



OSMANIA UNIVERSITY
HYDERABAD - 500007, INDIA

Ten. No. 943/PR/DIS/OU/2017/TENDERS/TAG-AUD

Date: 17 -11-2017

**SHORT RETENDER NOTIFICATION ON 'FAST TRACK PROJECT' FOR RENOVATION
OF AUDITORIUM, OSMANIA UNIVERSITY.**

On behalf of Osmania University, sealed tenders on "Fast Track Project" are invited from the reputed authorized dealers/ specialized contractors to execute the work related to Renovation of Auditorium, Osmania University Campus, Hyderabad. For further details, visit our website www.osmania.ac.in .

Sd/-
REGISTRAR



OSMANIA UNIVERSITY
HYDERABAD – 500007, INDIA

Ten. No. 943 /PR/DIS/OU/2017/TENDERS/TAG-AUD

Dt. 17 -11-2017

SHORT RETENDER NOTIFICATION ON 'FAST TRACK PROJECT'
FOR RENOVATION OF TAGORE AUDITORIUM, OSMANIA UNIVERSITY.

On behalf of Osmania University, sealed tenders for “Fast Track Project” are invited from the reputed bidders/OEMs to execute the work related to Renovation of Tagore Auditorium, Osmania University Campus, Hyderabad. The scope of work of the project comprises (A) Supply, installation and commissioning of Audio Visuals (B) Repairs of Auditorium interiors which includes Acoustics; Wall paneling; Flooring and Stage Renovation etc., (C) Supply, installation and commissioning of Ductable Air-conditioning System. Three separate tenders may be submitted for the above mentioned works, only OEMs/Authorized reputed Dealers are allowed to submit the tenders. The Tender document can be obtained from the Office of the Director (Infrastructure), Osmania University, Hyderabad from 17-11-2017 to 20-11-2017 on all working days between 11-00 A.M. to 3.00 P.M. on payment of non-refundable application cost of Rs. 5,000/- (Rupees five thousand only) through a Demand Draft drawn in favor of the Registrar, OU. The tender consists of two parts (i) Technical bid (ii) Commercial bid. The complete sealed tenders along with EMD @ 1% of the total project cost should be remitted at the time of submission of tender bids and remaining 1½% of the total project cost should be submitted at the time of entering into agreement (MOU) through Demand Drafts drawn in favor of the Registrar, OU. The sealed tender bids duly superscripted shall be submitted at the Office of the Registrar, 2nd Floor, Administrative Building, Osmania University, Hyderabad – 500 007 on or before 20-11-2017 by 3.00 P.M. Sealed tenders received after the due date and time will not be entertained. The Tenders will be opened on 20-11-2017 at 4.00 P.M. in the Committee Room, Registrar Office, OU, in the presence of the bidding firms. The detailed tender documents can also be downloaded from our website and in that case, Application cost and Tender Document Fee should be submitted along with the Technical Bid. Please note that the Application fee and EMD should be remitted through two separate Demand Drafts drawn in favour of the Registrar, OU and enclosed to the Technical bid, failing which the tender bids are liable to be rejected. For further details, please visit our www.osmania.ac.in. The bidder must have experience in execution of similar works of renovation and refurbishment of Auditoriums.

REGISTRAR,
OSMANIA UNIVERSITY.

NOTE: THE BIDDERS MAY PLEASE NOTE THAT RENOVATION OF AUDITORIUM SHOULD BE COMPLETED ON OR BEFORE 25-12-2017 POSITIVELY.



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Dt.17 -11-2017

**SHORT RETENDER NOTIFICATION ON ‘FAST TRACK PROJECT’
FOR RENOVATION OF TAGORE AUDITORIUM, OSMANIA UNIVERSITY.**

Osmania University hereby invites open sealed tenders for “Fast Track Project” are invited from the reputed contractors to execute the work related to Renovation of Tagore Auditorium, Osmania University Campus, Hyderabad. You are requested to submit your competitive price in the sealed covers as per the technical specifications given below. Please note that the bidders are advised to visit the sites before submitting the tender bids. Further, the above renovation work has to be completed on or before 25-12-2017 positively in view of 105th Indian Science Congress to be held at Osmania University. There will be no further extension of time for completion of total renovation works.

Part – I

TENDER SCHEDULE

- | | | |
|--|---|---|
| 1. Name of the Tender | : | Renovation of Tagore Auditorium, OU. |
| 2. Sale of Tender Schedule | : | From 17-11-2017 to 20-11-17 (11 A.M – 3.00 P.M.)
At the O/o the Director (Infrastructure) Administrative Building, Osmania University. (On all working days) |
| 3. Closing date and time
(For receiving duly filled in tender bids) | : | 20-11-2017 by 3.00 P.M. |
| 4. Submission of Tender bids | : | Sealed tenders in two parts (i) Technical bid (Annex-I) &
(ii) Commercial bid (Annex-II) should be submitted at O/o the Registrar, Administrative Building, Osmania University (on all working days) |
| 5. Date, Venue & Time of opening | : | 20-11-2017 by 4.00 P.M. in the
Committee Room Registrar’s Office, OU,
Hyderabad – 500 007 |

Note: In case of unavoidable circumstances, if the tenders are not opened on the stipulated date and time, the subsequent date/time will be intimated in due course.

- | | | |
|---------------------------------|---|--|
| 6. Earnest Money Deposit (EMD): | : | EMD @ 1% of total project cost at the time of submission of tender bids and balance of 1½% at the time of agreement (MOU) on award of contract, Payable through Demand Draft drawn on any nationalized bank in favour of Registrar, OU or . The Tenders without accompanying demand drafts or insufficient demand drafts will not be considered and will be summarily rejected |
| 7. Payment Conditions | : | i) 40% will be released on completion of 50% of Total work.
ii) 60% will be released on completion of 100% of total work based on satisfactory report and completion certificate issued by the Executive Engineer, OU. |

Part – A

TECHNICAL SPECIFICATIONS FOR AUDIO VISUAL

SL	Audio Specifications	Qty in Nos
1	SITC of Loudspeaker featuring full-range-driver array with Frequency Range 52 Hz – 15kHz, Nominal Coverage Pattern 120° H x 100° V, Sensitivity 92 dB, Calculated Maximum SPL at 1 m 116 dB, Nominal Impedance 8 ohms.	4
2	Low-frequency loudspeaker designed for indoor permanent installations. Frequency Response 50 Hz -140 Hz, Frequency Range 40 Hz - 160 Hz, Sensitivity 90 dB SPL, Maximum SPL is 116 dB SPL (122 dB SPL peak), Nominal Impedance 8 Ω.	2
3	SITC of Loudspeaker featuring full-range-driver array with Frequency Range 52 Hz – 15kHz, Nominal Coverage Pattern 120° H x 100° V, Sensitivity 92 dB, Calculated Maximum SPL at 1 m 116 dB, Nominal Impedance 8 ohms	2
4	Stage monitor that can deliver multiple coverage options, speaker configuration with Frequency Response 70 Hz - 16 kHz, Frequency Range is 55 Hz - 19 kHz, Sensitivity is 91 dB SPL, Maximum SPL is 111 dB SPL (117 dB SPL peak), Nominal Impedance 8 Ω.	2
5	Full-range loudspeaker with a single 4.5" (114 mm) full-range driver in a ported enclosure, Nominal Dispersion 125° H x 125° V, Sensitivity (SPL / 1 W @ 1 m)87 dB SPL, Maximum SPL @ 1 m 103 dB SPL (109 dB SPL peak),Long-Term Power Handling 40 W (160 W peak)	2
6	Free Space loudspeakers are high-performance, loudspeakers can be used as 8-ohm, 16-watt loudspeakers or 70/100V loudspeakers surface mount loudspeakers designed for Green room.	2
7	DIGITAL SIGNAL PROCESSOR Audio DSP: The device shall provide eight inputs that are selectable as line or mic level with phantom power and four, eight line level outputs. All signal processing, mixing and routing functions (including input gains) shall be controllable via software. Audio inputs and outputs shall be accessed via rear panel 3.81 mm terminal block connectors.	1
	The Graphical User Interface (GUI) software shall be installer programmable using the Windows® XP or higher operating system. Computer connection and control shall be via the device's rear panel Ethernet connector. The GUI shall provide the management of apps, device files and display and control of all signal processing and configuration functions including, but not limited to: Input and Output Gain • Highpass Filtering • Lowpass Filtering • FIR Filters • Crossovers • Parametric Equalization • Graphic Equalization • Expansion • De-Essing • Compression • Limiting • Automatic Gain Control • Ambient Noise Compensation • Feedback Elimination • Automatic Mixing • Priority Mixing • Signal Routing • Delay • Polarity.	
	The front panel shall include input and output signal level indicators as well as indicators for POWER, NETWORK, and ARC.	

	External control shall include preset selection as well as I/O level control and muting, and shall be via industry-standard CAT5 cable with RJ45 connectors using the optional ARC wall panel remote controls. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on board real time clock to facilitate automatic, timed changing of presets. Third-party control systems may interface over IP using a published ASCII control protocol.	
	Audio conversion shall be 24-bit, 48 kHz. The dynamic range of the processor shall not be lower than 110 dB A-weighted. With wall panel control panel.	
8	Adaptive Remote Controls, shall include one 8-character backlit alpha-numeric display, one momentary button for menu selection, and two momentary buttons for value increment/decrement, Power and control shall be connected via two RJ45 connectors, shall be configured by software provided with the hosting device to assign control within DSP system components.	
9	Class D 8 channel digital amplifier ,Maximum Rated Power Approved Makes : Bose/Apart Audio/EV 4000 W (500 W x 8 channels at 4 ohms),20 Hz - 20 kHz (at 1 W and +/- 0.5 dB), 102 dB (1 dB below rated power, A-weighted), 48 kHz / 24-bit, 5-band PEQ (+/- 20 dB), notch, shelving, high pass, low pass	1
10	Class D amplifier with power reservoir ,maximum Power per Channel 600 W @ 4-8 Ω, Amplifier Power 2 x 300 W (THD+N < 0.04%, 1 kHz,4- 8Ω, 70/100V) 70/100V, Frequency Response 4-8 Ω: 20 Hz – 20 kHz (+/- 0.5 dB @ 1 W) 70/100V: Same as 4-8 Ω with 50 Hz high-pass filter, Signal to Noise Ratio100 dB (at rated power, A-weighted)	1
11	Class-D amplifier, Amplifier Power1 x 90 W @ 70/100 V Frequency response 60 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)THD : ≤1 % (at full rated power) Dynamic Range: 88 dB, Input Channels, 1 Unbalanced	1
12	MG 16/4 Features eight mono microphone/line inputs, and four stereo line inputs, two with mono microphone input capability. Gain trim covers a wide -60db-16db range for microphone input, and-34db-10db for line input. Balanced XLR connectors are provided on all eight mono inputs and two of the stereo inputs, in addition to phono jack connectors.	1
13	Gooseneck Microphone with Base is KE 10 microphone capsule with cardioid directivity for universal miking and a streamlined 40 cm gooseneck with a XLR 3M connector.	2
14	Gooseneck desk top base, XLR 3F connector.	2
15	Handheld wireless system featuring the SKM 100 G3 equipped with the famed e835 cardioid dynamic capsule.	2
16	Wireless Lapel Microphone has to speak very loudly; the presenter's voice is delivered in a rich and full manner.	2
17	Dynamic Wired instrumental Microphone for cultural activities.	4
18	Equipment AV racks 36 U with shelf, Fan.	1
19	Customized speaker mounts for delay speakers	4
20	Blue ray player FULLHD 3D, with HDMI/USB, Ethernet ports supporting Major Audio, Video, and Photo formats.	1
21	Stage Box 2 no's with 3 pin XLR Female Connectors, Speakon connector & Power socket.	3
22	Speaker cable 2 core 2.5 sqmm FRLS grade (2000 mtr).	1
23	Snake cable 2 core 16 pair, signal cable (100 mtr).	1

24	Microphone cable 2 core (300 mtr) is heavy-duty, shielded and black in colour.	1
25	Cat6 Cable 10 mtr.	1
26	XLR Male/Female Connectors	40
27	Speakon Male/Female Connectors	40

Video Specifications		
Sl.No	Description	Qty in Nos
1	Professional series 1DLP 6,500 ANSI lumens, 16:9 native aspect ratio, 1920 x 1200 Resolution WUXGA, Contrast Ratio 2500:1 standard Lens, Powered Focus, Lens shift, Lamp Wattage 430W, Dual Lamp Life 2000 hours (Normal Mode)/4000 hours (Eco Mode) Distance To Width Ratio 1.8 (WIDE), 2.3 (TELE) Diagonal Display Size 50"~600" (100" at 3.5m, wide max.).	1
2	SITC of Projector Screen with 24 feet x 16 feet in size with Fabricated frame	1
3	SITC of Projector mount for Projector is Compatible with most short- and long-throw projectors; includes dual-stud short-throw extension arm.	1
4	SITC of HDMI Extender is High Speed HDMI Cable with Ethernet provides an uncompressed, all-digital interface for both audio and video signals.	2
5	SITC of Audio De-embedder for extracting analog audio from HDMI source.	1
6	SITC of CAT6 is Cable backward compatible with Category 5/5E and Category 3 specifications.	300
7	SITC of Laptop Input source popup box.	1
8	SITC of 4K HDMI Cable 2 meter for projecting the image on Projector screen	5
9	SITC of Connectors in lot.	1

Part – B

TECHNICAL SPECIFICATIONS FOR RENOVATION OF AUDITORIUM INTERIORS

Sl.No	Description	UOM	Qty Approx
1	<p>Removing existing panelling, Providing and Fixing Combination of Acoustic panels of 45 mm overall thickness and NRC value of .75 with trackable surface faced TAP Panels of desired shade and fire resistance, self extinguishing as per ASTM E84, 100% recyclable installed on Hardwood Wooden Battens/GI Frame perpendicular to the desired panel orientation. Panels has back lined 25mm Glass wool of min density 32 kg/ CumNon-combustible in accordance with BS 476 Part 4, 1970 incombustible low fire propagation (index 13.58) extremely low spread of flame(class 1 BS 476 Part 7) non emission of dense smoke and toxic gases(low toxicity index 0.86)non depletion of oxygen (high oxygen index 70%). Formaldehyde free and shall not promote Mold and Woodworks Million panels of width 168mm, thickness of 8 mm and length 1215 mm or as required by the Acoustic consultant, made of a high density fibre board of E1 standards with minimum 830 Kg/M3 density substrate with a wood veneer/Melamine facing and aluminium oxide overlay facing as per the approved shade/ species & finish .</p> <p>Aproved Brands -Saint gobain Ecophon, USG Boral,TAP Acoustic Ind,Shepard or equivalent'</p>	SFT/RFT	7000

2.	Installation of New 10 mm thick AC5 grade wooden Flooring as per approved shade, color and site feasibility. All necessary profiles shall be considered	SFT / RFT	2500
3	Removal of existing carpet on Pathways and Fixing New Pile Fiber of BCF Polypropylene with bulk continuous filament and Mechanical gauge of at least 2.5 mm and plain loop consisting of tiffed pile and bond strength of 30 Newton and Tft withdrawal strength of 20 Newton's. Flammability – (ASTM D 2859-96 and CPSC – FF- 170) 8 pass Commercial Heavy Duty , Static Generation under 3 KV Width – 3.66 plus or Minus .05 Roll Length – Approx 30. BRANDS –Donair or equivalent	SFT/RFT	2000
4	Supply and Errection of Scaffolding to install Wall Panelling as described in specification in all aspects. Removing of existing perforated panelling/Woodworks and stocking with unloading and lifting charges outside the premises	SFT/RFT	2500
5	Servicing of your existing motorised Curtain with new steel rope	LS	1
6	Wince cloth shall be Removed and will replaced with new navy blue fabric	Nos	4
7	Providing and applying synthetic plaster putty or plaster of paris putty or lime punning of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2-3hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials, including cost and conveyance of all materials to work site and all operational, incidental and labour charges Asian, Birla or Equivalent	SQMT	2,000
8	Painting to New walls with two coats of oil bound distemper of superior quality of approved brand and shade over base coat of cement primer grade –I making three coats in all to give an even shade after thoroughly brushing the surface to remove all loose powdered materials, including cost and conveyance of all materials, including cost and conveyance of all materials, cost of brushes, water to site, etc. Asian,Birla or Equivalent	SQMT	2,000
9	Melamine polishing of Existing Front Doors Asian,Nerolac or Equivalent	SFT/RFT	500
10	Repairs of Existing damage chairs.	No's	200

PART - C

TECHNICAL SPECIFICATIONS FOR SUPPLY OF DUCTABLE AIRCONDITIONING

SI.No	Description	Qty	Unit
EQUIPMENT DESCRIPTION			
1	Supply, of Air Cooled Split Air-conditioners with Refrigerant charging. Units shall be comprising outdoor units consisting of scroll compressors, air-cooled condensing copper coil, condenser fan, control panel mounted in sheet metal powder coated casing etc. The indoor Unit complete with Fan, Washable Filters complete with TEFC (Totally Enclosed, Fan Cooled) motor with 44 TR Floor Standing ductable units and 11 TR ceiling concealed ductable Units with R-22 Refrigerant	2	Nos.
2	Supply, of Air Cooled Split Air-conditioners with Refrigerant charging. Units shall be comprising outdoor units consisting of scroll compressors, air-cooled condensing copper coil, condenser fan, control panel mounted in sheet metal powder coated casing etc. The indoor Unit complete with Fan, Washable Filters complete with TEFC (Totally Enclosed, Fan Cooled) motor with 11 TR ceiling concealed ductable Units with R-22 Refrigerant	2	Nos.

ANCILLIARY WORKS				
1	Galvanized Steel Sheet Spiral ducting for supply air with proper supports from the slab with full threaded GI rods	20 G	180	Sqm
		22 G	315	Sqm
		24 G	210	Sqm
2	Alluminium Jet Diffusers with volume control dampers and fixing accessories	50	Nos.	
3	Aluminium powder coated Return Air Grilles along with out collar Dampers	140	Sft	
4	Collar dampers for supply air opening to adjust air flow as per requirement.	50	Nos.	
5	Acoustic insulation of initial part of supply air ducting with 10 mm thick open cell nitrile rubber insulation sheet.	180	Sqm	
6	Thermal insulation with 10 mm thick closed cell nitrile rubber sheet for balance ducts	400	Sqm	
7	Canvass Connection at the outlet of the indoor units	6	Nos.	
8	13/8" Hard drawn copper piping with fittings and insulation	120	Rmt	
9	5/8" Hard drawn copper piping with fittings and insulation	120	Rmt	
10	Electrical control cabling from indoor to out door units with pvc pipes for Ductable units	140	Rmt	
11	Initial gas charging for systems to commission the Units	12	Nos.	
12	Fresh air provision with adjustable damper and wiremesh including bend.	3	Nos.	
13	P.V.C Drain piping with insulation for ductable split units	60	Rmt	
14	M.S Stands for mounting the condensing units	12	Nos.	
15	M.S Supports for hanging the supply air ducts from wall with required materials	900	Kgs	
16	Making the plant room with Cement brick and Motor with both sides plastering with cement including door for entry and exit, civil works like wall opening to run the ducts for supply air and extra opening for return air on both sides of room.	2	Nos.	
17	Making the boxing to cover the supply air ducting on two sides of auditorium on top level with perforated gyp board, supports taken from slab and side walls, inside the sheet pasted with 50 mm thick glass wool sheet to reduce the noise level, finishing will be painting with enamel, paint colour match with side wall.	2500	Sft	
18	Scaffolding with materials up to worked level from ground level with required supports on both sides of auditorium from starting to completion time.	2	Sets	
19	Electrical incoming supply cable of 4C x 16 Sqmm Copper cable with 8 swg G.I wire for earthing for all units from Main D.B at Projector room	340	Rmt	
20	Floor mounted Electrical distribution panel to accommodate the Required incomes and out put for all 6 units with metering, busbar etc	1	Nos.	
21	Earth pits with materials like copper plate, patti and g.i pipes including charcoal, salt and civil works like digging, again refilling the same.	2	Nos.	
22	Miscellaneous works like wall opening, closing, lifting and shifting of debris including cleaning, covering the existing seats with polythene cover etc	1	Lot	
23	Lifting and positioning of units with required chain block pulleys or cranes with required isolators on machine bottom.	1	Lot	
24	Installation, testing and commissioning of ductable systems with laying of copper piping, cabling, leak testing, evacuation, gas charging for			
25	55.0/ 11.0 TR Ductable split units	12	Nos.	

PART – II

TERMS & CONDITIONS OF THE TENDER

1. The reputed firms/contractors should submit their tenders duly enclosing two separate Demand Drafts drawn in favour of Registrar, Osmania University, Hyderabad, towards (i) Non-refundable application cost of Rs.5, 000/- (Rupees five thousand only) and EMD @ 1% of total project cost at the time of submission of tender bids and balance of 1½% at the time of agreement (MOU) on award of contract after going through the conditions laid down.
2. Only reputed firms/contractors who have the expertise in the similar field of execution of works pertaining to Renovation /Refurbishment works are permitted to quote against the requirements
3. The bidders are advised to quote the prices plus taxes as applicable as per government norms. The discretion is vested with the University to decide as per the requirements. However, the University shall invite the L-1 bidders for negotiations.
4. The Bidder shall strictly adhere to all the terms and conditions stipulated in the tender and the Special Conditions specified therein, with regard to Renovation of Tagore Auditorium, Osmania University.
5. The bidders shall follow scrupulously all the stipulated conditions for the prescribed specifications of all the renovation items, so that the renovated items of work will not disturb the existing civil structure of the auditorium. Any damages caused while executing the renovation works by the bidders shall be rectified and make good at their own costs.
6. The bidders shall, subject to the provision of the contract and with due care and diligence, execute and maintain the works in accordance with specifications stipulated in the tender as per the requirement of OU.
7. The following information has to be filled by the tenderer with evidence (Documentary proof to be enclosed).
 - a) Registration Certificate issued by Govt. of TS
 - b) TSGST/CST/CGST Registration Certificate
 - c) Annual Turn Over -
 - (a) Supply, installation and commissioning of Audio Visuals of Auditorium Rs. 2.0 Crores Average per annum in the last three financial years (2014-15, 2015-16 and 2016-17)
 - (b) Repairs of Auditorium interiors which includes Acoustics; Wall paneling; Flooring and Stage Renovation of Auditorium etc., Rs.8 Crores cumulative in the last three financial years (2014-15, 2015-16 and 2016-17)
 - (c) for Supply of Ductable Air-conditioning Rs. 2.00 Crores Average per annum .in the last three financial years (2014-15, 2015-16 and 2016-17)
 - d) Documents of technical competence of the tenderer
 - e) Detailed profile of the firm
 - f) Recent Purchase Orders for Renovation in Government/Public Sector undertakings/Universities, Reputed Pvt Limited companies etc...
8. The offers must be in English. The rates should be quoted in INR and indicated both in figures and in words against each item inclusive of taxes. The bidder shall indicate the break-up of each individual items of work clearly indicating the basic cost and taxes including Defective Liability Period and AMC for five years. After defective liability period of two years, another three years of AMC which includes O&M, repairs, replacements and all items of work executed and completed.
9. Defective Liability Period will be of two years.
10. AMC for 3 years after completion of Defective Liability Period for AC and AV shall be Quoted separately as Non comprehensive warranty
11. The rates shall be fixed and constant throughout the entire period of the Contract and will not be modified under any circumstances.

12. Offers received after the bid closing date/time shall be rejected. Only those bids will be evaluated which are found to be fulfilling the eligibility and qualifying requirements of the RFP, Both technically and Commercially. The compliance of technical bids would be determined on the basis of parameters specified in the RFP. The price bids of only those bidders will be opened whose technical bids would clear the technical evaluation
13. Telex/Tele fax/E-Mail Tenders will not be accepted and the University takes no responsibility for delay/loss or non-receipt of tenders by post/couriers.
14. Any offer containing incorrect statement and incomplete information will be summarily rejected and no unsolicited correspondence shall be entertained.
15. Osmania University reserves the right to accept /reject any offer in full or in part or accept any offer other than the lowest without assigning any reasons thereof.
16. No deviation in specifications or change of material or size or thickness should be found and the same shall not be entertained and it is a fixed amount contract and if there is a decrease in quality detected, and for any increase, the contractor is liable to complete the work.
17. All disputes or differences whatsoever arising between the parties relating to the contract shall be settled by the arbitration in accordance with the rules of arbitration of Indian Council of Arbitration and the Award made in pursuance thereof shall be binding on the parties. The venue of arbitration shall be Hyderabad, and the Registrar, Osmania University, Hyderabad – 500007, will make the appointment of the arbitrator on behalf of the University.
18. The Tenders of those reputed firm shall only be accepted, who have remitted the prescribed non-refundable Tender Application fee of Rs. 5,000/- (Rupees five thousand only) along with EMD @ 1% of total project cost at the time of submission of tender bids and balance of 1½% at the time of agreement (MOU) on award of contract, Payable through Demand Draft drawn on any nationalized bank in favour of Registrar, OU.
19. FSD (Further Security Deposit) of 5% will be with-held from the running bills till the completion of the project. This condition is applicable for Audiovisual and Air-conditioning system only.
20. 1% will be released after completion of first year of Defective Liability period; another 1% will be released in 2nd year after Defective Liability period; 1% will be released during first year of AMC period and 1% will be released after 2nd year of AMC; and another 1% will be released after 3rd year of AMC.
21. Before quoting the rate, the firm is advised to do physical survey of the site at OU Campus for Renovation of Tagore Auditorium & difficulties encountered during execution of the work.
22. The E.M.D of the unsuccessful tenderers will be refunded without any interest.
23. The firm must have valid TSGST/CST/CGST Registration Certificate. (Please attach copies of valid certificates).
24. The security deposit shall be liable to be forfeited wholly or partly at the sole discretion of the University, if the tenderer either fails to execute the work as per the tender terms, or fails to fulfill the contractual obligations or fails to settle in full his dues to the O.U.
25. In case of premature termination of the contract, the Security Deposit will be forfeited and the O.U. will be at liberty to recover the loss suffered by it & if additional cost is to be paid, the same shall be recovered from the bidder as Revenue Recovery Process.
26. The O.U. is empowered to recover from the Security Deposit any sum due and for any other sum that may be fixed by the O.U. as being the amount or loss or losses or damages suffered by it due to delay in performance and / or non-performance and / or partial performance of any of the conditions of the contract and / or non-performance of guaranteed obligations.
27. Failure to comply with the terms of security deposit shall result into cancellation of work order and termination of the contract without any further reference to the tenderer and the EMD shall be forfeited.
28. The bidder should have the experience of the supply & execution of projects with Area More or equal to 10000 SFT, cumulative in any last 3 years.
29. The University reserves the right to cancel the tender or terminate the contract with L-1 vendor without assigning any reasons thereof.
30. The University shall however invite the L-1 bidder for negotiations, if it feels the lowest prices quoted are on the higher side.
31. The Tenderer/JV partner should be experienced in Renovation/Execution of new work in Auditorium with minimum capacity of 1000 Seater for Part A (AV), 10000 SFT of Acoustical

- Paneling area for Part B (Acoustics and Interiors) and 10000 SFT of Carpet area AC installation of air-conditioning works done for Part C (Air conditioning works), cumulative in any last 2 years.
32. The Osmania University reserves the right to evaluate technically, the equipment and samples offered by the bidders during technical evaluation.
 33. The bidders should have experience of similar works. All the items supplied should be of standard make/manufacturer to ensure compatibility of the items and better functioning of the system.
 34. OEM authorization certificate should be produced for Audio, Acoustics. Joint Ventures are valid for eligibility, Technical/Financial support and OEM Authorizations for eligibility.
 35. The Service Centre for AV and Air-conditioning systems shall be established in Telangana States for future service.
 36. Authorization certificate for providing test reports complying specifications at the time of Technical scrutiny.
 37. Technical and trained manpower shall be employed/deployed to complete the work as per the methodology for Acoustics as per manufacturer standards.
 38. The manufacturer and guarantee certificate shall be handed over to University.
 39. The bidder shall Mandatorily provide designs, drawings pictorial views and got approved by the University for Interiors and Acoustics.
 40. The bidder shall employ Technical persons having expertise in Acoustics, Audio, Video, AC and other related components of the Auditorium.
 41. The bidder shall test the equipment supplied after erection, testing and commissioning shall got approved by the University.

REGISTRAR,
OSMANIA UNIVERSITY

Annexure -I
TECHNICAL BID

(To be submitted in a separate sealed envelope)

1. Name of Tendering Company/Contractor with
Registration No. & Date
(Please enclose copy of certificate of Registration)
2. Do you possess trade license issued by Competent
Authorities, if so, please enclose a copy.
3. Name of Proprietor / Director
4. Furnish following particulars of the Registered
Office
 - a. Complete Postal Address
 - b. Telephone No.
 - c. Fax. No.
 - d. E-Mail Address
5. Furnish following particulars of the
Operating office, if different from above
 - a. Complete Postal Address
 - b. Telephone No.
 - c. Fax. No.
 - d. E-Mail Address
6. Are you Authorized/ Reputed firm,
If yes, please attach a copy of the relevant certificate
issued by the competent Authority.
7. PAN No. (Attach Attested Copy)
8. TIN No. (Attach Attested Copy)
9. TSGST/CST/CGST Registration Certificate
(Attach Attested Copy)
10. Financial turnover for last three financial Years.
(Please attach copies of audited Balance
Sheet and IT returns) (2014-15, 2015-16 and 2016-17)
Attach separate sheet if space provided is insufficient
11. Give details of the major clients –
Government, Educational Institutions, Universities etc.
Where similar works have been executed by the
Bidder during the last three years. Copies of the Orders
should be attached for proof.
 - a. Sl. No
 - b. Name & address of the Client with details
 - c. Name of the contact person,
Telephone no., Fax no., and E-mail ID
12. Whether your annual turnover was
 - (a) Supply, installation and commissioning of Audio Visuals of Auditorium Rs. 2.0 Crores Average
per annum in the last three financial years (2014-15, 2015-16 and 2016-17)
(Please attach relevant copies).
 - (b) Repairs of Auditorium interiors which includes Acoustics; Wall paneling; Flooring and Stage
Renovation of Auditorium,etc., Rs. 8.0 Crores cumulative in the last three financial years
(2014-15, 2015-16 and 2016-17)
(Please attach relevant copies).
 - (c) for Supply of Ductable Air-conditioning Rs. 2.00 Crores Average per annum
in the last three financial years (2014-15, 2015-16 and 2016-17)
(Please attach relevant copies).
13. Details of (i) Application fee Rs. _____ DD No. _____ Dt. _____ Bank _____
(ii) EMD fee Rs. _____ D.D.No. _____ Dt. _____ Bank _____

TECHNICAL SPECIFICATIONS FOR AUDIO VISUAL

Sl.No	Description	Complied Yes/No
SL	Audio Specifications	
1	SITC of Loudspeaker featuring full-range-driver array with Frequency Range 52 Hz – 15kHz, Nominal Coverage Pattern 120° H x 100° V, Sensitivity 92 dB, Calculated Maximum SPL at 1 m 116 dB, Nominal Impedance 8 ohms.	
2	Low-frequency loudspeaker designed for indoor permanent installations. Frequency Response 50 Hz -140 Hz, Frequency Range 40 Hz - 160 Hz, Sensitivity 90 dB SPL, Maximum SPL is 116 dB SPL (122 dB SPL peak), Nominal Impedance 8 Ω.	
3	SITC of Loudspeaker featuring full-range-driver array with Frequency Range 52 Hz – 15kHz, Nominal Coverage Pattern 120° H x 100° V, Sensitivity 92 dB, Calculated Maximum SPL at 1 m 116 dB, Nominal Impedance 8 ohms	
4	Stage monitor that can deliver multiple coverage options, speaker configuration with Frequency Response 70 Hz - 16 kHz, Frequency Range is 55 Hz - 19 kHz, Sensitivity is 91 dB SPL, Maximum SPL is 111 dB SPL (117 dB SPL peak), Nominal Impedance 8 Ω.	
5	Full-range loudspeaker with a single 4.5" (114 mm) full-range driver in a ported enclosure, Nominal Dispersion 125° H x 125° V, Sensitivity (SPL / 1 W @ 1 m)87 dB SPL, Maximum SPL @ 1 m 103 dB SPL (109 dB SPL peak),Long-Term Power Handling 40 W (160 W peak) Approved	
6	Bose Free Space loudspeakers are high-performance, loudspeakers can be used as 8-ohm, 16-watt loudspeakers or 70/100V loudspeakers surface mount loudspeakers designed for Green room.	
7	<p>DIGITAL SIGNAL PROCESSOR Audio DSP: The device shall provide eight inputs that are selectable as line or mic level with phantom power and four, eight line level outputs. All signal processing, mixing and routing functions (including input gains) shall be controllable via software. Audio inputs and outputs shall be accessed via rear panel 3.81 mm terminal block connectors.</p> <p>The Graphical User Interface (GUI) software shall be installer programmable using the Windows® XP or higher operating system. Computer connection and control shall be via the device's rear panel Ethernet connector. The GUI shall provide the management of apps, device files and display and control of all signal processing and configuration functions including, but not limited to: Input and Output Gain • Highpass Filtering • Lowpass Filtering • FIR Filters • Crossovers • Parametric Equalization • Graphic Equalization • Expansion • De-Essing • Compression • Limiting • Automatic Gain Control • Ambient Noise Compensation • Feedback Elimination • Automatic Mixing • Priority Mixing • Signal Routing • Delay • Polarity.</p> <p>The front panel shall include input and output signal level indicators as well as indicators for POWER, NETWORK, and ARC.</p> <p>External control shall include preset selection as well as I/O level control and muting, and shall be via industry-standard CAT5 cable with RJ45 connectors using the optional ARC wall panel remote controls. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on board real time clock to facilitate automatic, timed changing of presets. Third-party control systems may interface over IP using a published ASCII control protocol.</p> <p>Audio conversion shall be 24-bit, 48 kHz. The dynamic range of the processor shall not be lower than 110 dB A-weighted. With wall panel control panel.</p>	
8	Adaptive Remote Controls, shall include one 8-character backlit alpha-numeric display, one momentary button for menu selection, and two momentary buttons for value increment/decrement, Power and control shall be connected via two RJ45 connectors, shall be configured by software provided with the hosting device to assign control within DSP system components.	
9	<p>Class D 8 channel digital amplifier ,Maximum Rated Power Approved Makes : Bose/Apart Audio/EV</p> <p>4000 W (500 W x 8 channels at 4 ohms),20 Hz - 20 kHz (at 1 W and +/- 0.5 dB), 102 dB (1 dB below rated power, A-weighted), 48 kHz / 24-bit, 5-band PEQ (+/- 20 dB), notch, shelving, high pass, low pass</p>	
10	<p>Class D amplifier with power reservoir ,maximum Power per Channel 600 W @ 4-8 Ω, Amplifier Power</p> <p>2 x 300 W (THD+N < 0.04%, 1 kHz,4- 8Ω, 70/100V) 70/100V, Frequency Response 4-8 Ω: 20 Hz – 20 kHz (+/- 0.5 dB @ 1 W) 70/100V: Same as 4-8 Ω with 50 Hz high-pass filter, Signal to Noise Ratio100 dB (at rated power, A-weighted)</p>	
11	<p>Class-D amplifier,</p> <p>Amplifier Power1 x 90 W @ 70/100 V</p> <p>Frequency response 60 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)THD : ≤1 % (at full rated power)</p> <p>Dynamic Range: 88 dB, Input Channels, 1 Unbalanced</p>	

12	MG 16/4 Features eight mono microphone/line inputs, and four stereo line inputs, two with mono microphone input capability. Gain trim covers a wide -60db-16db range for microphone input, and-34db-10db for line input. Balanced XLR connectors are provided on all eight mono inputs and two of the stereo inputs, in addition to phono jack connectors.	
13	Gooseneck Microphone with Base is KE 10 microphone capsule with cardioid directivity for universal miking and a streamlined 40 cm gooseneck with a XLR 3M connector.	
14	Gooseneck desk top base, XLR 3F connector.	
15	Handheld wireless system featuring the SKM 100 G3 equipped with the famed e835 cardioid dynamic capsule.	
16	Wireless Lapel Microphone has to speak very loudly; the presenter's voice is delivered in a rich and full manner.	
17	Dynamic Wired instrumental Microphone for cultural activities.	
18	Equipment AV racks 36 U with shelf, Fan.	
19	Customized speaker mounts for delay speakers	
20	Blue ray player FULLHD 3D, with HDMI/USB, Ethernet ports supporting Major Audio, Video, and Photo formats.	
21	Stage Box 2 no's with 3 pin XLR Female Connectors, Speakon connector & Power socket.	
22	Speaker cable 2 core 2.5 sqmm FRLS grade (2000 mtr).	
23	Snake cable 2 core 16 pair, signal cable (100 mtr).	
24	Microphone cable 2 core (300 mtr) is heavy-duty, shielded and black in colour.	
25	Cat6 Cable 10 mtr.	
26	XLR Male/Female Connectors	
27	Speakon Male/Female Connectors	
Sl.No	Description	
1	Professional series 1DLP 6,500 ANSI lumens, 16:9 native aspect ratio, 1920 x 1200 Resolution WUXGA, Contrast Ratio 2500:1 standard Lens, Powered Focus, Lens shift, Lamp Wattage 430W, Dual Lamp Life 2000 hours (Normal Mode)/4000 hours (Eco Mode) Distance To Width Ratio 1.8 (WIDE), 2.3 (TELE) Diagonal Display Size 50"~600" (100" at 3.5m, wide max.).	
2	SITC of Projector Screen with 24 feet x 15 feet in size with Fabricated frame	
3	SITC of Projector mount for Projector is Compatible with most short- and long-throw projectors; includes dual-stud short-throw extension arm.	
4	SITC of HDMI Extender is High Speed HDMI Cable with Ethernet provides an uncompressed, all-digital interface for both audio and video signals.	
5	SITC of Audio De-embedder for extracting analog audio from HDMI source.	
6	SITC of CAT6 is Cable backward compatible with Category 5/5E and Category 3 specifications.	
7	SITC of Laptop Input source popup box.	
8	SITC of 4K HDMI Cable 2 meter for projecting the image on Projector screen	
9	SITC of Connectors in lot.	

TECHNICAL SPECIFICATIONS FOR RENOVATION OF AUDITORIUM INTERIORS

Sl.No	Description	Complied Yes/No
1	Removing existing panelling,Providing and Fixing Combination of Acoustic panels of 45 mm overall thickness and NRC value of .75 with trackable surface faced TAP Panels of desired shade and fire resistance, self extinguishing and per ASTM E84, 100% recyclable installed on Hardwood Wooden Battens/GI Frame perpendicular to the desired panel orientation. Panels has back lined 25mm Glass wool of min density 32 kg/ CumNon-combustible in accordance with BS 476 Part 4, 1970 incombustible low fire propagation (index 13.58) extremely low spread of flame(class 1 BS 476 Part 7)non emission of dense smoke and toxic gases(low toxicity index 0.86)non depletion of oxygen (high oxygen index 70%).Formaldehyde free and shall not promote Mold and Woodworks Million panels of width 168mm, thickness of 8 mm and length 1215 mm or as required by the Acoustic consultan, made of a high density fibre board of E1 standards with minimum 830 Kg/M3 density substrate with a wood veneer/Melamine facing and aluminium oxide overlay facing as per the approved shade/ species & finish . Approved Brands -Saint gobain Ecophon, USG Boral,TAP Acustic Ind,Shepard or equivalent'	
2	Installation of New 10 mm thick AC5 grade wooden Flooring as per approved shade, color and site feasibility. All necessary profiles shall be considered	
3	Removal of existing carpet on Pathways and Fixing New Pile Fiber of BCF Polypropylene with bulk continuous filament and Mechanical gauge of at least 2.5 mm and plain loop consisting of tiffed pile and bond strength of 30 Newton and Tft withdrawal strength of 20 Newton's. Flammability – (ASTM D 2859-96 and CPSC – FF- 170) 8 pass Commercial Heavy Duty , Static Generation under 3 KV Width – 3.66 plus or Minus .05 Roll Length – Approx 30. BRANDS -Donair or equivaant	
4	Supply and Errection of Scaffolding to install Wall Panelling as descried in specification in all aspects.Removing of exisitng damaged perforated panelling/Woodworks and stocking with unloading and lifting charges outside the premisis	
5	Servicing of your existing motorised Curtain with new steel rope	
6	Wince cloth shall be Removed and will replaced with new navey blue fabric	
7	Providing and applying synthetic plaster putty or plaster of paris putty or lime punning of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2-3hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials, including cost and conveyance of all materials to work site and all operational, incidental and labour charges Asian, Birla or Equivalent	
8	Painting to New walls with two coats of oil bound distemper of superior quality of approved brand and shade over base coat of cement primer grade -I making three coats in all to give an even shade after thoroughly brushing the surface to remove all loose powdered materials, including cost and conveyance of all materials, including cost and conveyance of all materials, cost of brushes, water to site, etc. Asian,Birla or Equivalent	
9	Melamine polishing of Exisiting Front Doors Asian,Nerolac or Equivalent	
10	Repairs of Existing damage chairs.	

TECHNICAL SPECIFICATIONS FOR SUPPLY OF DUCTABLE AIRCONDITIONING

Sl.No	Description	Qty	Unit
EQUIPMENT DESCRIPTION			
1	Supply, of Air Cooled Split Air-conditioners with Refrigerant charging. Units shall be comprising outdoor units consisting of scroll compressors, air-cooled condensing copper coil, condenser fan, control panel mounted in sheet metal powder coated casing etc. The indoor Unit complete with Fan, Washable Filters complete with TEFC (Totally Enclosed, Fan Cooled) motor with 44 TR Floor Standing ductable units and 11 TR ceiling concealed ductable Units with R-22 Refrigerant	2	Nos.
2	Supply, of Air Cooled Split Air-conditioners with Refrigerant charging. Units shall be comprising outdoor units consisting of scroll compressors, air-cooled condensing copper coil, condenser fan, control panel mounted in sheet metal powder coated casing etc. The indoor Unit complete with Fan, Washable Filters complete with TEFC (Totally Enclosed, Fan Cooled) motor with 11 TR ceiling concealed ductable Units with R-22 Refrigerant	2	Nos.

ANCILLIARY WORKS				
1	Galvanized Steel Sheet Spiral ducting for supply air with proper supports from the slab with full threaded GI rods	20 G	180	Sqm
		22 G	315	Sqm
		24 G	210	Sqm
2	Aluminium Jet Diffusers with volume control dampers and fixing accessories	50	Nos.	
3	Aluminium powder coated Return Air Grilles along with out collar Dampers	140	Sft	
4	Collar dampers for supply air opening to adjust air flow as per requirement.	50	Nos.	
5	Acoustic insulation of initial part of supply air ducting with 10 mm thick open cell nitrile rubber insulation sheet.	180	Sqm	
6	Thermal insulation with 10 mm thick closed cell nitrile rubber sheet for balance ducts	400	Sqm	
7	Canvas Connection at the outlet of the indoor units	6	Nos.	
8	1 3/8" Hard drawn copper piping with fittings and insulation	120	Rmt	
9	5/8" Hard drawn copper piping with fittings and insulation	120	Rmt	
10	Electrical control cabling from indoor to outdoor units with PVC pipes for Ductable units	140	Rmt	
11	Initial gas charging for systems to commission the Units	12	Nos.	
12	Fresh air provision with adjustable damper and wiremesh including bend.	3	Nos.	
13	P.V.C Drain piping with insulation for ductable split units	60	Rmt	
14	M.S Stands for mounting the condensing units	12	Nos.	
15	M.S Supports for hanging the supply air ducts from wall with required materials	900	Kgs	
16	Making the plant room with Cement brick and Mortar with both sides plastering with cement including door for entry and exit, civil works like wall opening to run the ducts for supply air and extra opening for return air on both sides of room.	2	Nos.	
17	Making the boxing to cover the supply air ducting on two sides of auditorium on top level with perforated gypsum board, supports taken from slab and side walls, inside the sheet pasted with 50 mm thick glass wool sheet to reduce the noise level, finishing will be painting with enamel, paint colour match with side wall.	2500	Sft	
18	Scaffolding with materials up to worked level from ground level with required supports on both sides of auditorium from starting to completion time.	2	sets	
19	Electrical incoming supply cable of 4C x 16 Sqmm Copper cable with 8 swg G.I wire for earthing for all units from Main D.B at Projector room	340	Rmt	
20	Floor mounted Electrical distribution panel to accommodate the Required incomes and output for all 6 units with metering, busbar etc	1	Nos.	
21	Earth pits with materials like copper plate, patti and G.I pipes including charcoal, salt and civil works like digging, again refilling the same.	2	Nos.	
22	Miscellaneous works like wall opening, closing, lifting and shifting of debris including cleaning, covering the existing seats with polythene cover etc	1	lot	
23	Lifting and positioning of units with required chain block pulleys or cranes with required isolators on machine bottom.	1	lot	
24	Installation, testing and commissioning of ductable systems with laying of copper piping, cabling, leak testing, evacuation, gas charging for			
25	55.0/ 11.0 TR Ductable split units	12	Nos.	

**Annexure – II
COMMERCIAL BID**

(To be submitted in a separate sealed envelope)

(A) Supply, installation and commissioning of Audio Visuals Renovation

Sl.No	Description	Qty	Unit Rate	Total Price	Taxes %	Grand Total
SL	Audio Specifications	Qty				
1	SITC of Loudspeaker featuring full-range-driver array with Frequency Range 52 Hz – 15kHz, Nominal Coverage Pattern 120° H x 100° V, Sensitivity 92 dB, Calculated Maximum SPL at 1 m 116 dB, Nominal Impedance 8 ohms.	4				
2	Low-frequency loudspeaker designed for indoor permanent installations. Frequency Response 50 Hz -140 Hz, Frequency Range 40 Hz - 160 Hz, Sensitivity 90 dB SPL, Maximum SPL is 116 dB SPL (122 dB SPL peak), Nominal Impedance 8 Ω.	2				
3	SITC of Loudspeaker featuring full-range-driver array with Frequency Range 52 Hz – 15kHz, Nominal Coverage Pattern 120° H x 100° V, Sensitivity 92 dB, Calculated Maximum SPL at 1 m 116 dB, Nominal Impedance 8 ohms	2				
4	Stage monitor that can deliver multiple coverage options, speaker configuration with Frequency Response 70 Hz - 16 kHz, Frequency Range is 55 Hz - 19 kHz, Sensitivity is 91 dB SPL, Maximum SPL is 111 dB SPL (117 dB SPL peak), Nominal Impedance 8 Ω.	2				
5	Full-range loudspeaker with a single 4.5" (114 mm) full-range driver in a ported enclosure, Nominal Dispersion 125° H x 125° V, Sensitivity (SPL / 1 W @ 1 m)87 dB SPL, Maximum SPL @ 1 m 103 dB SPL (109 dB SPL peak),Long-Term Power Handling 40 W (160 W peak) Approved	2				
6	Space loudspeakers are high-performance, loudspeakers can be used as 8-ohm, 16-watt loudspeakers or 70/100V loudspeakers surface mount loudspeakers designed for Green room.	2				
7	DIGITAL SIGNAL PROCESSOR Audio DSP: The device shall provide eight inputs that are selectable as line or mic level with phantom power and four, eight line level outputs. All signal processing, mixing and routing functions (including input gains) shall be controllable via software. Audio inputs and outputs shall be accessed via rear panel 3.81 mm terminal block connectors.	1				
	The Graphical User Interface (GUI) software shall be installer programmable using the Windows® XP or higher operating system. Computer connection and control shall be via the device's rear panel Ethernet connector. The GUI shall provide the management of apps, device files and display and control of all signal processing and configuration functions including, but not limited to: Input and Output Gain • Highpass Filtering • Lowpass Filtering • FIR Filters • Crossovers • Parametric Equalization • Graphic Equalization • Expansion • De-Essing • Compression • Limiting • Automatic Gain Control • Ambient Noise Compensation • Feedback Elimination • Automatic Mixing • Priority Mixing • Signal Routing • Delay • Polarity.					
	The front panel shall include input and output signal level indicators as well as indicators for POWER, NETWORK, and ARC.					
	External control shall include preset selection as well as I/O level control and muting, and shall be via industry-standard CAT5 cable with RJ45 connectors using the optional ARC wall panel remote controls. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on board real time clock to facilitate automatic, timed changing of presets. Third-party control systems may interface over IP using a published ASCII control protocol.					
	Audio conversion shall be 24-bit, 48 kHz. The dynamic range of the processor shall not be lower than 110 dB A-weighted. With wall panel control panel.					
8	Adaptive Remote Controls, shall include one 8-character backlit alpha-numeric display, one momentary button for menu selection, and two momentary buttons for value increment/decrement, Power and control shall be connected via two RJ45 connectors, shall be configured by software provided with the hosting device to assign control within DSP system components.					
9	Class D 8 channel digital amplifier ,Maximum Rated Power Approved Makes : Bose/Apart Audio/EV	1				
	4000 W (500 W x 8 channels at 4 ohms),20 Hz - 20 kHz (at 1 W and +/- 0.5 dB), 102 dB (1 dB below rated power, A-weighted), 48 kHz / 24-bit, 5-band PEQ (+/- 20 dB), notch, shelving, high pass, low pass					
10	Class D amplifier with power reservoir ,maximum Power per Channel 600 W @ 4-8 Ω, Amplifier Power	1				
	2 x 300 W (THD+N < 0.04%, 1 kHz,4- 8Ω, 70/100V) 70/100V, Frequency Response 4-8 Ω: 20 Hz – 20 kHz (+/- 0.5 dB @ 1 W) 70/100V: Same as 4-8 Ω with 50 Hz high-pass filter, Signal to Noise Ratio100 dB (at rated power, A-weighted)					
11	Class-D amplifier,	1				
	Amplifier Power1 x 90 W @ 70/100 V					

	Frequency response 60 Hz - 20 kHz (+0/-3 dB, @ 1 W reference 1 kHz)THD : ≤1 % (at full rated power)				
	Dynamic Range: 88 dB, Input Channels, 1 Unbalanced				
12	MG 16/4 Features eight mono microphone/line inputs, and four stereo line inputs, two with mono microphone input capability. Gain trim covers a wide -60db-16db range for microphone input, and-34db-10db for line input. Balanced XLR connectors are provided on all eight mono inputs and two of the stereo inputs, in addition to phono jack connectors.	1			
13	Gooseneck Microphone with Base is KE 10 microphone capsule with cardioid directivity for universal miking and a streamlined 40 cm gooseneck with a XLR 3M connector.	2			
14	Gooseneck desk top base, XLR 3F connector.	2			
15	Handheld wireless system featuring the SKM 100 G3 equipped with the famed e835 cardioid dynamic capsule.	2			
16	Wireless Lapel Microphone has to speak very loudly; the presenter's voice is delivered in a rich and full manner.	2			
17	Dynamic Wired instrumental Microphone for cultural activities.	4			
18	Equipment AV racks 36 U with shelf, Fan.	1			
19	Customized speaker mounts for delay speakers	4			
20	Blue ray player FULLHD 3D, with HDMI/USB, Ethernet ports supporting Major Audio, Video, and Photo formats.	1			
21	Stage Box 2 no's with 3 pin XLR Female Connectors, Speakon connector & Power socket.	3			
22	Speaker cable 2 core 2.5 sqmm FRLS grade (2000 mtr).	1			
23	Snake cable 2 core 16 pair, signal cable (100 mtr).	1			
24	Microphone cable 2 core (300 mtr) is heavy-duty, shielded and black in colour.	1			
25	Cat6 Cable 10 mtr.	1			
26	XLR Male/Female Connectors	40			
27	Speakon Male/Female Connectors	40			
Video Specifications					
Sl.No	Description	Qty			
1	Professional series 1DLP 6,500 ANSI lumens, 16:9 native aspect ratio, 1920 x 1200 Resolution WUXGA, Contrast Ratio 2500:1 standard Lens, Powered Focus, Lens shift, Lamp Wattage 430W, Dual Lamp Life 2000 hours (Normal Mode)/4000 hours (Eco Mode) Distance To Width Ratio 1.8 (WIDE), 2.3 (TELE) Diagonal Display Size 50"~600" (100" at 3.5m, wide max.).	1			
2	SITC of Projector Screen with 24 feet x 15 feet in size with Fabricated frame	1			
3	SITC of Projector mount for Projector is Compatible with most short- and long-throw projectors; includes dual-stud short-throw extension arm.	1			
4	SITC of HDMI Extender is High Speed HDMI Cable with Ethernet provides an uncompressed, all-digital interface for both audio and video signals.	2			
5	SITC of Audio De-embedder for extracting analog audio from HDMI source.	1			
6	SITC of CAT6 is Cable backward compatible with Category 5/5E and Category 3 specifications.	300			
7	SITC of Laptop Input source popup box.	1			
8	SITC of 4K HDMI Cable 2 meter for projecting the image on Projector screen	5			
9	SITC of Connectors in lot.	1			

(B)Repairs of Auditorium interiors which includes Acoustics; Wall paneling; Flooring and Stage Renovation

Sl.No	Description	Qty	Unit Rate	Total Price	Taxes %	Grand Total
1	Removing existing panelling,Providing and Fixing Combination of Acoustic panels of 45 mm overall thickness and NRC value of .75 with trackable surface faced TAP Panels of desired shade and fire resistance, self extinguishing and per ASTM E84, 100% recyclable installed on Hardwood Wooden Battens/Gl Frame perpendicular to the desired panel orientation. Panels has back lined 25mm Glass wool of min density 32 kg/ Cum Non-combustible in accordance with BS 476 Part 4, 1970 incombustible low fire propagation (index 13.58) extremely low spread of flame(class 1 BS 476 Part 7) non emission of dense smoke and toxic gases(low toxicity index 0.86) non depletion of oxygen (high oxygen index 70%). Formaldehyde free and shall not promote Mold and Woodworks Million panels of width 168mm, thickness of 8 mm and length 1215 mm or as required by the Acoustic consultan, made of a high density fibre board of E1 standards with minimum 830 Kg/M3 density substrate with a wood veneer/Melamine facing and aluminium oxide overlay facing as per the approved shade/ species & finish . Aproved Brands -Saint gobain Ecophon, USG Boral,TAP Acustic Ind,Shepard or equivalent	SFT/RFT	7000			
2	Installation of New 10mm thick AC5 Grade wooden Flooring as per approved Shade, color and site feasibility. All necessary profiles shall be considered	SFT / RFT	2500			
3	Removal of existing carpet on Pathways and Fixing New Pile Fiber of BCF Polypropylene with bulk continuous filament and Mechanical gauge of at least 2.5 mm and plain loop consisting of tiffed pile and bond strength of 30 Newton and Tft withdrawal strength of 20 Newton's. Flammability – (ASTM D 2859-96 and CPSC – FF- 170) 8 pass Commercial Heavy Duty , Static Generation under 3 KV Width – 3.66 plus or Minus .05 Roll Length – Approx 30. BRANDS -Donair or equivaant	SFT/RFT	2000			
4	Supply and Errection of Scaffolding to install Wall Panelling as described in specification in all aspects.Removing of existitng damaged perforated panelling/Woodworks and stocking with unloading and lifting charges outside the premisis	SFT/RFT	2500			
5	Servicing of your existing motorised Curtain with new steel rope	LS	1			
6	Wince cloth shall be Removed and will replaced with new navy blue fabric	Nos	4			
7	Providing and applying synthetic plaster putty or plaster of paris putty or lime punning of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2-3hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials, including cost and conveyance of all materials to work site and all operational, incidental and labour charges Asian, Birla or Equivalent	SQMT	2000			
8	Painting to New walls with two coats of oil bound distemper of superior quality of approved brand and shade over base coat of cement primer grade -I making three coats in all to give an even shade after thoroughly brushing the surface to remove all loose powdered materials, including cost and conveyance of all materials, including cost and conveyance of all materials, cost of brushes, water to site, etc. Asian,Birla or Equivalent	SQMT	2000			
9	Melamine polishing of Existing Front Doors Asian,Nerolac or Equivalent	SFT/RFT	500			
10	Repairs of Existing Damage Chairs	No's	200			

(c) SUPPLY, INSTALLATION AND COMMISSIONING OF DUCTABLE AIRCONDITIONING

SI.No	Description	Qty	Unit price	Total Price	Taxes %	Grand Total
EQUIPMENT DESCRIPTION						
1	Supply, of Air Cooled Split Air-conditioners with Refrigerant charging. Units shall be comprising outdoor units consisting of scroll compressors, air-cooled condensing copper coil, condenser fan, control panel mounted in sheet metal powder coated casing etc. The indoor Unit complete with Fan, Washable Filters complete with TEFC (Totally Enclosed, Fan Cooled) motor with 44 TR Floor Standing ductable units and 11 TR ceiling concealed ductable Units with R-22 Refrigerant	2				
2	Supply, of Air Cooled Split Air-conditioners with Refrigerant charging. Units shall be comprising outdoor units consisting of scroll compressors, air-cooled condensing copper coil, condenser fan, control panel mounted in sheet metal powder coated casing etc. The indoor Unit complete with Fan, Washable Filters complete with TEFC (Totally Enclosed, Fan Cooled) motor with 11 TR ceiling concealed ductable Units with R-22 Refrigerant	2				
ANCILLIARY WORKS						
1	Galvanized Steel Sheet Spiral ducting for supply air with proper supports from the slab with full threaded GI rods	20 G	180			
		22 G	315			
		24 G	210			
2	Aluminum Jet Diffusers with volume control dampers and fixing accessories	50				
3	Aluminum powder coated Return Air Grilles along with out collar Dampers	140				
4	Collar dampers for supply air opening to adjust air flow as per requirement.	50				
5	Acoustic insulation of initial part of supply air ducting with 10 mm thick open cell nitrile rubber insulation sheet.	180				
6	Thermal insulation with 10 mm thick closed cell nitrile rubber sheet for balance ducts	400				
7	Canvass Connection at the outlet of the indoor units	6				
8	1 3/8" Hard drawn copper piping with fittings and insulation	120				
9	5/8" Hard drawn copper piping with fittings and insulation	120				
10	Electrical control cabling from indoor to out door units with pvc pipes for Ductable units	140				
11	Initial gas charging for systems to commission the Units	12				
12	Fresh air provision with adjustable damper and wiremesh including bend.	3				
13	P.V.C Drain piping with insulation for duct able split units	60				
14	M.S Stands for mounting the condensing units	12				
15	M.S Supports for hanging the supply air ducts from wall with required materials	900				
16	Making the plant room with Cement brick and Motor with both sides plastering with cement including door for entry and exit, civil works like wall opening to run the ducts for supply air and extra opening for return air on both sides of room.	2				
17	Making the boxing to cover the supply air ducting on two sides of auditorium on top level with perforated gyp board, supports taken from slab and side walls, inside the sheet pasted with 50 mm thick glass wool sheet to reduce the noise level, finishing will be painting with enamel, paint color match with side wall.	2500				
18	Scaffolding with materials up to worked level from ground level with required supports on both sides of auditorium from starting to completion time.	2				
19	Electrical incoming supply cable of 4C x 16 Sqmm Copper cable with 8 swg G.I wire for earthing for all units from Main D.B at Projector room	340				
20	Floor mounted Electrical distribution panel to accommodate the Required incomes and out put for all 6 units with metering, busbar etc	1				
21	Earth pits with materials like copper plate, patti and g.I pipes including charcoal, salt and civil works like digging, again refilling the same.	2				
22	Miscellaneous works like wall opening, closing, lifting and shifting of debris including cleaning, covering the existing seats with polythene cover etc					
23	Lifting and positioning of units with required chain block pulleys or cranes with required isolators on machine bottom.					
24	Installation, testing and commissioning of ductable systems with laying of copper piping, cabling, leak testing, evacuation, gas charging for					
25	55 / 11.0 TR Duct able split units	12				
(A) Grand Total (inclusive of all taxes as applicable)						
(B) Cost of Salvageable materials including reusable/resalable						
(C) Net Amount to be payable to the L1 bidder after adjusting the Grand Total (less) Cost of Salvageable (A-B)						

Note: The vendors are advised to quote prices exclusive of taxes as applicable as per government norms and show the tax component separately followed by Grand Total prices. The discretion is vested with the University to decide as per the requirements. Tenders will be finalized even if one bidder is qualified and the contract will be awarded to the respective lowest bidder. The bidder should complete the entire work within Four weeks on war foot basis in view 105th Indian Science Congress. Any delay in the execution of the work the bidder shall have to forfeit the EMD and penalty will be levied by the University. The bidder must have experience in execution of similar works of renovation and refurbishment of Senate Hall/Auditoriums/Seminar halls, etc.

Annexure – III

COMMERCIAL BID – Part-II

(To be submitted in a separate sealed envelope)

Amount payable during the defective liability period of two years and another three years of AMC which includes Operation and Maintenance, repairs and replacements for all items of work for a total period of FIVE years (Two years of defective Liability period and Three years of AMC) after completion of the scope of work.

S.No	Particular of Services to be rendered	Amount Payable in NRI	
		First Six Months (1-6 Months)	Another Six Months (7-12 Months)
1	Operation and Maintenance including repairs and replacements and all such activities are functions which needs, repairs and replacements during defective liability period of FIRST YEAR		
2	Operation and Maintenance including repairs and replacements and all such activities are functions which needs, repairs and replacements during defective liability period of SECOND YEAR		
3	During the AMC of FIRST YEAR after defective liability period. Operation and Maintenance including repairs and replacements and all such activities are functions which needs, repairs and replacements during FIRST year of AMC		
4	During the AMC of SECOND YEAR after defective liability period. Operation and Maintenance including repairs and replacements and all such activities are functions which needs, repairs and replacements during SECOND year of AMC		
5	During the AMC of THIRD YEAR after defective liability period. Operation and Maintenance including repairs and replacements and all such activities are functions which needs, repairs and replacements during THIRD year of AMC		