8	How to Retrieve Recorded Content	Removable Hard Drive / SSD, transfer data via USB 2.0		
	9	Storage File System	NTFS		
	10	Recorded File Format	MP4 (H.264+ AAC)		
	11	Video Recording Bit Rate / Colour Sampling	YUV 4:2:0 / 12bit		
	12	Audio Recording Format	AAC 2CH, but not support audio rec only		
	13	Chassis	1U/HALF		

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	14	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.7	CONVERTER				
	1	Conversion	VGA/HDMI/SDI to HDMI/SDI Multi-format Up/Down/Cross		
	2	Video Inputs	1x VGA, 1x HDMI, 1x 3G/HD/SD-SDI		
	3	Loop Through	1		
	4	Video Outputs	2x 3G/HD/SD-SDI with embedded Audio 1x HDMI		
	5	Audio Inputs	2x RCA (Stereo Pair) 2x SDI Audio embedded		
	6	Audio Outputs	SDI embedded audio up to 8CH, 48KHz, PCM audio HDMI embedded audio up to 8CH, 48KHz, PCM audio		
	7	Supported Video Input Formats	800x600 (60Hz), 1024x768 (60Hz), 1280x1024 (60Hz), 1366x768 (60Hz), 1400x1050 (60Hz), 1600x1200 (60Hz), 1280x720 (60Hz), 1920x1080 (60Hz), 480i, 480p, 525i, 576i, 576p, 625i, 720p (50/59.94/60Hz), 1080i (50/59.94/60Hz), 1080psf (23.98/24/25/29.97/30Hz), 1080p (23.98/24/25/29.97/30/50/59.94/60Hz)		
	8	Output Resolutions	Sel.: 525i, 625i, 720p (50/59.94/60Hz) 1080i (50/59.94/60Hz) 1080p (23.98/24/25/29.97/30/50/59.94/60Hz)		
	9	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.8	VIDEO DISTRIBUTION AMPLIFIER				
	1	Video Inputs	2 x BNC		
	2	Video Output	6 x BNC		
	3	Video Format	1080p 60/59.94/50/29.97/23.98 1080i 60/59.94/50 720p 60/59.94/50 525i, 625i		
	4	Audio Format	Support SDI embedded audio Up to 8 channels, 48KHz, PCM audio		
	5	Audio Inputs	2x RCA (Stereo Pair) 2x SDI Audio embedded		
	6	Audio Outputs	2x HDMI Audio embedded		
	7	Power	12V / 2.8W		
	8	Dimension (LxWxH)	127 x 85 x 45 mm		
	9	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.9	4-PORT HDMI SPLITTER				
	1	Output Interface	4 x HDMI		
	2	Input Interface	1 x HDMI		
	3	Max. Data Rate	Single link 600MHz (18Gbps) or better		
	4	Max. Pixel Clock	340 MHz		
	5	Compliance	HDMI (3D, Deep Colour, 4K); HDCP Compatible		
	6	Audio Formats Supported	DTS-HD Master Audio, Dolby TrueHD, Dolby Digital, DTS, DVD-Audio, LPCM, SACD, MPCM		

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	7	Video Processing	HDR 4K2K@60 4:2:0 10bits 4K2K 60Hz YCbCr4:4:4 8bit/YCbCr4:2:0 10bit 4K2K 30Hz YCbCr4:4:4 8bit		
	8	Max. Resolution:	Up to 4096 x 2160 / 3840 x 2160 @ 60Hz; 4096 x 2160 / 3840 x 2160 @ 30Hz;		
	9	Video Format	HDMI Supported Resolutions 4096x2160p60/59.94/50 4096x2160p30/29.97/25/24/23.98 3840x2160p60/59.94/50 3840x2160p30/29.97/25/24/23.98 1080p60/59.94/50, 1080p30/29.97/25/24/23.98 1080i60/59.94/50, , 720p60/59.94/50 480p, 576p, 480i, 576i PC Supported Resolutions: 640x480@60Hz, 800x600@60Hz, 1024x768@60Hz, 1280x720@60Hz, , 1280x768@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@ 60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1680x1200@60Hz, 1920x1080@60H		
	10	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.10	LIVE GRAPHICS SOFTWARE:				
	1	Video Signal	SD or HD		
	2	OS	Windows 10		
	3	Crawl	Yes		
	4	Scroll	Yes		
	5	Layers	250		
	6	Multiple Images on the Same Page	Yes		
	7	Data Substitution	Yes		
	8	Animations	Gif		
	9	Multi Language	Yes		
	10	Clock	Yes		
	11	Timer	Yes		
	12	Playlist	Yes		
	13	2D Graphics	Yes		
	14	Group playing and text playing	Yes		
	15	Modify on the fly	Create and modify without interrupting the current payout		
	16	Real-Time data for text crawler objects	From text file Source, csv file as a source		
	17	License	Perpetual		
1.11	HD / SD CHARACTER GENERATOR KIT				

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	1	Video Input	HDMI x 1 HD-SDI x 1		
	2	Video Output	HD-SDI x 1 LAN port x 1		
	3	Input Format	1080i 50/59/60 720p 50/59/60 576i 50 480i 59		
	4	Control	By Dip Switch/PC		
	5	F/W Upgrade	Ethernet (RJ-45)		
	6	Power	12 V		
	7	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.12	LAPTOP FOR HD / SD CHARACTER GENERATOR KIT				
	1		Laptop with Core i5, 8GB RAM, 512 GB SSD, Windows 10 Pro OS, Graphics Card for Graphics. Recommended Graphics Card NVIDIA GTX 780 or similar		
	2	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.13	43" FHD DISPLAY WITH HDMI INPUT				
	1	Make and Model	Bidder Must Quote		
	2	Size	Min 43 Inch or Higher		
	3	Resolution	3840 x 2160 or better		
	4	Connectivity	RGB/VGA: Minimum 1 HDMI: Minimum 2 ports USB: Minimum 2 port RJ45: Minimum 1 port		
	5	Wifi	Must support		
	6	Built in Speaker	Minimum 12 Watt		
	7	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.14	TELEPROMPTER				
	1	Device Used	Apple iPads Android Tablets		
	2	Camera-Mount Interface	Adjustable Camera Plate		
	3	Smartphone / Tablet Size	Min. Tablet Width: 110mm Max. Tablet Width: 210mm		
	4	Multi-language support	Device dependent including Arabic and Asian languages such as Chinese, Japanese, Korean, Hindi, Tamil and more		
	5	Hood Dimension/ Prompter Size	Width: 265mm Height: 160mm Depth: 120mm		

	6	Remote Control	Universal Bluetooth Wireless Remote Included (with USB cable adapter for charging purposes)		
	7	Net Weight	1.28 Kg		
	8	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.15	I-PAD				
	1	Apple iPad	25.90 cm (10.2 inch) Wi-Fi Tablet 32 GB		
	2	Warranty	1 Years Warranty		
1.16	16-CHANNEL AUDIO MIXER (DIGITAL)				
	1		7" Diagonal Colour TFT Screen		
	2		16 Mic/Line Inputs (12 XLR, 4 XLR/Jack Combo)		
	3		2 Stereo Line Inputs (1/4" TRS)		
	4		Stereo USB / MP3 Playback		
	5		1 x Talkback Input with XLR Connector		
	6		4 Band Parametric EQ, Gate & Compressor Input Processing		
	7		Balanced Main LR Output on 2 x XLR (Line Level)		
	8		6 x Balanced Aux Outputs on XLR (Line Level)		
	9		1 x Stereo TRS Headphone Output		
	10		1 x Stereo TRS Monitor L/R Output		
	11		1/3 Octave Graphic EQ, 6 Band Parametric EQ, Variable High & Low Pass filters, 8-Band Anti-Feedback Filters, Limiter, Delay Output Processing		
	12		Stereo mp3 & 22 x 22 Multitrack Recording & Playback direct to hard drive		
	13		8 DCA Groups with Mute, 8 Mute Groups		
	14		4 Simultaneous Effects Processing including Reverb, Echo, Delay, Chorus, Pitch Shift etc		
	15		1/3 Octave RTA assignable to channels or user selectable source		
	16		99 User Scenes, 120 Factory Pre-set, 99 User pre-sets		
	17		External Control using Wi-Fi enabled iOS or Android devices		
	18		USB Wi-Fi Adapter Included in Package		
	19		Selectable 44.1 kHz to 48 kHz Sampling Frequency		
	20		32 Bit Floating Point Internal Processing		
	21		THD <0.005% at +4 dBu, 20 Hz to 20 kHz, Unity Gain, any input to any output		
	22		Dynamic Range 105 dB		
	23		Equivalent Input Noise -126 dBu		
	24		Residual Output Noise -86 dBu		
	25		Crosstalk -80 dB		
	26		S/N Ratio -94 dB		
	27		Mic Input Gain - 75 dB (60 dB Analog, 15 dB Digital)		
	28		Maximum Input Level +16 dBu on XLR Mic/Line Inputs, +26 dBu on TRS Mic/Line Inputs, +22 dBu on Stereo Inputs		
	29		Maximum Output Level +22 dBu on all line level outputs		


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	30		48V Phantom Power Individually Switchable on all Mic Inputs		
	31	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.17	WIRELESS LAPEL MICROPHONE				
	1		Supply of wireless Lapel microphone, with diversity receiver (UHF), 18 Channel Preset or better, Display on Transmitter and Receiver, RF Power output 50mW or Better, Polar Pattern: - Omnidirectional, Carrier frequency range 500Mhz to 865Mhz, Frequency response 45Hz to 15Khz, Mute Button on Transmitter, Battery Operation time Minimum 8hr, should have Charging Contact in Body pack Transmitter. Receiver dynamic range 80dB (A-weighted) switching bandwidth Minimum 40Mhz or better		
	1	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.18	STUDIO TALKBACK SYSTEM				
	1	Digital Pocket Transmitter Having following specifications	Bluetooth interface		
	2		High security against unauthorized listening due to AES-256 encryption.		
	3		Bi-directional transmission of audio signals		
	4		On-off and menu button, Multifunction button, Volume button for connected headphones, headset, induction loop, Integrated microphone, Mute button for microphone.		
	4		Operation with integrated lithium-ion battery, Operation time > 15 hours, Status indicator (LED) for operating and charging status, OLED display to indicate the channel name, battery status and different menus.		
	6		Line-in connection for external players via mini stereo jack (3.5 mm)		
	7		Connection for external microphone, USB connection, type C – audio input and charging, Charging contacts		
	8		Belt clip to attach to clothing, Removable neck strap for wearing around the neck		
	9		DECT RF frequency range 1880 - 1930 MHz, DECT transmission power up to 250 mW (peak)		
	10		Audio bandwidth Low quality (SD) 50 Hz - 7 kHz (-3 dB), High quality (HD) 50 Hz - 14 kHz (-3 dB)		
	11	Digital Pocket Talk Back Receiver having following specification	AES-256 code encryption, OLED display to indicate the channel name, battery status and different menus, Charging via charging contacts or USB connection, type C		
	12		Operation time > 15 hours		
	14		Integrated microphone, Talkback button for speaking to the guide		
	15		DECT RF frequency range 1880 - 1930 MHz, DECT transmission power, up to 250 mW (peak), Audio bandwidth Low quality (SD) 50 Hz - 7 kHz (-3 dB), High quality (HD) 50 Hz - 14kHz (-3 dB).		
	16	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.19	STUDIO AUDIO MONITOR				
	1	Speaker Type	2-way bi-amp powered studio monitor		
	2	Frequency range (-10dB)	54Hz - 30kHz		
	3	Components	5" cone, 1" dome		
	4	Output power	70W		
	5	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		

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1.20	AUDIO DISTRIBUTION PROCESSOR/ DSP (DIGITAL SIGNAL PROCESSOR)			
	1		8 Analog Balanced Mic/Line Input with Phantom Power	
	2		8 Analog Balanced Line Output	
	3		8 Analog Balanced Flex I/O individually switchable as Mic/Line Input or Line Output	
	4		16 Channels of Routable AEC Processing	
	5		1 x POTS Telephone Line on Standard RJ11 Connector	
	6		4 Instances of VoIP	
	7		128 x 128 Networked Audio Channels	
	8		16 x 16 GPIO Logic Ports	
	9		16 x 16 USB Audio Channels	
	10		16 Track Audio Player (Upgradable to 32, with optional license)	
	11		Approximately 2.5 GB Internal Memory for Storing Audio Files, expandable to 128 GB with optional hardware	
	12		Dual Gigabit LAN Port for Networked Audio, Control, VoIP or Network Redundancy	
	13		Sampling Rate 48 kHz	
	14		A to D & D to A Converters 24 Bit	
	15		USB Audio 16 Bit 48 kHz	
	16		Freely Assignable Audio & Logic Processing Objects including but not limited to Gain Sharing & Gated Auto mixer, Matrix Mixer & Router, Multi Band Crossover, Gain, Delay, Compressor, Limiter, Multi Octave Graphic Equalizer, Multi Band Parametric Equalizer, Notch Feedback Controller	
	17		Software Based Configuration & Monitoring, Event Scheduling, Managing Audio Files & Playlist, User Control Interface Configurable by Software for OEM Manufactured Controllers, iOS Devices or PC/Laptops (with optional license)	
	18		Front Panel Display Displays Information about Design, Network etc.	
	19	Warranty	3 Years Onsite Warranty with 24x7 Support NBD	
1.21	ROOM SPEAKERS			
	1	Speaker Type	2-way bi-amp powered studio monitor	
	2	Frequency range (-10dB)	54Hz - 30kHz	
	3	Components	5" cone, 1" dome	
	4	Output power	70W	
1.22	EDITING SUITE			
	1	Apple- iMAC	All in One PC with 21.5-inch (diagonal) LED-backlit display 1920x1080 resolution, 2.3GHz dual-core Intel Core i5, 8GB of 2133MHz DDR4 memory, 1TB (5400-rpm) hard drive, Intel Iris Plus Graphics 640	
1.23	PROFESSIONAL VIDEO EDITING SOFTWARE			
	1		Apple FCPX Professional Software for Video Editing with perpetual license	
1.24	ACCESSORIES			
1.24.1		24 Port Network Switch	Smart Switch 24 x 10/100/1000Mbps RJ45 PoE+ Ports and 4 x 100/1000Mbps SFP Slots	

		Switching Capacity: 56 Gbps Packet Forwarding Rate: 41.7 Mpps Should support Static Routing Should Support Creation of VLANs. Should support STP/RSTP/MSTP, IPv6 Dual IPv4/IPv6 Web-based GUI and CLI management Secure web management through HTTPS with SSLv3/TLS1.0 Secure Command Line Interface (CLI) management with SSHv1/SSHv2		
1.24.2	8 Port POE+ Network Smart Switch	Smart Switch 8 x 10/100/1000Mbps RJ45 PoE+ Ports and 2 x 100/1000Mbps SFP Slots Switching Capacity: 20Gbps Packet Forwarding Rate: 14.9 Mpps PoE+ Budget: 120 Watt Should Support Creation of VLANs. Should support STP/RSTP/MSTP, IPv6 Dual IPv4/IPv6 Web-based GUI and CLI management Secure web management through HTTPS with SSLv3/TLS1.0 Secure Command Line Interface (CLI) management with SSHv1/SSHv2		
1.24.3	Light Stand	Light Stand to be provided		
1.24.4	Equipment Rack	Equipment Rack wherever is desired should be provided to keep the devices		
1.24.5	Cables, Connectors, Accessories	Bidder must provide all necessary Cables, Connectors, Accessories to complete this Work		
1.24.6	Crroma Screen	Green Colour Plastic Mat (1.8M x 54M)-Wall use		
1.25	STORAGE SERVER 50 TB (NAS)			
	1	Rack mount	NAS controller should be rack mounted with a form factor of not more than 4U	
	2	Processor	2 (Dual) x Intel Xeon Scalable Processor min. 2.0 GHz, 8C / 16T and 10 MB Cache with support of min. DDR4-2400 MHz	
	3	Memory	128 GB DDR4 ECC RAM or higher, scalable to 256 GB DDR4 RAM	
	4	Hard Drives	Shall be supplied with minimum of 50 TB Usable Capacity using SAS/ NL- SAS 10K RPM Hard drives in RAID 6 & 1 Hot spare	
	5	Storage expandability	Offered NAS controller shall be at-least 16 internal Slots. Offered storage shall also have capability for 192 TB Raw capacity without adding any enclosures	
	6	Network Connectivity	Min. 2 X 1Gbps RJ45 auto sensing NICs ports and Min 2 x 10 Gbps RJ 45 Ports from day 1	
	7	Protocols support	TCP/IP, iSCSI, FTP, FTPS, CIFS/SMB 3.1.1, HTTP, HTTPS, NFS 4.1, WebDev or any other equivalent etc.	
	8	Fault Tolerance for Internal drives.	Offered NAS shall support RAID 0,1,5,6 for Internal Drives. Offered Raid controller shall have minimum of 8 GB Cache.	
	9	Network Client Types Support	Should support Windows 10, Windows 2012, 2016, HP-UX, AIX, SOLARIS, Linux etc	
	10	Operating System	Microsoft Windows Storage Server 2016 - 64-bit edition (NAS optimized) including powered OS drivers or better.	
	11	Internal HDD	For Operating System 2 x 600GB 10K RPM 12 Gbps SAS HDD from Day 1	

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	12	Feature -1	Offered NAS shall have block based De-duplication which can be enabled for all required volumes. De-duplication engine shall have:		
	13	Feature -2	Flexibility to decide the multiple schedules when de-duplication process can be run		
	14	Feature -3	Flexibility to limit the time of de-duplication process so that a production operation remains intact.		
	15	Feature -4	Flexibility to bypass the recent files under the de-duplication process so that production operations remain intact.		
	16	Feature -5	License for De-duplication shall be provided.		
	17	Feature -6	Shall support more than 64TB of file system for de-duplication.		
	18	Feature -7	Offered NAS shall have support for file screening so that administrator can ensure that users shall not be able to store unwanted files on		
	19	Feature -8	offered NAS device.		
	20	Feature -9	Offered NAS shall have Quota management for both Volume and Directory		
	21	Feature -10	Software for both file screening as well as Quota management shall be provided.		
	22	Feature -11	Shall have flexibility to expire or move files to different folder / Location / Volumes / drives based on policies like day of creation /		
	23	Feature -12	modification / access of based on file pattern like extension.		
	24	Feature -13	Shall also be able to expire or move files to different folder / Location / Volumes / Drives based on content classification within files.		
	25	SAN storage (iSCSI based) Snapshots	Integrated iSCSI for block access over LAN. Point in time copies of your data to guard against data corruption		
	26	Encryption, compression, and Replication	Shall have support for encryption and Compression. License for both of same shall be offered. Offered NAS shall support replication		
	27	Power Supply and FAN	Offered NAS shall also have Hot Plug redundant power supply and FAN from day 1		
	28	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.26	86" INTERACTIVE DISPLAY				
	1	Interactive Display	Interactive Flat Panel (86") touch panel 4K/3 Gb RAM/16Gb internal + 32Gb Card = 48 GB storage / Android 8.0.0 with OPS system i5 7TH GEN / 8GB ram/ 128 GB SSD / 4K		
	2	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.27	DESKTOP WITH CAMERA AND WITH CAMERA AND GRAPHICS ANNOTATE SLATE				
	1	Desktop	Intel Core i5, Latest Gen. 6Core /12 Threads, 16 GB RAM, 1 TB HDD, 2 GB Graphics Card, 1 GbE LAN Port, Desktop HD Camera, Headset with Mic, 21-inch Interactive Pen Display		
	2	Warranty	3 Years Onsite Warranty with 24x7 Support NBD		
1.28	VIRTUAL CLASSROOM CLOUD SOFTWARE FOR 5YEARS				
	1	Desktop	Virtual Classroom solution - The proposed virtual classroom system should be cloud based, full HD and software-based VC system. It should work with Windows and MAC based operating systems and should interoperate with multiple vendors' MCU & endpoints		
	2		The proposed system must support USB based PTZ camera. And the software should run on PC, Laptop, Tablets and Smartphones.		
	3		The solution should support SIP & IP calling for interoperability with another Legacy device		

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4		The proposed system should be cloud based with OEM server in India.		
5		The system should ensure a minimum connection with 20 active locations with two-way communication		
6		It should support H.323, SIP standards for communications.		
7		It should support SVC, H.264 High Profile / AVC		
8		It should support content resolution at Full HD Resolution (1080P at 60fps)		
9		Audio features containing Acoustic Echo Cancelling (AEC)		
10		Automatic Gain Control		
11		Dynamic audio input/output selection		
12		Audio Lost Packet Recovery		
14		Dual Tone Multi Frequency Signalling		
14		Keyboard noise reduction		
15		Adaptive video layering		
16		Media collaboration		
17		Sharing from all the participants simultaneously		
18		Private and group text messaging		
19		Toggle between multiple content sharing windows		
20		Security H.460 firewall traversal		
21		AES -128 -bit media encryption		
22		Support for both Android and IOS		
23		License for 5years		
1.29	RESIDENT TECHNICAL MANPOWER ON 8x5 BASIS FOR ONE YEAR			
	23	<p>The Technical Manpower must be efficient in handling supplied equipment including Video Recording, Video Editing and Troubleshooting. Must have experience of managing Audio-Video equipment with basic level of video editing skills.</p> <p>Min. Qualification: Diploma in CSE/IT/Electronics or B.Sc. (IT) or BCA or any Graduation with One Year Computer/Hardware/Networking Diploma like PGDCA or Equivalent.</p> <p>He/she should be available for service in the Recording Studio during official hours <i>i.e.</i>, Monday to Friday (9.00AM to 5.30PM).</p> <p>For any kind of leave, the tech. staff must get prior permission of the Controlling Officer <i>i/c</i> and the bidder must post a suitable candidate as backup tech. staff, who has similar knowledge of handling the audio-video devices.</p> <p>A record of attendance must be maintained and must be endorsed by the Controlling Officer <i>i/c</i>.</p> <p>Initial engagement will be for one complete year and will be extended on yearly basis.</p>		

			The University will not provide any Fooding and accommodation facility in the campus which has to be arranged by the staff by himself/herself.		
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Part-2: SOUND PROOFING WORK OF STUDIO ROOM

Bill of Quantity (BoQ)

S/N	Items	Approx. Qty.	UoM.
2.1	ACOUSTICS		
2.1.1	ACOUSTIC WALL PANEL FOR WALL AREA	400	Sq. Ft.
2.1.2	ACOUSTIC WOODEN PARTITION	800	Sq. Ft.
2.1.3	SOUNDPROOF GLASS WINDOWS (6'X3')	24	Sq. Ft.
2.1.4	SOUNDPROOF DOORS	96	Sq. Ft.
2.1.5	ACOUSTIC CEILING	510	Sq. Ft.
2.2	CARPETING	510	Sq. Ft.
2.3	ELECTRICAL	1	Job
2.4	FURNISHING		
2.4.1	STUDIO TABLE	1	Pcs.
2.4.2	TABLE FOR CONTROL ROOM	1	Pcs.
2.5	HVAC	1	Job
2.6	STUDIO LIGHTING	1	Job
2.6.1	STUDIO LIGHTING 2X55W LAMP	2	Nos.
2.6.2	STUDIO LIGHTING 150W FRESNEL SPOTLIGHT	2	Nos.
2.6.3	STUDIO LIGHTING LIGHT POINT WIRING FROM PATCH PANEL	4	Nos.
2.6.4	STUDIO LIGHTING TELESCOPIC TRIPOD STAND EXTENSION RODS (3-8FEETS)	4	Nos.
2.6.5	STUDIO LIGHTING DMX XLR CABLE CONNECTOR ACCESSORIES	1	Lot
2.6.6	STUDIO LIGHTING OF DMX SPLITTER 8 CHANNEL	1	No.
2.6.7	STUDIO LIGHTING STAGE 1024 CONTROLLER	1	No.
2.7	10 KVA ONLINE UPS POWER SUPPLY	1	Job
2.8	ANY OTHER UNSPECIFIED JOB(S)	1	No

Specifications

SN	PARTICULARS	Make	Qty	UOM
2.1	ACOUSTICS			
2.1.1	<p>ACOUSTIC WALL PANEL FOR WALL AREA</p> <p>Supply and installation of Stretch NRC system consisting of FR Grade NRC fabric with high-performance integrated core and acoustically transparent face covering of choice colour, size 1.7m x 75mm, stretched by using combination of Strut CC10 Cross Channel and Strut Tracks, 10mm wooden base, 5x10 infill with requisite accessories.</p> <p>The Strut system includes Strut CC10 Cross Channel, fully knurled, sectional thickness 0.55mm, length 3600mm, web 40, depth 10mm and equal flanges of 15mm is fastened to the wall @ 600mm centers. Wooden base 10mm is then installed on the CC10 along the marking lines with metal fasteners at 300mm centers. Tracks to be installed on wooden base, by first applying Synthetic adhesive on both surfaces for a true and continuous secure grip, and heavy-duty fasteners at 150mm centers on one/both sides of Strut Tracks. Strand square edge magnesite bonded pinewood fiber panels of size 600x1200x15mm having density 400kg/m³, weight 6kg which is fixed to Strut CC10 Cross Channel in between tracks. Long edge of panels should be perpendicular to length of Strut CC10 Cross Channel. Synthetic Poly Fiber 5x10mm adhered on Strand by using Synthetic adhesive.</p> <p>The Stretch NRC acoustical fabric of width 1.7m is stretched and tucked into the Strut Tracks and secured to the locking jaws with purpose-specific tucking tools to obtain smooth, taut, wrinkle-free finish. Ensure the weft and weave of the fabric along with the surface are all oriented in one direction to achieve uniform shade.</p> <p>Note: Minimum 100mm additional fabric is required for tucking hence maximum module wall fabric width would be 1600mm.</p> <p>Framing: GI Framework at 610mm centers of 50mm X 50mm Sections in cleats to wall by using metal fasteners, 25mm XLPE sound proofing sheet fitting with the help of adhesive and nails.</p>	Reputed Make	400	Sq.ft.
2.1.2	<p>ACOUSTIC WOODEN GROOVED PARTITION</p> <p>Providing & Fixing on (Acoustical Wooden partition):</p> <p>Supply and installation of 25mm thick, made from recycled poly fibre and fully recyclable, surface density 500g/m², weight 0.5kg/m² in form of rolls of 600mm/1200 wide and 15m in length, adhered to surface with stick S7 adhesive or held in position with chicken wire mesh.</p> <p>Supply, Fitting and fixing of 19mm plywood both side veneer on top. Surface should be polished as per approved shade confirmed by the University official.</p> <p>Supply, fitting and fixing of wooden channel for finishing work as required. The wooden bit should be polished to match the colour of panel surface.</p>	Custom	800	Sq.ft.
2.1.3	<p>SOUNDPROOF GLASS WINDOWS (6'x3')</p> <p>Design, supply, fabrication of soundproof clear glass make Saint Gobain base material, with airspace width 18mm the optimum for thermal insulation and inner pane of 12mm thick glass.</p>	Reputed Make	24	Sq.ft.

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2.1.4	SOUNDPROOF DOORS (3Nos.) Providing & fixing Acoustical sound reducing Doors: Auditorium Acoustic Wooden doors are extremely high-performance sound reducing door sets. These high-quality door sets are available in a wide range of finishes with 2-Point Latching System. They are used wherever high sound reduction performance is required between noise sensitive areas. Leaf of the acoustic wooden door is made up of an acoustic sandwich panel core, hardwood, or marine plywood structure with stripping in the recesses and on the bottom, surfaced on both sides with 2.5mm thick high-pressure laminate in the desired veneer over MDF board. The core of the door is made up of a sandwich panel of different materials to achieve good sound refraction and therefore good acoustic performance. The door to be fabricated with 12mm thick commercial ply or equivalent grade with veneer on top and varnished. Wooden framework filled with Insulation wool with one layer of 75mm thick. 24.Kg.Cu.M density insulation wool. The insulation should be supported with wooden batten of Teakwood framework minimum 610mm x 610mm to avoid sagging. The door leaf will be fabricated using 90mm X 70mm thick. Teakwood frame. The fixed door frame (chowkhat) shall be teakwood of size 140mm X 72mm. The door will have a hydraulic door closer, crossbar door handle and relevant hardware for fabrication and fixing. Complete with the requisite door frame and magnetic and rubberized door seals all-around of the door frame or as per specification, drawing, and as per the instructions of Engineer-in-Charge. the door to be attached with the door frame by SS ball bearing hinges with adequate strength and numbers to avoid sagging All joints to be sealed with Dow Corning 790 or equivalent mastic Sealant. The doors on the auditorium side to be finished using non-light reflective media like a carpet of dull laminate /veneer. All works complete in all respect.	Custom	96	Sq.ft.
2.1.5	ACOUSTIC CEILING Supply and Installation of ceiling tiles, square edge, Glass wool backed fully encapsulated ceiling tile of size 595x595x15mm having volume density 120Kgs/m ³ , weight 1.8 kg/m ² which is suspended by using 0.3mm thick TrelisT15 metal grid system. TrelisT15 metal grid system of 600x600mm module includes wall angle with unequal flanges of 15/19mm, length 3000mm, fixed along the perimeter of walls with the help of nylon sleeves and suitable fasteners at 300mm centers. Then suspend MainT with flange width 15mm, height 32mm and length 3600mm, from the soffit slab with help of soffit cleat and wire rod with levelling spring clip at 1200mm centres. CrossT with flange width 15mm, height 26mm and length 1200mm is interlocked into the pre-cut slots in the Main T15 at 600mm centers in the perpendicular direction to the Main T15. Finally, CrossT with flange width 15mm, height 26mm and length 600mm are interlocked into the pre-cut slots in the CrossT in direction parallel to the Main T15 to result in 600x600mm module. The square edge tiles of size 595x595x15/20/25mm shall be placed into the grid size of 600x600mm. Ensure arrow marks behind the tiles are oriented in one direction to achieve uniform shade.	Reputed Make	510	Sq.ft.
2.2	CARPETING 2/2 carpet: Supply fitting and fixing of carpet Loop Pile Acoustical Carpet with Plie Fibre Composition of 100% olefin, Yarn Type: BCF, Dye Method: Solution Dyed, Pile Weight: 700g/m ² , Pile Height: 2.30/5.50 mm, Total Height: 8.50 mm, No of Tufts: 197500/m ² , Flammability: ASTM D-2859//FF-170//16EER1630, Static Property: ISO 6356, Thermal Resistance: ISO 8302, Impact Sound Insulation: ISO140-8, Sound Absorption Value: EN13011654		510	Sq.ft.
2.3	ELECTRICAL Electrical: 2/2 ceiling down light 10 nos. complete wiring for studio light, camera, editing setup, air condition, audio, and video	Reputed Make	1	Job
2.4	FURNISHING	Custom	1	Pcs
2.4.1	Studio Table: size 4050*1050*750mm (approx.) Providing and placing at site the Reception Desk with built in drawer shelf using 19mm thick BWR plywood (IS-303) of approved make. All the exposed surfaced of the table shall be laminated with 1mm thick lamination of approved colour confirmed by the University official. mentioned in the drawing. The internal surface of the table and the drawer shall be finished with laminate of 0.8mm thick of approved colour confirmed by the University officials. Shelves of the drawer shall be made with 12mm thick plywood with two coats of enamel paint over a coat of primer with necessary hardware fixtures. The top of the table finished with 6mm thick Korean laminate.			

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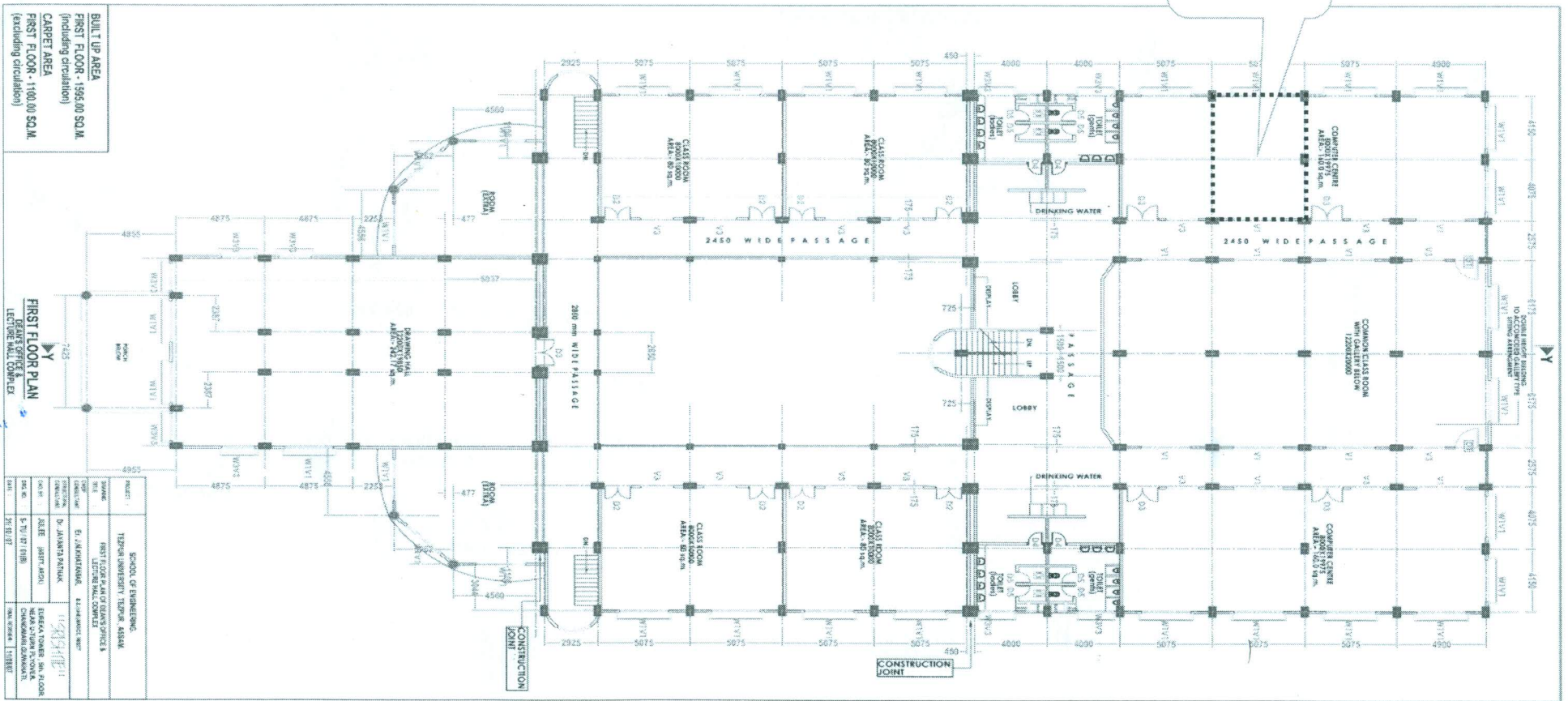
2.4.2	Table for Control Room: size 3050*1050*750mm (approx.) Providing and placing at site the control room Desk with built in drawer shelf using 19mm thick BWR plywood (IS-303) of approved make. All the exposed surfaced of the table shall be laminated with 1mm thick lamination of approved colour mentioned in the drawing. The internal surface of the table and the drawer shall be finished with laminate of 0.8mm thick of approved colour confirmed by the University officials. Shelves of the drawer shall be made with 12mm thick plywood with two coats of enamel paint over a coat of primer with necessary hardware fixtures. The top of the table finished with 6mm thick Korean laminate.	Custom	1	Pcs.
2.5	HVAC Supply, Installation, Testing & Commissioning of full Inverter (Hot & Cool) Air Cooled Type Variable Refrigerant Flow (VRF) Outdoor unit with one Variable Frequency Driven highly efficient Scroll compressors with R410a refrigerant. The units should be complete with multiple no. of compressors in each condensing unit, controls, microprocessor control panel etc: Outdoor Units: 5HP OUTDOOR UNIT 5HP VRF Outdoor Unit Indoor Units with cordless remote: 1.6TR Cassette AC Indoor-1no. 3.2 TR Cassette AC Indoor-1no. Indoor Refnet Joint-2nos. Supply Installation, Testing Commissioning of VRF Unit with all installation materials *Copper Refrigerant Piping 18g Hard Drawn (Hard/Roll type) 1.0mm/0.8mm thick, 19mm thick Nitrile Insulation Tube, Copper Communication Cable 1.5sqmmx3core, CPVC Drain 25mm Thick with Necessary fittings, solvent, R410 Refrigerant Gas (Green Gas) Electrical Works: Cable between indoor to MCB panel and Outdoor Unit to Main Panel with Isolator necessary cable gland, fittings etc. Cable Tray GI 6" for Laying of Copper pipe, Cable etc.	Reputed Make	1	Job
2.6	STUDIO LIGHTING			
2.6.1	Supply, Installation, Testing & Commissioning of 2X55W complete with lamps, Barndoor, Gel Frame, C-clamp, power cable, powder quoted with Black heat resistant paint. Manual and DMX512 0 TO 100% Dimming control 5-pin input output XLR connectors 220/240V 50/60HZ Input	Reputed Make	2	Nos.
2.6.2	Supply, Installation, Testing & Commissioning of 150W Fresnel Spotlight with High power bright COB Mount LED having daylight colour temperature controls onboard and with DMX Light controls, 4-leaves Barndoor, Yoke, Power cord, C-clamp with safety chain.	Reputed Make	2	Nos.
2.6.3	Supply, Installation, Testing & Commissioning of Light Point Wiring from Patch Panel to be provided near stage to various stage light fixtures with 1.5 Sq.mm 3 Core PVC Insulated and PVC Sheathed Cable including of suitable size for laying these wires including 15 amps Suko sockets with box at top. ISI mark cable.	Reputed Make	4	Nos.
2.6.4	Supply, Installation, Testing & Commissioning of Telescopic Tripod Stand Extension Rods (3-8feets)	Reputed Make	4	Nos.
2.6.5	Supply, Installation, Testing & Commissioning of DMX XLR Cable Connector Accessories	Reputed Make	1	Lot
2.6.6	Supply, Installation, Testing & Commissioning of DMX splitter 8 channel to ensure maximum safety and DMX signal distribution. The DMX splitter provided on DMX input and minimum six buffered output, the connections are through 3 pin XLR	Reputed Make	1	No.
2.6.7	Supply, Installation, Testing & Commissioning of stage 1024 controller ,1024 DMX Channel, 2x512 channel, control 96 Intelligent Lights with up to 40 channel each; consisting of sub master separate pages manual controls with 2 sub master ,1 master fader, blinkers switches, effects control, DMX output and soft patch to 512 channels, LCD menus, HTP Control, provision for controlling intelligent lights etc.	Reputed Make	1	No.
2.7	10KVA ONLINE UPS POWER SUPPLY			

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	All equipment and low power lightings under the Studio must be sufficiently backed up by Online UPS of 10KVA rating with 30Min backup time. All wiring from Source to distribution must be inclusive in the Cost of the UPS System. The UPS systems must have inbuilt isolation transformer	Reputed Make	1	No.
2.8	ANY OTHER UNSPECIFIED JOB(S)			
	The work of sound proofing is being carried out at the pre-existing hall. Therefore, there may be some unspecified jobs (like dismantling of existing partitions walls / erecting of walls or any other civil works etc.) that must be carried out at the proposed location to achieve the optimum sound proofing solution. This part may be quoted as a lumpsum basis after due physical inspection of the proposed studio site. Hence, bidders are invited to visit the site before uploading of the bids.		1	Job

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Location of Recording Studio

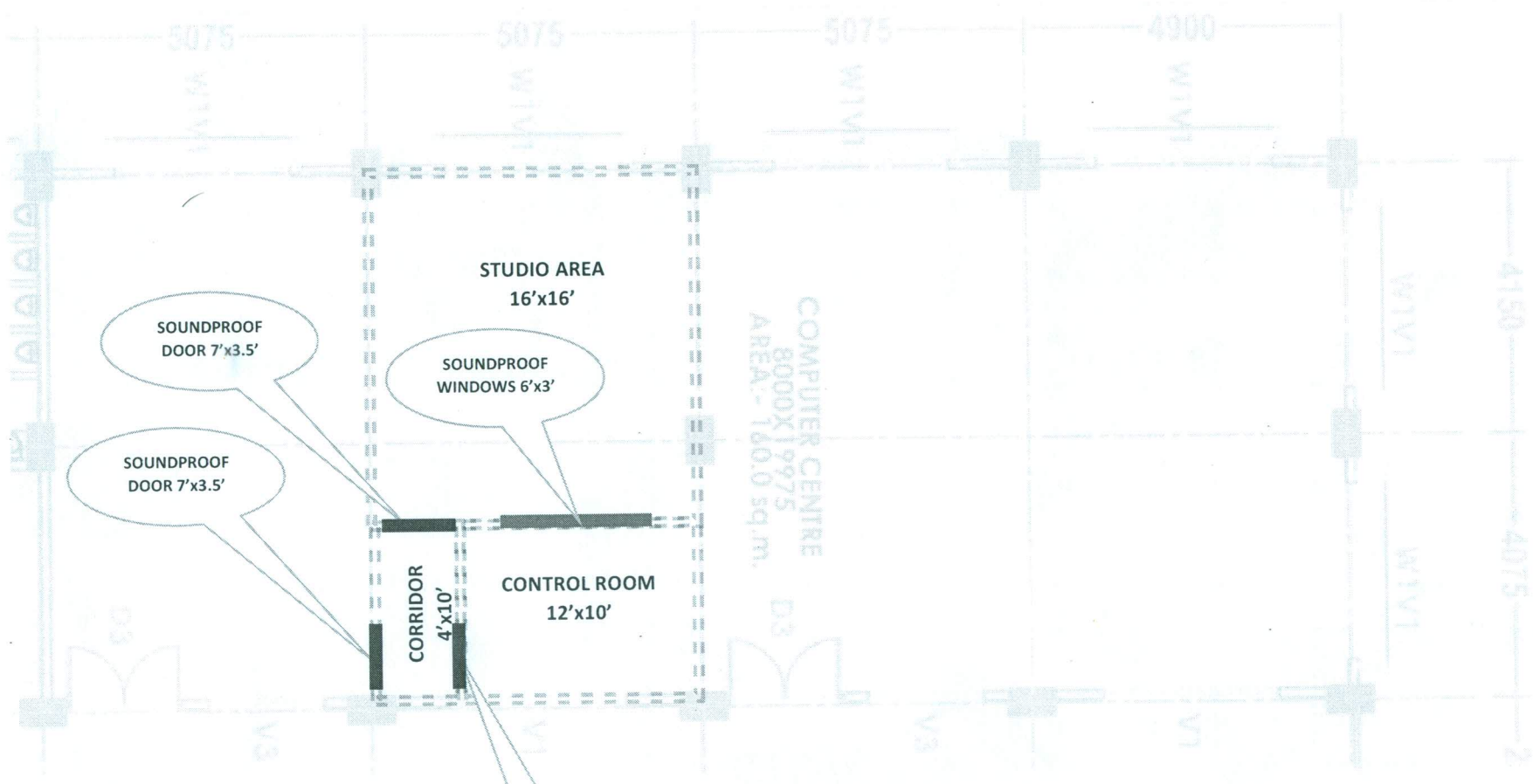


BUILT UP AREA
FIRST FLOOR - 1595.00 SQ.M.
(including circulation)
CARPET AREA
FIRST FLOOR - 1400.00 SQ.M.
(excluding circulation)

FIRST FLOOR PLAN
DEAN'S OFFICE & LECTURE HALL COMPLEX

PROJECT	SCHOOL OF ENGINEERING, TERTIARY UNIVERSITY, TEMUKU, AHSAR
WORKING TITLE	FIRST FLOOR PLAN OF DEAN'S OFFICES & LECTURE HALL COMPLEX
DESIGNED BY	B. JAWAD PATRIKHA
CHECKED BY	A. ELIE
DATE	5-19-2011
SCALE	1:100

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SOUNDPROOF DOOR 7'x3.5'

SOUNDPROOF DOOR 7'x3.5'

SOUNDPROOF WINDOWS 6'x3'

CORRIDOR 4'x10'

CONTROL ROOM 12'x10'

SOUNDPROOF DOOR 7'x3.5'

COMPUTER CENTRE
8000X19975
AREA: 160.0 sq.m.

HEIGHT OF THE ROOM 11'

Handwritten:
Chen
12/12/xx

(To be submitted on Company's/Firm's Letterhead Signed and Sealed)

Bid-Security Declaration Form

Date: _____

Bid No. _____

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Security Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of three year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

(a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or

(b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown) in the capacity of (insert legal capacity of person signing the Bid Securing Declaration).

Name: (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of: (insert complete name of Bidder) Dated on

_____ day of _____ (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

Handwritten signature and date: 15/12/14