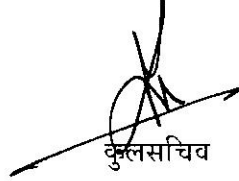डॉबाआंतंवि/भांडार/स्थावर/अं.प.सू /२०२४-२५/०१   दि.०१/०३/२०२५

अंदाज दरपत्रक सूचना

    डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ, लोणेरे येथील शैक्षणिक संकुल प्रकल्पातील विविध इमारतीकरिता करण्यात येणाऱ्या इंटेरिअर डिझायनिंग,फॉल्स सीलिंग वर्क, अकोस्टिक, स्टेज लाईट, डिजिटल क्लासरुम तयार करणे व अनुषंगिक सिविल, इलेक्ट्रिकल व मेकॅनिकल कामे करण्यासाठी अंदाज पत्रक तयार करणे करिता व्यवसायिक नोंदणीकृत, पात्र व सदर कामांचा किमान पाच वर्ष पुर्वानुभव असलेल्या पुरवठादार/कंत्राटदार यांचेकडून दरपत्रक मागविण्यात येत आहेत.

    सदर कामाचे दरपत्रक प्रपत्र व इतर तपशिलवार माहिती विद्यापीठाच्या www.dbatu.ac.in या संकेतस्थळावर उपलब्ध आहे. आपण आपले सिलबंद दरपत्रक डॉ. बाबासाहेब आंबेडकर तंत्रशास्त्र विद्यापीठ लोणेरे यांचे नावे दि. १५/०३/२०२५ रोजी सांय. ०३.०० वा. पर्यंत अथवा तत्पूर्वी स्थावर विभागातील कुलुपबंद पेटीमध्ये जमा करावेत. सदरचे दर हे फक्त अंदाजपत्रक तयार करणेसाठी गृहीत धरण्यात येणार आहेत.

कुलसचिव

NAME OF WORK: PREPARATION OF ESTIMATE FOR INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE LIGHT, STAGE CRAFT, DIGITAL CLASSROOM, AND ANCILLARY CIVIL AND ELECTRICAL WORKS OF

AUCOSTIC WORK, CATWALK, CARPET AND CHAIR WORK

Sr. No.	DESCRIPTION	QUANTITY	UNITS	RATE	GST %	AMOUNT INCLUDING GST
1	PITC of Modular Rigid PVC Metal Panelling for Auditorium & Control Room 1) Factory made removable type Modular Metal Panelling system. The front sheet shall be constructed from preformed textured hot-dip galvanized metal with a rigid polyvinyl chloride (PVC) film on one side and a rust-resistant coating on the other side. The sheet thickness shall be no less than 0.6mm. The overall system thickness shall range between 80-90mm.The metal panelling/partition shall be Greenguard Gold Certified from (UL / Intertek). Valid certificate to be submitted along with the technical bid. 2) Tiles Perforation – To achieve acoustics without deteriorating the aesthetical appeal of the room it is necessary that the wall panelling shall have micro-perforations (less than 1.6mm diameter each) atleast 25% of the panelling area with a density of 5000 holes per square feet. UL audit certified design feature on modular wall panelling tile having clean perforations and providing smooth finish on front fascia of tiles. The tile shall have 5000 holes per square feet on front side of the tile. Valid UL audit certificate to be submitted along with the technical bid.3) The modular metal panelling shall comply to the lead-free directive to ensure restriction of hazardous substances so that the final product does not contaminate the environment. The final product i.e., modular metal panelling does not contain hazardous substances and we give a healthy life to our coming generations it is necessary that the modular metal panelling system shall be RoHS certified (from UL / Intertek). Valid certificate/test report to be submitted along with the technical bid	1.00	Sq.M.			
	4) Seismic safety of user & equipment is a prime concern area. The metal panelling shall sustain the seismic vibrations as per design spectrum IS 1893 for zone 4 or better vibrations. The test shall be carried out by authorized government agency. Test Report to be submitted along with the technical bid. 5) The wall panelling shall be robust & strong enough to sustain the routine loads/minor impacts of typical room environment. The wall panelling/partition structure shall have UL audit certified feature of Load bearing capacity of 300 Kgs to hold any display unit on clamp having minimum length of 750mm. Valid UL audit certificate to be submitted along with the technical bid.6) In an unlikely case of damage to the existing wall panelling tiles the same shall be replaceable within 120 seconds and thereby preventing loss of time of operators and ongoing operations. UL audit certified feature of modular wall panelling tile having secure locking arrangement for equidistant mounting. Locking arrangement enables easy replacement without using any tool within 120 seconds. The feature shall provide easy flexibility of locking all tiles in one column through gravity. Valid UL audit certificate to be submitted along with the technical bid. 7) The modular metal wall partition/partition shall meet the fire resistance rating criteria of 60 minutes with respect to Thermal Insulation (I), Integrity (E), and Stability (R) in accordance with BS 476 Part 20 & 22. The fire resistance test must be conducted by UL/Intertek/ an authorized Fire Research Laboratory under the Government of India. Valid test reports/certifications to be submitted along with the technical bid. 8) The structural framework shall include vertical tubular galvanized iron (GI) pipes securely installed between top and bottom GI frames.					
2	PITC of Printed Metal Panelling for Auditorium: 1) The printed panelling shall have the same technical specifications for structure as that of modular rigid PVC metal panelling (Wall Finishing - Modular rigid PVC metal panelling). Except for the front tile, which shall be powder coated & digitally printed. Graphics shall be approved by the Customer. 2) Digital printing shall be done on modular metal Panelling. Pasting stickers/flex/vinyl on metal tile shall be deemed unacceptable.	1.00	Sq.M.			

3	PITC of Fabric Panelling for Auditorium : 1) Factory-made removable type modular fabric paneling system. The panel shall be made up set of extrusions joined by die-casted corners and metal clamps, with fabric tensioning mechanism shall be concealed in the aluminium frame to ensure that the fabric remains perfectly taut. The fabric tension within each frame shall individually adjustable, allowing for optimal stretch in all directions. The panels shall be mounted on a minimum 1.5 mm powder-coated CRCA metal frame, with the help of hooks fabricated from minimum 2.0 mm powder-coated CRCA sheet. Acoustic backing provision may be provided (as per acoustical requirements), and a minimum 100 mm skirting shall be provided to screw in alignment with the structure (if the panel starts from the floor). Overall fabric panel thickness shall be minimum 52 mm, and the system thickness shall be minimum 120 mm. 2) There shall have possibility of variety of colours to choose from the available fabric catalog. 3) Panel shall be designed in such a manner that it takes care of undulation of walls and gives perfect flat surface finish and compile easy service & maintenance procedure. 4) The fabric panelling shall be Greenguard Gold Certified from (UL / Intertek). Valid test reports/ certifications to be submitted along with the technical bid.	1.00	Sq.M.			
4	PITC of Fabric Panelling with combination of having 2D / Motifs of PET for Auditorium:- 1) Factory-made removable type modular fabric paneling system. The panel shall be made up set of extrusions joined by die-casted corners and metal clamps, with fabric tensioning mechanism shall be concealed in the aluminium frame to ensure that the fabric remains perfectly taut. The fabric tension within each frame shall individually adjustable, allowing for optimal stretch in all directions. The panels shall be mounted on a minimum 1.5 mm powder-coated CRCA metal frame, with the help of hooks fabricated from minimum 2.0 mm powder-coated CRCA sheet. Acoustic backing provision may be provided (as per acoustical requirements), and a minimum 100 mm skirting shall be provided to screw in alignment with the structure (if the panel starts from the floor). Overall fabric panel thickness shall be minimum 52 mm, and the system thickness shall be minimum 120 mm. 2) There shall have possibility of variety of colours to choose from the available fabric catalog. 3) Panel shall be designed in such a manner that it takes care of undulation of walls and gives perfect flat surface finish and compile easy service & maintenance procedure	1.00	Sq.M.			
	4) The fabric panelling shall be Greenguard Gold Certified from (UL / Intertek). Valid test reports/certifications to be submitted along with the technical bid. 5) PET 2D-motifs shall be installed over the fabric paneling to enhance the aesthetical appeal of the facility. These PET motifs shall be computationally generated paneling form made up of polyethylene terephthalate, the material shall be resistant to moisture. The elements shall be arranged in a defined pattern with proper spacing. The panels shall be fixed on bison board/painted walls/steel structure/fabric paneling with appropriate fixing/installation method. The proposed acoustic panels shall be Greenguard Gold certified/tested (from UL/Intertek). The panels should be available in 9mm & 12mm thickness. Material NRC should range between NRC: 0.8 - 0.85.					
5	PITC of PET Panelling for Auditorium: -1) Computationally generated partition/paneling form made up of polyethylene terephthalate, the material shall be resistant to moisture. The elements shall be arranged in a defined pattern with proper spacing. The panels shall be fixed on bison board/painted walls/steel structure with appropriate fixing/installation method. The proposed acoustic panels shall be Greenguard Gold certified/tested (from UL/Intertek). The necessary certificate / test report to be submitted along with the technical bid. The panels should be available in 9mm & 12mm thickness. Material NRC should range between NRC: 0.8 - 0.85. 2) To ensure restriction of hazardous substances; the acoustic panel/board shall be RoHS certified/tested (from UL/Intertek). The necessary certificate / test report to be submitted along with the technical bid	1.00	Sq.M.			

6	PITC of Fire Rated Cum Acoustic Wooden Door - of 120 mins. (30-32db Approx.) for Auditorium and Control Room:- 1) ISO 9001:2015 certified Fully Insulated Non Metallic Wooden Fire door at all Levels. 2) Fire doors satisfy the requirement of latest NBC 2016 Part 4 for Fire & Life Safety guidelines for 120 minutes Fire Rating with 20 minutes Insulation properties along with its Stability & Integrity for 120 minutes. 3) Wooden Fire door carries 120 minutes Insulation properties. 4) The Prototype fire door sample carry a prior test evidence as per IS 3614 part-2 / BS 476 Part 20 & 22 .The offered test certificate should either carries it's Validity or certificate must not be older than 5 years from CBRI / NABLAccredited Lab i.e Spectro or by any accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 fortesting and calibration scopes shall be eligible. 5) The door must carry the Batch sticker with scanning options for offered door details. The offered test report evidence must be FR/0378 or equivalent for 52mm thick Wooden fire doors. Door Frame 1) Door frame shall be Single rebate profile of section 140 x 90 mm made out of Hard Wood (Red Mirandi) with factory made groove of suitable size so as to accommodate Fire & smoke seal of size 20x4mm. Wooden Shutter : 1) Wooden shutter must be of 77mm thickness finished with 6mm Thick Commercial Ply & 1mm Thick Laminate (Any Regular Plain Shade inSuede Finish) on both faces. 2) The composite thickness of the core insulation will be 45mm thick consists of calcium Silicate boards and treated wool Insulation material. 3) The shutter should be provided with heat activated intumescent fire seal strip of size 20mm x 4 mm mounted in the suitable grooves all three sides except bottom provided on Exposed wooden lipping etc. complete.					
	Door Size : 2000mm (W) X 2400mm (H)	1.00	Nos.			
	Door Size : 1800mm (W) X 2400mm (H)	1.00	Nos.			
	Door Size : 900mm (W) X 2400mm (H)	1.00	Nos.			
	Door Size : 800mm (W) X 2400mm (H)	1.00	Nos.			
7	PITC of PET Ceiling for Auditorium:-1) Computationally generated ceiling form made up of polyethylene terephthalate, the material shall be resistant to moisture. The panels/elements shall be arranged in a defined pattern with proper spacing. The width of the polyethylene terephthalate slots shall be minimum 150mm and maximum 1700mm. Maximum single piece length shall be 3000mm the arrangement shall be held in place using the customized metal systems. The thickness options shall be 9mm & 12mm. Material NRC should range between NRC: 0.8 - 0.85. The ceiling shall be light in weight and easy to handle. 2) The proposed PET acoustic ceiling panels shall be Greenguard Gold certified/tested (from UL/Intertek). The necessary certificate / test report to be submitted along with the technical bid. 3) To ensure restriction of hazardous substances; the acoustic panel/board shall be RoHS certified/tested (from UL/Intertek). The necessary certificate / test report to be submitted along with the technical bid.	1.00	Sq.M.			
8	PITC of Fabric Panels for Auditorium :- Stretched fabric ceiling shall be installed over minimum 60 mm wide heavy duty extruded aluminum frame with die cast aluminum corners. Self-tensioned spring system shall keep the fabric surface in a perfectly stretched condition. The fabric shall not be installed/pasted/ glued/bolted on any flat surface. There shall be air gap of at least 10mm between the fabric and the acoustic material. Fabric shall not be affected by humidity or temperature. The frames shall have flexibility to achieve any, size, and angle of inclination. Length of ceiling shall be minimum 200mm and maximum 6000mm. Aluminum frame shall allow easy removal & re-upholster whenever required. The fabric shall be tested by independent engineering companies to achieve acoustical performance. Fabric shall have light fastness of 5 as per ISO 105 - B02 and flammability standard to adhere BS 476 Part 6 Class 0. Any additional charges shall not be paid for the same. The ceiling shall be Greenguard gold certified/tested. The necessary certificate / test report to be submitted along with the technical bid.	1.00	Sq.M.			

9	PITC of Designer Metal Ceiling for Auditorium:- 1) Factory made acoustic modular metal false ceiling of powder coated panels. Make shall comprise of perforated and non-perforated metal panels made through CNC laser Cutting, bending & punching. Panel shall be of 0.6mm CRCA sheet of approved powder coating finish. The designer metal ceiling shall be greenguard gold tested/certified (from UL/Intertek). Valid certificate/test report to be submitted along with the technical bid. Metal modular false ceiling shall have Noise absorption coefficient (NRC) value 0.60 according to IS:8225-1987, ISO: 354-1985 and ASTM 423- 90. 2) It is well known that metal is resistant to fire as compared to wood & fabric. However, from fire and safety point of view, to ensure that the used material is not subjected to any kind of surface treatment which provokes fire. The proposed ceiling tiles shall be Class A certified as per ASTM e84 (from UL / Intertek) for surface spread of flame and smoke generation. This is mandatory to ensure that the materials used in the interiors do not provoke fire. Valid certificate/test report to be submitted along with the technical bid. 3) To ensure restriction of hazardous substances; so that the final product does not contaminate the environment and we give a healthy life to our coming generations it is necessary that the modular metal ceiling system shall be RoHS certified (from UL / Intertek). Valid certificate/test report to be submitted along with the technical bid. 4) Structure shall be made from heavy duty powder coated CRCA steel sheet (minimum sheet thickness 0.8 to 1.6mm)	1.00	Sq.M.			
10	PITC of Designer Acoustic Metal False Ceiling with planks:-1) Factory made acoustic modular metal false ceiling of powder coated panels. Make shall comprise of perforated and non-perforated metal panels made through CNC laser Cutting, bending & punching. Panel shall be of 0.6mm CRCA sheet of approved powder coating finish. Panels shall be designed to achieve shape and design as per the design consultant with the combination of acrylic panels with lights, designed to enhance visual feel, with provision for easy installation and maintenance, integrated lighting and scope for integration of building services like HVAC and fire detection/ fighting system. The designer metal ceiling shall be greenguard gold tested/certified (from UL/Intertek). Valid certificate/test report to be submitted along with the technical bid. Metal modular false ceiling shall have Noise absorption coefficient (NRC) value 0.60 according to IS:8225-1987, ISO: 354-1985 and ASTM 423-90. 2) It is well known that metal is resistant to fire as compared to wood & fabric. However, from fire and safety point of view, to ensure that the used material is not subjected to any kind of surface treatment which provokes fire. The proposed ceiling tiles shall be Class A certified as per ASTM e84 (from UL / Intertek) for surface spread of flame and smoke generation. This is mandatory to ensure that the materials used in the interiors do not provoke fire. Valid certificate/test report to be submitted along with the technical bid. 3) To ensure restriction of hazardous substances; so that the final product does not contaminate the environment and we give a healthy life to our coming generations it is necessary that the modular metal ceiling system shall be RoHS certified (from UL / Intertek). Valid certificate/test report to be submitted along with the technical bid	1.00	Sq.M.			

	4) To avoid dark spots/areas in the control room it is necessary that continuous linear lights are used across the width/length of the control room. UL audit certified design feature of integrated channel in ceiling for quick installation & replaceability of continuous linear light: The ceiling system having integrated inbuilt channel for installation of cove lights and shall permit quick and easy replacement of cove light without using any tools. Replacement to be carried out within 120 Seconds per meter. Valid certificate/test report to be submitted along with the technical bid. 5) Seismic safety of user & control room equipment is a prime concern area. The metal ceiling shall sustain the seismic vibrations as per design spectrum IS 1893 for zone 4 vibrations or better. The test shall be carried out by authorized government agency. Valid certificate/test report to be submitted along with the technical bid. 6) The proposed "Acoustic Modular Designer Control Room Interiors with Designer Metal Ceiling" should be assessed (from an authorized practitioner of LCA) for environmental impacts associated with all the stages of a product's life for cradle to gate with end of life. OEM shall have had valid report/document from UL/Intertek to be submitted along with technical bid. 7) The EPD of the Acoustic Modular Designer Control Room Interiors shall be verified in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 (from UL/Intertek) for impacts on environment by Acoustic Modular Designer Control Room Interiors with Designer Metal Ceiling. 8) Structure shall be made from heavy duty powder coated CRCA steel sheet (minimum sheet thickness 0.8 to 1.6mm)					
11	PITC of Gypsum Ceiling for Auditorium & Control Room:- The false ceiling shall consist of approximately 12 mm thick gypsum boards, supported by a structure formed of GI perimeter channels. The boards shall be affixed to the wall using wood screws and metal expansion raw plugs. The gypsum boards are manufactured from an aerated gypsum core with water-repellent additives, firmly bonded to strong paper liners. The surface of the gypsum boards shall be finished with plastic emulsion paint of an approved make and shade. The gypsum boards shall comply to below standards: 1.1) Surface Spread of Flame (BS-476 -Part-7): The boards shall be classified as Class 1, ensuring a high level of fire resistance. 1.2) Water Absorption Class (EN-520): The boards shall meet the requirements of Class H1, indicating efficient resistance to water absorption etc. complete.	1.00	Sq.M.			
12	PITC of Designer Acoustic Flooring for for Auditorium & Control Room Carpet Flooring minimum 4 mm thick acoustic carpet flooring shall meet the requirement of EN 1307 (shall have Impact sound of minimum Lw = 19 dB as per (ISO 717-2)). Flooring shall be decorative type of approved shade, pattern, texture and design and of approved manufacturer with sound absorption of 0.1 as per ISO 354. The designer acosutic flooring shall be Greenguard Gold certified from (UL / Intertek). Valid certificate/test report to be submitted along with the technical bid. Dimensions shall be as per the final approved design and site requirement etc. complete.	1.00	Sq.M.			

13	PITC of Wooden Flooring for Auditorium :- Teak wood flooring system for Auditorium Stage Flooring SURFACE BOARD: - 1ST Class Teak Wood Sports Flooring - Grade 1" LABO SPORTS Test Certify finished with 21 mm Thickness, 55 to 85mm wide and in random length in tongue and groove shape. The edges of the boards will have a finger lock groove and the bottom side with air pass groove and treated with special anti-termite and water-resistant lacquer. THE UNDER FRAME: - Resilient SPF Pine Wood sleeper subfloor of 70 mm x 45 mm, treated with anti-termite solution and fixed on the bottom side with 19 mm thick EPDM rubber pads, stapled through the two wings at 350 mm x 350 mm. INSTALLATION: - IPS subfloor treated with a vapour barrier to be placed on the levelled IPS sub-floor before laying the under frame. The runners having air cushion pads to be placed on the vapour barrier in perfect level at 350 mm in 1 direction. The surface board to be screwed to the runner through the tongue only and will lock the screwed tongue by the groove of adjoining board. Ends of the boards will be locked by inserting the wooden fingers through the edge grooves and fixed with suitable adhesive. The expansion of 12-15 mm will be left open between the wooden flooring and the surrounding tiled area / walls. FINISHING: - After installation the floor will be machine sanded in uniform level and finished with P. U. Polishing water based polyurethane lacquer. Game line marking to be carried out in required color before applying the finish coat. etc. complete.	1.00	Sq.M.			
14	PITC of Granite Stone for Floor Highlighter/steps in required design and pattern, with 12mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) laid and joint with white cement slurry including pointing with white cement slurry admixed with pigment of matching shade as directed by the Engineer-in-Charge.	1.00	Sq.M.			
15	Providing & Fixing in position **Under Deck insulation** for roof using 800 Gsm synthetic wool with Laminated Tissue paper fixed to roof using adhesive & binding wire as per detailed Architectural - Acoustical Design & Drawings etc. Complete in all aspects.	1.00	Sq.M.			
16	Providing & Fixing in position **18mm thick Waterproof plywood** on 50mm x 50 mm Indian Teak -Wood frame at 600mm x 600mm c/c (center to center) distantce including cost of required Cut-Outs as per detailed Architectural -Acoustical Design & Drawings etc. Complete in all aspects including necessary sacffolding. Specification No: As directed by engineer in charge (Excluding cost of 2nd class Indian Teak Wood- frame)	1.00	Sq.M.			
17	Providing New Modular Control Desk for provision of 01 monitor 750mm(W) X 1000mm(D) X 750mm(H) for control room 1. Table top: - The material of the working surface shall be minimum 25 mm thick MDF with High-Pressure laminate. The proposed Control Desk's life cycle should be assessed (from approved LCA consultant) for environmental impacts associated with all the stages of a product's life for cradle to grave analysis. Valid report/document from UL/Intertek to be submitted along with the technical bid. 2. Modular removable PU nosing: The front edge of consoles is the component which comes in frequent contact of the operator. The soft polyurethane edge is meant to prevent injury (accidental impact) to operator during emergency and it also reduces the contact stress. In case of damage to this edge the desk design shall permit quick & easy replacement within half an hour without taking any shutdowns or removal of the tabletops. Audit certified design feature of modular PU Edge: High-density poly urethane moulded on industrial grade aluminium core to form 50mm deep tapered edge to be installed on worktop. In case of damage or wear, the edge shall be mechanically replaceable within 30 minutes without opening or removing the worktop. Valid UL audit certificate to be submitted along with the technical bid. Extruded PU edging/PVC T-beading shall be deemed unacceptable. 3. Structure: - 3.1 Made of heavy-duty extruded vertical and horizontal aluminium profiles. The extrusions shall be duly powder coated with 40+ microns over all surfaces. All sheet metal parts shall be finished with a durable, black, electrostatic powder coating. OEM shall have a valid trademark registration certificate issued by the Government of India for the Control Desk proposed in this tender. Valid Trademark registration certificate to be submitted along with the technical bid.	1.00	Nos.			
18	Providing & Fixing of Auditorium chairs with auto tipup, chair of 21" / 22" ctc in row with common PU with soft pad arm rest and chair fully upholstered in our standard foam backed polyester stretch fabric as directed by Engineer-In-Charge including writting pad and navigation name/number etc complete.	1.00	Nos.			

19	Provide and Fixing Mural including clay moulding, scaffolding, Joint Filling and Finshing, Coloring, Weather Proof Coating including all Labour, tool, equipments and trasporation, loading, unloading, fixing and installing in proper position as directed by engineer-In-incharge and aprroved by architect. Mural Design should be sumited by contractor for Aprroval of Client and Architect before Execution.						
	a) F.R.P. Casting	1.00	Sq.M.				
	b) Bronze Metal Casting	1.00	Sq.M.				
	c) G.R.C. Casting	1.00	Sq.M.				
20	**Fixing of Wall paneling:-** Providing and fixing on site Laminated / veneered panelling made by using Centrally Province Teak Wood (C.P.T.W.) framing out of 38 x 25 millimeter (finished size) at approximately 600 x 450 millimeter center to center or as per site conditions and covered by 6 millimeter thick marine ply of the requisite manufacture generally confirming to I.S.303 finished with 4 millimeter thick match group veneer with grooves pattern of approved quality including all necessary end mouldings, moulding pattern, and melamine polish. Antitermite treatment to all plywood and woodwork etc.including all leads and lifts etc complete as per Architect's Drawing and instructions of Engineer In Charge.	1.00	Sq.M.				
21	**Fixing of Carpet:** Providing and laying decorative type Green carpet tile of approved make and required size 7 - 8 mm thick with pvc backing of approved shade and pattern for flooring in required position including neat necessary surface preparation,application and cleaning etc.complete.as per Specification and directed by The Engineer-In-Charge.	1.00	Sq.M.				
22	**Fixing of Wall Paper:** Providing & fixing Wall Paper on wall/ partition. Rate includes sanding, scrubbing, making the receiving surface smooth of imperfections so as to receive the wall paper. (Basic rate of WallPaper: Rs.1500/ Sq. M)	1.00	Sq.M.				

	NAME OF WORK: PREPARATION OF ESTIMATE FOR INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE LIGHT, STAGE CRAFT, DIGITAL CLASSROOM, AND ANCILLARY CIVIL AND ELECTRICAL WORKS OF VARIOUS BUILDINGS OF EDUCATIONAL COMPLEX AT DR. BABASAHEB AMBEDKAR UNIVERSITY OF TECHNOLOGY, LONARE.					
Sr. No.	**DESCRIPTION**	**QUANTITY**	**UNIT**	**RATE**	**GST %**	**AMOUNT INCLUDING**
	FURNITURE					
1	Providing and fixing File Storage Units 900(W) x 450(D) x 2100(H) WITH WOODEN DOORS Providing, supPLPBing and placing of storage unit.Product Size - 2 Doors (LH and RH) Construction & Material - Made from 0.6mm Thick CRCA (D Grade, IS-513) Soft closing Hinge Handle - Asthetically appealing handle made of Aluminum Wooden Doors with Cam Lock - Made of 18mm Thick Pre-laminated twin board of E1-P2 grade and approved shade confirming to IS-12823:1990 Soft closing Hinge. -3 Way locking provision. - Click action mechanism. - Key removable in locked and unlocked positions. - Zinc alloy die cast housing. Finish - Epoxy Polyester Powder coated to the thickness of 50 microns (+/-10 micron).	1.00	Nos.			
2	Providing and fixing File Storage Units (Size 1200 W x 450 D x 750 H) Providing, supPLPBing and placing of storage unit.The wooden storage range comprises of a range of Low height to medium height wooden SDU. Body : Body is made from 18mm PLB with all the edges sealed with 0.8 mm thick PVC Edgeband. The Back panel is 9mm White PLT. The entire construction is ready to assemble unit and is assembled with suitable KD fittings. The shelves and separator panels (if available) is made from 18 mm white PLT and edges are sealed with 0.8 mm edge band. The bottom shelf is fixed and other shelves have one step adjustment for optimizing the space. Doors : Door Panels ae made from 18 mm PLB with 2 mm Edge band on all edges ad a flush Plastic handle is fitted vertically at the center of the door. The SDU runs in a PVC track mounted on the TOP and Bottom panel of the Body. SDU has a push type lock.	1.00	Nos.			
3	Manufacturing, Providing and Installation of Executive Cabin Table, Table Top Shall made up of 36 mm thick. Interior Grade Pre-Laminated Medium Density Fiber Board Confirming IS 14587:1993 with 2 mm thick PVC edge banding all around and 12 mm thick. designer aluminium profile at the bottom the table top all around. The Modesty shall be made of 25 mm Thick Interior Grade Pre-Laminated Medium Density Fiber Board Confirming IS 14587:1993 with 2 mm thick PVC edge banding. The Table top shall be Supported by Pedestal from one side and Pedestal shall made of 18 mm thick Interior Grade MDF Board with 75 mm Height of Skirting. Pedestal Body, Facia shall made up of 18 mm thick Interior Grade MDF board and Drawer body shall made up of 15 mm thick Interior Grade MDF board Confirming to IS14587:1993. Pedestal shall have Box+Box+Box configuration with duplicate Locking Facility. The pedestal Unit should be provided with Equal Three Nos of drawer and all the drawer should be slide with s drawer double telescopic channel. Drawers have a soft closing mechanism. Handles are provided for ease of opening. Other Side of the Table Top shall be Supported by the ERU (Open 3 Door System). The Body, Shutter and Open Shelf of ERU shall made up of 18 mm thick Interior Grade Pre- Laminated MDF Board Confirming to IS 14587:1993. The ERU Storage Shall come with Locking Facility. Storage has a soft closing & anti slam mechanism. Metal Leveller shall provide at the bottom of the storage to adjust the floor level up to 5-10 mm. Handle of shutter shall made up to Stainless steel (Matt/Glossy) of Grade 202 with Arc Profile. Wire Management-For wire management, Access Flap shall provide on table top and access flap shall made up of CRCA Sheet with 1.2 mm thick Grade-IS 513:2008 with approved shade of Epoxy Polyester Powder coated to the thickness of 60 to 70 microns. Access flap have size of minimum 350-400 mm to fit the 10 Module of electrical module approved by the architects. Switch Mounting Box shall made up of CRCA sheet with 1.2 mm thick of Grade-513:2008 of in approved shade of Epoxy Polyester Powder coated to the thickness of 60 to 70 microns. Wire shall move from ground to table top through the Vertebrae and Vertebrae shall made up of ABS Plastic with Size 850LxDia 65 mm for movement of more no's of wires and Item shall be complete as per guiding image, manufacturer's specification and direction of Engineer – in – charge. Dimension- 1800Wx750Dx750HT+ERU- 900x450Dx620HT (in mm)	1.00	Nos.			

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE	GST %	AMOUNT INCLUDING
	FURNITURE					
4	Providing, assembling and placing in position High Back Executive Office Chair as per specifications - Chair seat shall be made up 12mm thick Moulded Ply Board and Back shall made up of 12 mm ply. Seat and Back shall Covered with leatherette Upholstery with moulded with High Resilience (HR) PU foam of density 45 kg/cum & hardness load of 16 kg -f as per IS 7888 for 25% compression. The Thickness of Seat Cushion shall be 50 mm and back cushion shall be 50 mm thick. Chair shall have headrest covered with leatherette upholstery. The size of seat shall be 512W mmx495 D mm and back size shall be 495W mm X 830 Ht. mm. Seat and Back shall be join through the 8 mm thick MS HR Sheet. Chair shall have adjustment headrest and upholstered with Leatherette. The Size of Nest rest shall be 300 W mm x63 D mm x 125 H mm. Chair shall have adjustable rest as per user requirement. Chair shall have the adjustable type armrest with the 3 D function (Up/Down, Swivel, Front/Back). Armrest shall have metal insert for better stability and strength. The armrest top shall be moulded from PU Pad and mounted on to a drop lift to armrest support & shall have 1 steps height adjustment of 40 -50 mm. Chair shall have Bio synchro mechanism with 4 Position Locking with Tension adjustment, 360 - degree revolving type, seat back tilting ratio 1:2, 3 position tilt limiter. Chair shall have BIFMA Level 3 Gas lift with the height adjustment of 100 mm. The chair shall have high Die Casted aluminium pedestal of size 700 mm (PCD) pitch centre dia. fitted with 5 Nos. injection moulded plastic twin wheel 50 mm dia. castors. Overall Dimension - 730Lx700Wx1170/1270 Ht. and Item shall be complete as per guiding image, manufacturer's	1.00	Nos.			
5	PROVIDING Wood CHAIR The seat and back shall be made up of wood veneer with foam back. The chair can also be provided with fixed wooden armrests .The dimensions of back shall be 49 cm (W) X 37 cm (H) and of seat shall be 51 cm (W) X 50.0cm (D). The Seat and Back Inner shall be upholstered with PU foam and fabric and shall be assembled over the seat and back. The chair is made of Rubber wood veneer with thickness of the leg 25 mm and width of the leg at 28mm. Seat Height - 46 cm, Height-83.0cm, Width & Depth of Chair as measured from base - Width-60.0cm and Depth-56.0 cm.Dimensions tolerance / variations shall be within +/- 1 cm.	1.00	Nos.			
6	METAL STORAGE WITH GLASS DOOR 900W X 450D X 2015H Glass Door Storwel shall have an overall size of 916mm(W)x486mm(D)x1981mm(H) with welded construction. It should have shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA 'D' grade high yield strength as per IS:513. The glass door storwel shall have a brass handle and a 2 way locking mechanism with shooting bolt . It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It should also have a M10 Screw type Leveller with Hex plastic base. The finishing shall include Epoxy powder coated to the thickness of 50 microns (+/- 10). Plenty of colour options and shelving options shall be available. The Storages is knock down are made up of CRCA having shelves. The storage has equally divided shelves. Each storage door system has an indivial locking mechanism pre-fitted to it. The top of the Storage is made up of 0.8 mm thick CRCA duly powder coated to aproved finish. The caracass and shelf are made up of 0.8mm (18 GAUGE) CRCA Duly Powder Coated. The skirting is made up CRCA duly powder coated to the approved finish. The shelf comes with a stiffner with a thickness of 15mm duly tested for 40Kg UDL. The doors are made of 0.8mm thick CRCA with stiffeners for support. The powder coating is of 60-80 microns.	1.00	Nos.			
7	Providing & fixing 8 Seater Dining Table: Top shall be of Stainless Steel brushed with PLB insert for Durability . Easy to maintain hygiene . The Understructure shall be made of 50.8 mm x 50.8 mm 1.2 mm thick powder coated ERW tubes at base which are welded and fixed to the Top with screws . Tubular stiffeners that are provided between the two vertical frames . The tubes shall be closed with plastic caps . Level adjustment shall be provided to take care of unevenness in floor .	1.00	Nos.			
8	Stool for Lab and Class-IV Providing and fixing 4 legged Lab stool, Legs made of 16 Guage 45 MM Outer dimension MS Pipe, Duly painted, With a 304 Grade Stainless steel 12 inch wide seat with a 1 inch collar, Height adjustment via a screw. as per design and drawing and instructions of Engineer in charge.	1.00	Nos.			

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE	GST %	AMOUNT INCLUDING
	FURNITURE					
9	Mild Steel Locker : Mild Steel Locker : Providing, supPLPBing and placing of storage unit.Product Size - 2 Doors (LH and RH) for 1200W For 600W and 1200W storage-Each Door width 598W Construction & Material - Made from 0.6mm Thick CRCA (D Grade, IS-513) Soft closing Hinge Handle - Asthetically appealing handle made of Aluminum Cam Lock - -3 Way locking provision. - Click action mechanism. - Key removable in locked and unlocked positions. - Zinc alloy die cast housing. Finish - Epoxy Polyester Powder coated to the thickness of 50 microns (+/-10 micron).	1.00	No			
10	**Providing and fixing Corner Table With MS Understructure with Toughened Glass top, 600 x 600 x 450H** 12mm thick toughened glass top with MS powder coated understructure (25x25 tube section). Free from burrs & sharp edges etc. complete and approved by Architect / Clients.	1.00	No			
11	Providing & Fixing 3 Seater Sofa. The seat , armrest & backrest assembly shall consists of a Pine understructure with PLPBwood frame consisting layers of foam with wadding. The complete assembly shall be covered with Leatherette upholstery . The size of seat shall be: 131.0cm. (W) X 51.5cm. (D) X 43 cm. (H) Approx. Elastic Webbing is used to give a soft contour to the seat . It consists of a fabricated inner-frame hardboard assembly with layers of foam. The hardness of the P.U. foam= 16-20 Kgs. on Hampden m/c for 25% compression of the foam. The leg is made of wood and 4 tier packing is used to minimize damage & reduce wastage. Overall Dimensions of Chair shall be Seat Width - 131 cm. Height - 82 cm. Total width - 71 cm. Total length - 160 cm. Dimensions tolerance / variations shall be within +/- 1 cm etc.	1.00	Nos.			
12	PROVIDING & FIXING HIGH Back with moulded mesh back with lumbar support, HR foam seat with plano fabric, 1D adj. armrest, Nylon base & PU Castor VOC Certified chair - ANSI/BIFMA X7.1-2007 & ANSI/BIFMA M7.1-2011.The cushioned seat assembly shall consists of moulded polyurethane foam upholstered with fabric. The foam is assembled over a 12mm thick hot pressed PLPBwood . The back shall made up of two piece injection moulded frame. The inner frame shall be upholstered with mesh fabric and mounted on the main assembly. Size of back shall be (W)-48.5cm, (H)-49.5 cm & size of seat shall be (W)-49 cm x (D)-44.0 cm .Armrest has 2 way button operated height adjustment and depth adjustment. The arm top is made of soft moulded PU with MS insert.The mechanism of chair shall have following features:360 degree revolving type, Synchro mechanism, Tilt tension adjustment, multi position tilt limiter with Back-safety return feature. Head rest assembly shall made up of polyurethane foam upholstered with fabric. The head rest assembly is mounted on the top of back. It has 5 point adjustment of upto 8 cm . The chair shall be provided with pneumatic height adjustment which shall have stroke of 112 mm. The pedestal shall be made of die-cast polished aluminium or nylon. it shall be fitted with 5 nos twin wheel	1.00	No			
13	Centre Table With MS Understructure with Toughened Glass top, 1200 x 750 x 450H 12mm thick toughened glass top with MS powder coated understructure (25x25 tube section). Free from burrs & sharp edges	1.00	No			
14	Providing & Fixing Sofa Chair- The seat , armrest & backrest assembly shall consists of a Pine understructure with PLPBwood frame consisting layers of foam with wadding. The complete assembly shall be covered with Leatherette upholstery . The size of seat shall be: 53cm. (W) X 51.5cm. (D) X 43 cm. (H) Approx. Elastic Webbing is used to give a soft contour to the seat . It consists of a fabricated inner- frame hardboard assembly with layers of foam. The hardness of the P.U. foam= 16-20 Kgs. on Hampden m/c for 25% compression of the foam. The leg is made of wood and 4 tier packing is used to minimize damage & reduce wastage. Overall Dimensions of Chair shall be Seat Width - 53 cm, Height - 82 cm, Total width - 71 cm, Total length - 82 cm. Dimensions tolerance / variations shall be within +/- 1 cm.	1.00	Nos.			

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE	GST %	AMOUNT INCLUDING
	FURNITURE					
15	PROVIDING & FIXING DRESSING TABLE: - 2400 (W) X 600 (D) X 1800 (H) The Dressing table unit is made up of 18mm thick PLPB Board with both side decorative laminate. All exposed edges are sealed with 2mm thick PVC edge Banding. The unit has one drawer and one shelf. The dressing table has a mirror of 4mm thick pasted on 18mm thick PLPB Board attached to the base unit. The mirror size considered is 2000L x 1050H x 4(t). The mirror has been pasted using high quality 3M sticker etc. complete as per detail drawings and approved by Architect / Clients.	1.00	Nos.			
16	PROVIDING & FIXING WARDROBE: - 1200 (w) X 600 (d) X 2100h) . The wardrobe side panels and doors are made up of 18mm thick PLPB with as per approved laminate sahde . side decorative laminate. All exposed edges are sealed with 2mm thick PVC edge Banding. The shelves are made of 18mm thick PLPB with decorative laminate on both sides. The top is made of 18mm PLPB with decorative laminate on both sides. The exposed edges of the top are sealed with 2mm thick PVC edge Banding. The top most part of the wardrobe has an aluminum hanger rod of EBCO make. One drawer of size 400(W) x 150(H) x 450 (D) made of 18mm thick PLPB Board as per approved shade . The drawer will have a multipurpose lock of EBCO premium make. The wardrobe handles are Satin SS finish of 160mm pitch. The wardrobe has a multipurpose lock of EBCO make. All hinges considered are Hettich make. Necessary good quality hardwares have been considered as required. HOSTEL WARDROBE Mirror:- 1060 (H) X 288 (w) x 4 (t)	1.00	Nos.			
17	**HOSTEL BED Single :- 900 (W) x720(H) x 1950(L) for mattress size of 78" X 36" X 4"** Understructure: - The legs are made of Square tube of size 25 x 25mm made out of MS with a thickness of 1.2mm. The legs should have corner brackets welded to it at two levels. The corner brackets are made of 2mm thick CRCA having a L shaped structure to join the side panels and headboard to the leg. Three nos. of Horizontal stiffeners are provided at equal intervals. The stiffeners are made of Square tube of size 25 x 25mm made out of MS with a thickness of 1.2mm. The middle Horizontal Stiffener has a leg attached to it to transfer the load to the ground and add to the strength and stability of the complete structure. This leg is also made of Square tube of size 25 x 25mm made out of MS with a thickness of 1.2mm. All Metal components to undergo 7 tank treatment process and should be powder coated to the thickness of minimum 50 Microns DFT. Side Panel: - The side panels are made up of 18mm thick Prelam Particle Board with both side decorative laminate. All exposed edges are sealed with 2mm thick PVC edge Banding. The overall width of the side panel is 150mm. The side panels have 18mm thick prelam particle board Baton running for required length to add rigidity to the structure. Head Board :- The head board is made up of 18mm thick Prelam Particle Board with both side decorative laminate. All exposed edges	1.00	No			
18	PROVIDING & FIXING HOSTEL STUDY TABLE: - 1200 (W) X 600 (D) x 740 (H) The table top and gable end are made of 25mm thick PLPB As per approved lamiante shade . All exposed edges are sealed with 2mm thick PVC edge Banding. The modesty panel is made of 18mm PLPB As per approved lamiante shade with matching PVC edge Banding. One storage unit of size 400(W) x 450(D) x 715 (H) has been considered. All side panels, shelves and drawer facia are made of 18mm thick PLPB As per approved lamiante shade with matching PVC edge Banding. The drawer will have a multipurpose lock of EBCO	1.00	No			
19	Providing & Fixing Bed Side Table @ 400LX 400DX 415H Providing and Fixing Bed Side Table of size 400LX 400DX 415H The bed side unit is made up of 18mm thick PLPB with both side approved shed laminate. All exposed edges are sealed with 2mm thick PVC edge Banding. The bed side table has one drawer and one shelf. The shelf is made of 18mm thick PLPB with both side approved shed laminate. All exposed edges are sealed with 2mm thick PVC edge	1.00	No			
20	Providing & Fixing Tea Table @ 1200LX 750DX 450H Providing And Fixing Of Tea Table 1200mm X 750mm X 450mm With 12mm Thick Colour Etched Tempered Glass With Bevelled Drawing Made Out Of 18mm Thick Waterproofing PLPB. The Outer Laces To Be Finished With High Quality 4 Mm Thik Veneer Or 1 Mm Thik Mica etc. complete as per drawings and approved by Architect / Clients.	1.00	No			

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE	GST %	AMOUNT INCLUDING
	FURNITURE					
21	**Glass Partition :**Providing and fixing in position Full height 12 mm thick toughened glass partition using approved make customised toughned glass, glass partition fix upto ceiling by19 mm thick BWR 303 ply boxing to hold glass at top in aluminium glazing profile & Aluminum in glazing profile bottom side of approved make as per Architect/Client's instruction and as per detail drawing. Fixed panels of 12mm thick customized clear toughened glass, edge polished fixing with necessary cutting of glass as per drawing & specifications including providing and fixing EPDM quality rubber for aluminum sections / filling transparent neutral cure glazed & metal silicon sealant of approved make on the periphery of the glass & wood/Ply etc Each glass panel secured to the 19 mm thick BWR 303 ply box at top and C -Channel at floor.Item includes all necessary fitting / fixing etc. complete as per drawing, approval and instructions of the Architect/Client. sample mock shall be approved from Architect/Client.	1.00	Sq.M.			
22	**Staff Area Internal Partition :** Laminate finished (Both side) partition (solid) : Providing & fixing 12mm thick Commercial BWR 303 grade plywood fixed on frame work on both side finished with 1mm thick laminate. The frame work shall be made from square hollow aluminium section of approved make conforming to IS specification of size 38 x 38 x 1.6 mm vertically and horizontally. The framework shall be fixed as per drawing vertically @ 600 mm c/c & horizontally 1200 mm c/c and first horizontal member shall be fixed at gr. level. In partion frame work (intermediate, perimeter) & (at vertical or horizontal joint of ply & at turning point) shall be fixed to the wall/floor & ceiling with Sheet metal screws/Nylon grip screws of Corro-shield /Fischer and shall be supported by filling required size wedges /washers/ MS wall connectors or packings of teak wood /MS washers to ensure right angles and plumb level. All ply/wooden frameworks shall be treated with anti-termite treatment & hidden The framework shall be covered with approved make plywood ,adhesive ,tape, headless nails etc ,finished with 1mm thick laminate in pattern as shown in the drawing having 10 mm groove at skirting level with laminate finished skirting . Rate shall be inclusive of grooves etc complete as per drawing or as directed by EIC/ Architect. Measurements for partition work to be recorded upto finished false ceiling level only irrespective of aluminium frame work, which shall be provided from gr. level to RCC slab / beams soffit level. Plywood board both side above false ceiling will fixed up to RCC slab and all junction will fill with approved sealant complete. Rates shall also be inclusive of cost of making cut outs/ openings for electrical fixtures, tube lights /air-conditioners ,grills, diffusers etc & providing additional sections for strengthening around the openings/cut-outs additional Aluminium support for fixing of patch fittings for doors, making grooves, sections, in filled with termite treated wooden members wherever required or as per drawing /instruction of EIC. and no extra payment shall be considered for additional sections provided. All curved surfaces, recesses, waffles shall be part of the partition, including openable shutter wherever required area and finished with the same material. Rate shall be inclusive of all item	1.00	Sq.M.			
23	LABORATORY BENCH CONSITS OF SIZE 2400LX1200WX900H Storage Cabinets of 6001S1S - 4 nos, Supply and Installation of Laboratory Workbenches/Storage units including granite worktops and other supporting structures/hardware's based on the specified Make List. includes delivery to ABC, unloading the consignment and transporting it from the place of storage to the installation site. Supply & Installation of all utility service outlets and accessory fittings, electrical receptacles, plumbing and electrical switches & fittings identified on drawings as mounted on the laboratory furniture. Supply & Installation of all laboratory sinks, bottle traps, drain troughs etc. including service structures where specified and setting in place reagent shelves of the type shown in the drawings & removal of debris, dirt and rubbish accumulated as a result of installation/commissioning of the laboratory furniture and accessories and leaving the premises broom clean and orderly. ali Furniture shall meet the performance requirements and should follow SEFA 8 guidelines. a. Floor Based Cabinet with Metal Skirting • Welded cabinet body should be flush face construction with intersection of vertical and horizontal members like LH and RH side panel along with front horizontal channel, back panel and bottom panel. • It should be relocated anywhere easily as it is an independent unit. • Cabinet should of square non-sharp edge construction. • Doors should be assembled with SS-304 hinge assembly. • Removable back panel should be provided to easily access the service lines running behind the cabinet benches. • Intermediate horizontal channels should be provided between door and drawer. • Toe-space of 90mm X 90mm is provided at front-bottom side of cabinet. • Levelers are provided for easy leveling of welded cabinet. • Shelf should be eight-bend panel with 20mm height. • Drawer tray should be of single piece construction. Drawer should be well supported on LH and RH ball slide suspension system. • Steel door and drawer front should be of double wall construction with sound dampenening material filled inside. • Doors should be easily removable and hinges should be easily replaceable. Knee space panel should be in 22 gauge construction • Dimensions: W=300/450/580/600/750/900 mm, D = 530mm, H = 875/725 mm • Configurations: 1 Shutter + 1 Drawer/4 Drawers/Leg Spaces/1 Shutter/2 Shutters/3 Drawers/2 Shutters + 1 Drawer/Sink Unit + 2 Shutters • MOC: MSCRCA: IS – 513 (1994) {quote for set of 4}	1.00	Sq.M.			

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE	GST %	AMOUNT INCLUDING
	FURNITURE					
	• Thickness: o LH/RH side panels, shutter front, Bottom panel, Top front, Drawer separator, shelf, Alignment channel is of 1.2mm thk. o Removable Back panel, Shutter cover, Fr. Rack strip, Top cover panel is of 0.8mmthk • Finish: Powder coating pure epoxy, thickness 40-50 microns • Handle: Anodized Aluminum Recessed-Type, CTC: 160.0mm • Lock: Units have a locking facility with 180° and 10 lever cam lock mechanism (except for sink and corner unit) • Hinge: SS Hinge Screw: SS 304 Shutter should be of twin-type construction with sound dampening effect using profeel. Shutter cover should be equipped with Bump on for sound dampening. Base Moulding should be made of PVC with corner clips. Ball Slide: 500mm Length (Godrej-Make) (required only for drawer unit). Shutter should have provision of roller catch. WORKTOP a. GRANITE • It should be 20 +/- 2 mm thick, jet black granite with edges having chamfer of 4 x 4 mm on top side. The overhang on the storage cabinet should be 25 mm at the front side and 30 mm at the sides • The backing material used for granite should be a neoprene mat of 6 mm thickness.　　　　SINK (PP SINK) • It should be made up of 5 mm thick high density and elastic poly propylene with good resistance to organic solvents • PP Bottle-traps should be offered with PP Sinks • Standard bowl size (L x W x D) should be 500 x 400 x 300 mm • 1-way/2-way/3-way Faucet should be provided (Make: Broen/Watersaver).　　　　PEGBOARD (MOC: SS) • These should be Single faced high grade stainless steel pegboard having a tray hole for water drainage and detachable pegs. • The essence should be made up of I mm thick stainless steel (SS 304) whereas the pegs should be made up of polypropylene and will be adjustable with a minimum 10mm distance between each peg					
	ELECTRICAL TRUNKING • Electrical trunking is made up of 0.8mm thick CRCA MS Sheet. • The complete M.S. material of cabinet should be pre-treated (degreased, Zinc phosphated) and epoxy powder coated for better corrosion resistance. • The thickness of powder coat should be 45-50 microns, which passes the test of Salt Spray for 1000 hours. • It should have a high temperature withstanding capacity with excellent electrical insulation properties. • The rear portion of above accessories which is in contact with live metal should be made from thermo set material which will not melt on heating.　　　　SWITCHES AND SOCKETS • These are made of High gloss virgin grade engineering thermoplastics to impart a defect free surface. • They impart excellent electrical insulation properties i.e. do not melt on heating or catches fire. • Owing to this all electrical switches and sockets are capable of handling higher currents and operating temperatures. • Front plates can be changed at any time with ease without disturbing the wiring to quickly and economically match changes in the surroundings					
24	Providing and fixing in position 2 TILE Pentagonal WORKSTATION @ WORKSTATION 1500LX1500LX 600DX1200HT [1ST [1ST MODULE - METAL TILE/2ND MODULE - FABRIC/3RD MODULE - PINUP+MDF MARKER]+ GABLE END + FABRIC SEPARATOR PANEL/ GLASS PANEL At all levels all lead lift etc. co Frames :- Partition thickness is 60mm for stability and with the inside gap between two tile is approximately 50mm for higher wire carrying capacity. Frame Horizontals are made of 1mm thick CRCA sheets & the verticals are made of Aluminium Extrusions of 1.2mm thick. All the frames will be duly powder coated based on the choice of the Powder Coat colour , as per Customers choice, which will be inline with the Top trims & end trims, All the frames are fastened together by means of M6 NUTS & BOLTS . They can be attached to form a 2-way, 3-way or a 4-way configuration. All the Caps viz end, inline & universal & raceway caps are made out of Die-cast Aluminum. These caps also are finished in an epoxy powder coating finish in the same color.All the frames are fitted with M10 leveling bolts. The workstation shall have the gable ends made up of interior grade 25mm thick prelaminated particle board. The Detailed Description of this item is stated in Sch C.complete At all levels all lead lift etc. complete	1.00	No			

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE	GST %	AMOUNT INCLUDING
	FURNITURE					
25	Providing and fixing in position 2 TILE Linear WORKSTATION @ WORKSTATION 1200LX 600DX 1200HT [1ST [1ST MODULE - METAL TILE/2ND MODULE - FABRIC/3RD MODULE - PINUP+MDF MARKER]+ GABLE END + FABRIC SEPARATOR PANEL/ GLASS PANEL At all levels all lead lift etc. co Frames :- Partition thickness is 60mm for stability and with the inside gap between two tile is approximately 50mm for higher wire carrying capacity. Frame Horizontals are made of 1mm thick CRCA sheets & the verticals are made of Aluminium Extrusions of 1.2mm thick. All the frames will be duly powder coated based on the choice of the Powder Coat colour , as per Customers choice, which will be inline with the Top trims & end trims, All the frames are fastened together by means of M6 NUTS & BOLTS . They can be attached to form a 2-way, 3-way or a 4-way configuration. All the Caps viz end, inline & universal & raceway caps are made out of Die-cast Aluminum. These caps also are finished in an epoxy powder coating finish in the same color.All the frames are fitted with M10 leveling bolts. The workstation shall have the gable ends made up of interior grade 25mm thick prelaminated particle board. The Detailed Description of this item is stated in Sch C.complete At all levels all lead lift etc. complete.	1.00	No			
26	Providing of HD 1 Bay/2 Bay/3 Bay/4 Bay/5 Bay Single Fixed Drive unit body of Compactors of size 2362H mm X (915/1830/2745/3660/4575)W mm x 457D mm made out of 0.8 mm thick Cold Rolled Cold Annealed Steel conforming to IS:513 Grade, having 6 loading levels (Load Bearing Capacity - 80 Kgs Uniformly Distributed Load) formed by 5 no's adjustable shelves, finished with epoxy polyester 10 tank powder coating processed of approved color & shade with a dry film thickness of minimum 40 microns, oven baked with a controlled temperature of 180 deg.C to 200 deg.C. Anti toppling mechanism shall be provided at the bottom rails with heavy duty bearings. Each shelf made of 0.8mm thick CRCA steel sheet shall be provided with 8 no of folds with an additional stiffner spot welded at the bottom,each shelf having 1mm thick antislip rubber sheet. Insert type label holder shall be provided for indexing and easy identification of the contents of the unit and shelves. Motion of the understructures along with bodies shall be achieved mechanically through a drive wheel and sprocket-chain mechanism. The whole compactor unit shall be provided with knock down construction which shall be installed by the supplier at site as per instructions of the engineer incharge. The Undercarriage shall be made up of welded frame of HR sheet 3.15mm thk conforming to IS:10748 suitably fabricated to take the load based on configuration having Fasteners, label holders, mounted on guide channels.This Specifications are followed with BIFMA level 3 audited guidelines.	1.00	No			
27	Providing of HD 1 Bay/2 Bay/3 Bay/4 Bay/5 Bay Single Last Drive unit body of Compactors of size 2362H mm X (915/1830/2745/3660/4575)W mm x 457D mm made out of 0.8 mm thick Cold Rolled Cold Annealed Steel conforming to IS:513 Grade, having 6 loading levels (Load Bearing Capacity - 80 Kgs Uniformly Distributed Load) formed by 5 no's adjustable shelves, finished with epoxy polyester 10 tank processed powder coating of approved color & shade with a dry film thickness of minimum 40 microns, oven baked with a controlled temperature of 180 deg.C to 200 deg.C. Anti toppling mechanism shall be provided at the bottom rails with heavy duty bearings. Each shelf made of 0.8mm thick CRCA steel sheet shall be provided with 8 no of folds with an additional stiffner spot welded at the bottom,each shelf having 1mm thick antislip rubber sheet. Insert type label holder shall be provided for indexing and easy identification of the contents of the unit and shelves. Motion of the understructures along with bodies shall be achieved mechanically through a drive wheel and sprocket-chain mechanism. The whole compactor unit shall be provided with knock down construction which shall be installed by the supplier at site as per instructions of the engineer incharge. The Undercarriage shall be made up of welded frame of HR sheet 3.15mm thk conforming to IS:10748 suitably fabricated to take the load based on configuration having Fasteners, label holders, mounted on guide channels.This Specifications are followed with BIFMA level 3 audited guidelines.	1.00	No			
28	Providing of HD 1 Bay/2 Bay/3 Bay/4 Bay/5 Bay Twin Mobile Drive unit body of Compactors of size 2362H mm X (915/1830/2745/3660/4575)W mm x 915D mm made out of 0.8 mm thick Cold Rolled Cold Annealed Steel conforming to IS:513 Grade, having 6 loading levels (Load Bearing Capacity - 80 Kgs Uniformly Distributed Load) formed by 5 no's adjustable shelves, finished with epoxy polyester 10 tank processed powder coating of approved color & shade with a dry film thickness of minimum 40 microns, oven baked with a controlled temperature of 180 deg.C to 200 deg.C. Anti toppling mechanism shall be provided at the bottom rails with heavy duty bearings. Each shelf made of 0.8mm thick CRCA steel sheet shall be provided with 8 no of folds with an additional stiffner spot welded at the bottom, each shelf having 1mm thick antislip rubber sheet. Insert type label holder shall be provided for indexing and easy identification of the contents of the unit and shelves. Motion of the understructures along with bodies shall be achieved mechanically through a drive wheel and sprocket-chain mechanism. The whole compactor unit shall be provided with knock down construction which shall be installed by the supplier at site as per instructions of the engineer incharge. The Undercarriage shall be made up of welded frame of HR sheet 3.15mm thk conforming to IS:10748 suitably fabricated to take the load based on configuration having Fasteners, label holders, mounted on guide channels.This Specifications are followed with BIFMA level 3 audited guidelines.	1.00	No			

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE	GST %	AMOUNT INCLUDING
	FURNITURE					
29	Providing of Hinge Door made out of 0.8 mm thick Cold Rolled Cold Annealed Steel conforming to IS:513, D having recessed Die cast Handle cum lock giving 3 way locking through a lever & shooting bolts as per attached Detailed Specifications and Design etc. complete.	1.00	No			
30	Providing of Guide Channels consisting of 'J' section 2 mm thk HR sheet & 25 mm Square bright bar – both connected by screws, prior to the embedding of the guide channels with the help of raul plug & screw. End stoppers shall be provided at the end to prevent derailment. The ground has to be in properly levelled condition as per attached Detailed Specifications and Design etc. complete.	1.00	No			

NAME OF WORK: PREPARATION OF ESTIMATE FOR INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE LIGHT, STAGE CRAFT, DIGITAL CLASSROOM, AND ANCILLARY CIVIL AND ELECTRICAL WORKS OF VARIOUS BUILDINGS OF EDUCATIONAL COMPLEX AT DR. BABASAHEB AMBEDKAR UNIVERSITY OF TECHNOLOGY, LONARE.

STAGE CRAFTS WORK

SR. NO	PARTICULARS	QTY	UNIT	RATE	GST %	AMOUNT INCLUDING GST
1	**MAIN CURTAIN:**	1	No.			
	Providing & Fixing of Main Curtain in Hitech Velvet Cloth with lining cloth 50% gatherings Satin Border at bottom of 6" and 4" in two pieces (Centre Parting) size 47' x 16'					
2	**MAIN CURTAIN FRILL**:	1	No.			
	Providing &. Fixing of main .Curtain Frill in same cloth as main Curtain 50% gatherings & Golden Fringe at Bottom of the Frill size 47' x 3'.6"					
3	**WINGS:**	1	No.			
	Providing &. Fixing of wings in Alluminium Box pipe 70 mm X 40 mm with two intermediate supports. Rollers to slide the wings. Providing of Alluminium channels to slide the wings. Fixing of Cloth on both sides.					
	Rollers at bottom Sixe (16' X 4')					
4	**MID & BACK CURTAIN** :	1	No.			
	Providing & Fixing of Mid & Back Curtain in casement drill cloth stretched Fat of (a) size 35' x 16'					
	(b) size 25' x 16'	1	No.			
	Fixed to electrical / manual hoisting mechanism.					
5	**FRILLS:**	1	No.			
	Providing & Fixing of Frills in Drill cloth with 50% gatherings fixed to Grid in 25mm G.I. Pipe suspended by wire rope Size (40' X 3'.6")					
6	**MIC BARS (Utility Bars):**	1	No.			
	Providing & Fixing of Mic Cars in G.I. pipe 400mm dia 'B' class length 40'					
7	**LIGHT BARS**:					
A	Providing & Fixing of Light bars in 40 mm G.I. Pipe (Dual Barrel) 'B' Class with Brackets. M.S. Cable Tray for Electric wire.(Size 100mm X 50mm)					
	a) 40 Fts. 3 on stage	1	No.			
B	**LIGHT LADDERS:**					
	Providing & Fixing of light ladders in 40mm G.I. Pipe ' B ' Class with two intermediate supports size 6' x 2'	1	No.			
8	**CENTRE PARTING MECHANISM** :	1	Nos.			
	Provind & Fixing of Main Curtain Mechanism fixed with 1. H.P. 3 phase Motor (NAVJYOT make ISI Mark) with Reduction Pulley Sets, Roller Drum, 3mm Steel Wire Rope, 25mm MS Brite Material Dual Track in round shape, Brass Runners, Limit Switch Plate & Rod, Limit Switches (2 Nos), M.S. Angle Stand, Control Panel, Contactor (Siemens), Push Button Sets, Electric Wire, etc. Complete.					
9	**ELECTRIC HOISTING MECHANISM :**	5	Nos.			
A	Providing & Fixing of hoisting Mechanism for					
	cover, Mid & Back Curtain,					
	Light Bars with following details.					
	a. 2 H.P. 3 Phase motor (Navjyot make)					
	b. Gear Box 40:1 (Elecon)					

SR. NO	PARTICULARS	QTY	UNIT	RATE	GST %	AMOUNT INCLUDING GST
	c. 100mm Pulley Set with Bearings one way					
	two way, three way, four way, five way					
	d. Guide Pulley sets					
	e. 6mm steel wire rope. Appox 400ft					
	f. 75mm x 50mm M.S. Stand					
	g. M.S. Drum 9" dia					
	h. Limit switches with Plate & Rods					
	i. Electric wire 2.5 sq.mm 8 core					
	j. Panel Board with siemens/L&T Contactors					
	k. Pedestal Bearing 2 Nos.					
	l. G.I. Pipe 25mm					
11	**PIPE GRID:**	1	Sqft.			
	Providing & Fixing of Pipe Grid to be suspended form ceiling in M.S. Flat of 40mm x 5mm. The grid to be provided G.I. Pipe of 50mm ' B' Class. M.S. ' C ' Channel of 75mm x 40mm on three sides. Painting etc complete. Size (47' x 30')					
12	**WIRE MESH:**	1	Sq ft			
	Providing & fixing of wire mesh on top of Grid 25mm x 25mm 10 Gauge with M.S.Angle 25 mm frame . Size (47' x 30 ')					
13	**Signage Board**: Providing , Supplying and fixing signage board of 3mm Acrylic sheet with UV printing letter including all lift , lead , Scafollding , fixtures & fastening etc. complete as per Drawings.and sample approved by Architect / Clients.	1.00	Sq.M.			

INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE CRAFT, AND ANCILLARY CIVIL WORKS

| NAME OF WORK: PREPARATION OF ESTIMATE FOR INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE LIGHT, STAGE CRAFT, DIGITAL CLASSROOM, AND ANCILLARY CIVIL AND ELECTRICAL WORKS OF VARIOUS BUILDINGS OF EDUCATIONAL COMPLEX AT DR. BABASAHEB AMBEDKAR UNIVERSITY OF TECHNOLOGY, LONARE. |||||||

ELECTRICAL WORK- DIGITAL BOARD						
Sr. No.	ITEM DESCRIPTION	Quantity	Unit	Basic Rate	GST %	Amount Including GST
1	**Installation of Display Technology Type Backlit LED (IPS Panel) Panel.** Display- Display Technology Type Backlit D -LED (IPS) , Brightness (Typical/Minimum) 350cd/m2 or better , Contrast Ratio (Typical) 1,200:1 or better , Native Resolution 4K Ultra-HD (3840 x 2160) , Viewing Angle (H/V) 178/178 degree , Viewing Angle (H/V) 178/178 degree , Aspect Ratio 16:09 , Response Time (MS) 8ms (Typ) , Refresh Rate (Hz) 60Hz, Estimated Life Time (Typical) 30,000 hours (Min), Display Color (Bit) 1.07 billion (10-bit), Orientation Landscape. Interactivity- Touch Technology Infrared Touch, Touch Points, Writing 10 Points, Touch 20 Points, Accuracy finger ±1.5mm (Over 90% area) or better, Accuracy passive pen ±1.5 mm (Over 90% area) or better, Response Time <10ms , Surface Protection 4mm Thick Toughened Glass (Level 7H on Mohs, Scale of Mineral Hardness), Touch Tools Finger, Stylus, Glove, Opaque Objects. Operating System- System Version -Android™ v8.0 or latest, CPU – Multicore high performance ARM CPU , GPU- 4*Mali™ G51, RAM -3GB DDR3, Internal Storage -16GB(e MMC flash) . Connectivity- Input -Display HDMI v2.0 (x3) (HDCP v2.2 Compliant), VGA-In (x1), Audio Audio-In (3.5mm), AV -In (*1), Out -Display HDMI-Out v2.0 (x1) (HDCP v2.2 Compliant) , Audio Audio-Out (3.5mm), SPDIF-Out (x1), Internet- LAN (RJ45), Control- RS232, Wireless WiFi(usb dongel) - IEEE 802.11 a/b/g/n/ac (2.4GHz/5GHz), I/R receiver - Front (*1)(±25°angle >8m distance), USB -USB front USB 2.0(*2) , USB side USB 3.0(*3) , USB Type B(*2) (For Touch Port),USB Bottom USB 2.0(*1). Audio - Internal Speakers 16W +16 W(Stereo). Power- Power Supply (Internal) AC 100-240V, 50/60Hz ,(4.5A), Consumption 450 W , Standby Mode <0.5W (Standby) Physical Characteristics- Dimensions (L x H x D) Product 1,957.4 x 1160 x 91.4 mm , Weight Net 70.8 kg , VESA Mounting (FPMPMI) 4 - M6 × 25mm, 800* 400 mm ,Colour -Grey or approved by Architect. Accessories standard - AC Power chord,VGA Cable,HDMI Cable,USB Cable,Audio cable,Stylus (*2),Remote Control (w/batteries),wall mount kit, wifi usb module, documentatin set .					

Sr. No.	ITEM DESCRIPTION	Quantity	Unit	Basic Rate	GST %	Amount Including GST
	OS Support:- Windows® (Windows 7 and above; Driver Free), Mac® (10.10 and above), Android™ (2.2/2.3/4.0/4.1/4.2 (Kernel v3.5 and above - Driver Free), Chrome (v39 and above), Linux (Kernel v3.5 and above). Built-In Features: - Should be able to run multitasking in android platform, Gestures Supported- Use palm/hand back to erase/ Slide up from bottom to call out Touch Menu//Two fingers to call out floating toolbar, Should have compatibility with Intelligent Handwriting Recognition, Interactive Classroom: Intelligent AI based writing pen, Built-in Voting System for student, QR Code Scanner, Wireless Connect: Connect up to Minimum 64 users simultaneously, and allow 4 people to present on one display, Remote Management Software: -Ability to manage & maintain all deployed IFPs connected over LAN/WAN, including the functionality of: - Turn on/off the panel; Change input/ volume, Broadcast message to the panel, Remote monitoring of the panel desktop, Mirroring for iOS Airplay®, Android™ Google Cast, Windows® PC, Apple® macOS™, Google Chromebook™, Ubuntu –OS independent , Wireless facility with 802.11n/ac dual-band 2.4/5GHz support, Inbuilt wireless receiver and supports the wireless dongle for wireless presentation Required, Manufacturer and Supplier should be same OEM (no third-party h/w or s/w will be permitted),					
	Remote manager with IT management software with automatic discovery and configuration, Tablet lock and terminate session, File and URL sharing, Schedule power on/off, Screen record for preparing video tutorial, Support USB camera ,Voting and polling functions, Enhanced Usability features: - Remote meetings - Live Screen function – allows content to be streamed in real-time to others on wireless collaboration devices (support USB microphone/ USB camera for audio input), Compatibility with productivity tools including Microsoft Office applications,					
	PDF documents and many others,Android Device support for Full Screen Mirroring via the Present App, Install applications directly from the App store, to personalize the Panel environment, Should have Integrated Digital Signage with following features: - Complete integration of a flexible and easy-to-use Digital Signage Content and Management Software Manufacturer and Supplier should be same OEM (no third-party h/w or s/w will be permitted) – with easy content updates via wired, wireless networks or Cloud, The display should be turned into active signage rather than remaining "passive" when the meetings are finished, he signage can support PowerPoint file, PDF file, and online media from twitter, Google Drive, FTP and Samba., Video can reach to 4K @60Hz, The signage can also be interactive, creating a more compelling and engaging environment for participants, Centralized Management & Security: - Centralized Management functionality enables settings to be changed locally or remotely for added user convenience, Mobile Device Management capability to enables IT departments to tightly manage device operations and maintenance, Data security provided by AES-256 encryption, Panel Firmware should be able to update from a centralized platform Etc.Complete.					
	DIGITAL BOARD SIZE- 98"	1.00	Nos.			
	DIGITAL BOARD SIZE- 86"	1.00	Nos.			
	DIGITAL BOARD SIZE- 75"	1.00	Nos.			

NAME OF WORK: PREPARATION OF ESTIMATE FOR INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE LIGHT, STAGE CRAFT, DIGITAL CLASSROOM, AND ANCILLARY CIVIL AND ELECTRICAL WORKS OF VARIOUS BUILDINGS OF EDUCATIONAL COMPLEX AT DR. BABASAHEB AMBEDKAR UNIVERSITY OF TECHNOLOGY, LONARE.

Sr. No.	ITEM DESCRIPTION	Qty.	Unit	Basic Rate	GST %	Amount Including GST
	ELECTRICAL WORK					
1	Installation, testing and commissioning of cubical type MV Panel conform to IEC:61439-I as per technical specifications,single line diagram & approval of Drawings prior to manufacturing, packed in wooden crates with PVC sheets inner packing, transport to site, compartmental cubicle type freestanding with appropriate cable entries, front operating, front maintained wherever required complete with base frame etc. erected in 14 gauge CRCA sheet and surface treated with phosphating seven tank process and duly powder coated with MSEDCl approved color, feeder piller should be with supporting angles, self-locks, gasket and slanting top to be erected on provided foundation 'Auditorium Main Panel Name: Auditorium Duty: Indoor Type (IP 42) Location: Auditorium Incomer: 2 Nos 200A FP MCCB with LSI release with R, Y, B & On , OFF, Trip indications and required accessories. 200A ATS with MFM. Busbar: 200A AL busbar. Outgoing: 1 No of 100A TPN MCCB. 1 No of 32A FP MCB. 7 Nos 63A FP MCB All outgoing with Dual Source MFM etc. complete.	1	Each			
	Out Door LED					
2	VideoWall Screen Size of LED Screen 21 X 9 ft Display Size (W x H) - 4800 mm x 2880 mm or higher Pixel Pitch - 6.67 mm or better (Lower pitch is regarded as better) LED Configuration - RGB 3 in 1 SMD Pixel Density - Minimum 22,500 pixels per sqm or higher Viewing Angle - H 140 degrees / V 120 degrees or better Refresh Rate - >3840 Hz or better LED Makes - Nichia/Cree/Osram/Nationstar Temp Range - -20 to +50 Degrees C or better Grey Scale Processing - 14 Bit or better Brightness (Calibrated) - 5000 cd/m² or better Maximum Power Consumption - 900 w/sqm or lower Dimming Capability - 255 levels Power Input - 200 ~ 240 VAC Individual Tile/Cabinet Dimensions - 960 mm (W) x 960 mm (H).x 92 mm (D) Lower depth will be acceptable , Cabinet Material - Aluminum, Contrast Ratio - 5000:1 or Higher Scan - 10s or better, Auto Brightness - Auto Brightness Sensor to be provided Access for Maintenance - Rear or Front Ingress Protection of Front of Tile - Should meet or exceed Front IP65 . - Ingress Protection Rear of Tile - Should meet or exceed Rear. Safety Certifications (Mandatory to submit along with the bid) - BIS Registration (Bureau of Indian Standards) As per Standard: IS 13252(PART 1) :2010 Quality/Health & Safety/Environmental Certifications of OEM/OEM subsidiary in India (Copy to be submitted along with the bid - Quality Management System 9001:2015, - Occupation health & Safety Management System - OHSAS 18001:2007, - ISO 27000:1- Environmental Management System 14001: 2015.	1.00	Nos.			

Sr. No.	ITEM DESCRIPTION	Qty.	Unit	Basic Rate	GST %	Amount Including GST
3	**POWER DISTTRIBUTION UNIT --- An** IP 54 rack shall be provided to house the various components required to drive the Outdoor LED wall. - Front Door - 2 Hinges with Rack & Aircon bolted Wall Mount Clamp - Welded on Rack frame rear side 19" pillar front & 19" pillar rear - Bolted on rack side wall Locking Arrangement - To be provided with a locking system Limit Switch - The rack door to be provided with a limit switch Earthing - Earthing studs should be provided in the rack for earthing purposes Cable points - Cable entry and exit points should be provided in the rack Mounting - Should be possible to mount the rack either on a pole or on a wall with options of different mounting types Material - GI 120 gsm thickness 1.5 mm IP rating - IP54 AC input - 380V/220V AC Power Load Max - 5KW Surge protection - Class C Over temperature protection - Selectable from 30 deg. to 60 deg. C A	1.00	Nos.			
3	**Controller Unit --- Control** Port - RS232 or LAN Signal Input - DVI/HDMI Minimum Load Capacity - 497664 Pixels Input Voltage - 100~240 VAC Operating Temperature - 5~40 Deg. C	1.00	Nos.			

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Sr. No.	Item Description	Qty.	Unit	Rate	GST %	Amount including GST
	LV System (Networking, Telephone, FAS, PA & CCTV) work					
1	erecting **2 m Telephone patch cord of RJ11 type e** in position as position as per Engineer directed.	1	Each			
2	ITC of **4 MP Full HD IP Dome Camera** Image Sensor 1/3" 4 megapol progressivescan CMOS Effective Pixels 2304 (H) 1296 (V) Electronic Shutter Speed Auto Manual 1-1/100000 s Min Illumination 0.5 lux. F21 (Color): 0 lux (R LEDS on IR Distance-nupto 100 m (30 m) Day/Night -auto (ICR)/Color/BW Backlight Compensation-BLC /HLC/ DWDR White Balance Auto Manual Gain Control - Auto/Manual Noise Reduction - 30 Privacy Masking- Up to 4 areas Lens Focal Length- 2.8 mm Horizontal Angle of View 92 86-28 Compression H.265 (Main/ High/ Baseline Profile) /MJPEG Resolution 3. MP (2304x1296) 1080p Main Stream 4 MP.30 fps 16x Digital zoom 60 fps, Resolution- Verifocal lens, 320 db Corridor Mode Support Network Protocol IPv4/IPv6 HTTP HTTPS TCP/IP UDP UPnP ICMP IGMP RTSP RTP SMTP NTP DHCP DNS PPPoE DDNS FTP IP Filter QoS Compatibility -nONVIF Profile S CGI Max. User Access 20 users Mobile App for iPhone iPad Android Phone and Tablet Power Supply PoE (802.3af) 12 V DC Working Environment -22°F to 140°F (-30°C to 60°C). 10% to 100% RH. condensing Ingress Protection IP66 Vandal Resistance IK10 Regulatory FCC Part 158 Class B (3 years warranty)	1	Each			
3	ITC of **4 MP Full HD IP Bullet Camera** Image Sensor 1/3" 4 megapol progressivescan CMOS Effective Pixels 2304 (H) 1296 (V) Electronic Shutter Speed Auto Manual 1-1/100000 s Min Illumination 0.5 lux. F21 (Color): 0 lux (R LEDS on IR Distance-nupto 100 m (30 m) Day/Night -auto (ICR)/Color/BW Backlight Compensation-BLC /HLC/ DWDR White Balance Auto Manual Gain Control - Auto/Manual Noise Reduction - 30 Privacy Masking- Up to 4 areas Lens Focal Length- 2.8 mm Horizontal Angle of View 92 86-28 Compression H.265 (Main/ High/ Baseline Profile) /MJPEG Resolution 3. MP (2304x1296) 1080p Main Stream 4 MP.30 fps 16x Digital zoom 60 fps, Resolution- Verifocal lens, 320 db Corridor Mode Support Network Protocol IPv4/IPv6 HTTP HTTPS TCP/IP UDP UPnP ICMP IGMP RTSP RTP SMTP NTP DHCP DNS PPPoE DDNS FTP IP Filter QoS Compatibility -nONVIF Profile S CGI Max. User Access 20 users Mobile App for iPhone iPad Android Phone and Tablet Power Supply PoE (802.3af) 12 V DC Working Environment -22°F to 140°F (-30°C to 60°C). 10% to 100% RH. condensing Ingress Protection IP66 Vandal Resistance IK10 Regulatory FCC Part 158 Class B (3 years warranty)	1	Each			
4	**32 Channel professinal series 4K HD Network Video Recorder** Smart H265+/H265/Smart H264+ Max 320Mbps Incoming Bandwith upto 12MPResolution for Preview and Playback. Bit Rate 16Kbps-20Mbps per channel. 2HDMI/ 2VGA simultaneous video output to enhance the storagereliablity when the network break down, Quad- Core embeded processor. 8 STATA III Ports upto 6 TB for each HDD for 2 RJ45 port (10/100/1000Mbps) independant of joint Networking. Analytical Features like - ANPR, People Count, Face Detection, Missing/ Abonded Objects, Tripwire and Instrsion alarms, Smart FAN to achive high cooling effects. Automatic Network Replenishment (ANR) Technology - Network Video Recorders with ANR function automatically store video data on an IP camera SD card when the Network is disconnected. After recovery of the network, the NVR automatically retrives the video data stored on the camera. 3 years waranty.	1	Each			
5	erecting, testing and commissioning of multistrand annealed bare copper conductor, **PVC insulated 2C x 1.5 sqmm cable** in provided trunking/conduit etc.	1	m			

Sr. No.	Item Description	Qty.	Unit	Rate	GST %	Amount including GST
	LV System (Networking, Telephone, FAS, PA & CCTV) work					
6	erecting **8 TB internal Surveillance HDD suitable for SATA Port** of DVR/NVR, interface transfer rate 6 GB/S, maximum sustained transfer rate 210 MB/Sec to 213 MB/S. Drive bay supported 08+, Cameras supported up to 64, Cache (MB) 256, Load/Unload Cycle -3000000, Work Load Rating per Year 180TB, MTBF 1000000 Hrs. HTTPS. RoHS, UL, CE certified, duly erected in position in provided NVR as per specification no. CCTV-HDD	1	Each			
7	erecting 32" professional LED Monitor with 1920*1080 (Full HD) Display, suitable for 16 channel NVR and following features Brightness: minimum 250 Cd/m2 Contrast Ratio: minimum 1000:1 Viewing angle: 178/178 deg. Response time: maximum 8 ms Inputs: HDMI, VGA, BNC, USB, Audio In, Built-in speakers maximum 2 W, Suitable to operate on 100-240 V 50 Hz AC supply and 24/7 Duty Cycle duly erected on wall or table top with standard accessories like wall mount stand and wiring connections etc. complete as per specifications no. CCTV-MON	1	Each			
8	installation of **15U** 600mm x 650mm(D) **Floor mount Rack** with Front Glass Door, Fan Tray on Top, Perforated Rear Doors, Openable Entry at the Bottom for the Cable entry, Cable Basket for Cable Dressing & 2 Nos Vertical Power Strip with all necessary accessories & hardware (**for mounting Amplifier, Zone controller etc**)	1	Each			
9	installation, testing & commissioning of **6 Watt Cone type Ceiling Mounted metal grill Speakers** with line matching transformer, Power tapping: 1.5W/3W/6W, Frequency response: 100-20000 Hz. SPL (1W 1m) 92 dB, including screw clamp mounting with required accessories. (Colour - White)	1	Each			
10	Installation, testing and commissioning of **6 Watt column/wall mount Box type speaker** with line matching transformer, Power tapping: 3W/6W, fire protected **ABS or Metal cabinet**, includes a steel U-bracket, with adjustable inclination and easy installation with required accessories.	1	Each			
11	installation, testing & commissioning of EN-54 Certified **Digital EVAC PA controller** with **built in audio message generator** (multi message)**,** capable of adding **8 Zones** in the system and expandable upto 400 zones with 14x 4 Audio matrix withAudio matrix with full DSP functionality. 8 audio inputs, 4 audio outputs, 4 channel output matrix. amplifier redundany, 4 x 100V audio inputs and built in 8 zone speaker line outputs. 8000 fault, warning and event conditions log. Built in message manager for 100 emergency/business calls up to 85 minutes. Should be able to send 2 different pre-recorded messages simultaneously (**message should be in 2 languages English & Hindi**). Shall be able to handle up to 2000Watt load, 10 routers, 6 call stations, 128 speaker zones. The controller should integrates multiple functions such as audio storage, playback, zone control, audio monitoring, scheduled broadcast and fault diagnosis, audio playing, zone control, fault monitoring, log recording, volume control and amplifier switchover etc. complete with cords, connectors, power supply & required accessories.	1	Each			
12	installation, testing & commissioning of EN-54 certified Digital **1 x 500W Class D**, **high efficiency amplifier**. 70/100V loudspeaker output voltages, galvanically separated, 4 automatic selectable audio inputs on RJ45, local input, Audio input level limiter, RMS output power limiter, high temperature, DC, short circuit, mains undervoltage protection, DC supply undervoltage protection, inrush current limiter with cords, connectors, power supply & required accessories.	1	Each			

	LV System (Networking, Telephone, FAS, PA & CCTV) work					
Sr. No.	Item Description	Qty.	Unit	Rate	GST %	Amount including GST
13	installation, testing & commissioning of **Call Station** (**upto 8 zones**), built in numerical keypad, LCD display, gooseneck microphone with supervised electret microphone, five menu/function keys, 15 customizable function and speed dial buttons. Possible to use keys for Zone select, source select, level control, emergency on/off, message on/off, failure acknowledge / reset, Switching output trigger on/off or 0 to 10V, select scheduled events, scheduled event on/off. Call Station is supervised by system controller can be expanded by connecting 5 additional extention keypads with required accessories.	1	Each			

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Sr.No	Description of Item	Quantity	Unit	Rate	GST %	Amount in Rupees including GST
	ELECTRICAL WORK - VIDEO WALL AND CONFERENCE SYSTEM					
1	Installing, Testing and Commissioning of 8M X 3M Active LED video wall with Controller, facbrication with required cables and connectors etc. complete including following specification. 1) Pixel Pitch (mm)- 2.5mm or better. 2) Pixel Configuration-SMD 3-in-1 LED Type. 3)Pixel Density (pixel/m2)- 160000 pixels/m2 or better 4)Brightness-Native (max)-800 cd/m2 or better 5)(cd/m2)-Calibrated-900. 6) ColorTemperature (Default)-8000K Set up 2000-9300K . 7)Gamma (Default)-2.8. 8) Capability Set up-1-4. 9)Dimming Capability-0-255 Levels or higher	1	No.			
2	Installing, Testing and Commissioning of 1.56 mm Pixel Pitch COB LED of Size 4.8 Mtr x 2.02 Mtr with Controller, facbrication with required cables and connectors etc. complete including following specification. 1) Pixel Pitch (mm)- 1.56mm or better. 2) Pixel Configuration-SMD 3-in-1 LED Type. 3)Pixel Density (pixel/m2)- 160000 pixels/m2 or better 4)Brightness-Native (max)-800 cd/m2 or better 5)(cd/m2)-Calibrated-900. 6) ColorTemperature (Default)-8000K Set up 2000-9300K . 7)Gamma (Default)-2.8. 8) Capability Set up-1-4. 9)Dimming Capability-0-255 Levels or higher	1	No.			
3	ePodium Delivers unmatched Interactivity among various digital devices with its slim design podium which allows you to communicate with your audiences more effectively. Includes Body with visualiser Tray, 21.5 Inches Touch Screen Monitor, 1 lapel, 1 Handheld, 1 Gooseneck Mic, Amplifier, Speaker Pair and Full Fledge Controller with 5 RS-232 ports, 2 IR/RS-232, 10 Relay Control, 7 inches Touchpad.	1	No.			
4	6.5-inch, 2 way, Ceiling-mount loudspeaker. Low-saturation 70V/100V transformers with 8-ohm bypass,Frequency Range-65 Hz – 20 kHz, Rated noise power / voltage-30 watts / 15.5 volts (rms), Sensitivity-89 dB SPL, Coverage- 110° conical (500 Hz to 5 kHz), Maximum continuous SPL-96 dB, Maximum peak SPL- 110 dB, LF Transducer - 6.5-inch Polypropylene cone with butyl rubber surround, HF Transducer - .86-inch silk dome tweeter, coaxially mounted. Rated impedance- 8Ω, Transformer Taps- 70 V: 30, 15, 7.5, 3.7, 1.9 watts, 100V: 30, 15, 7.5, 3.8, watts	1	No.			
5	4 Channel Class D Energy Star Qualified Amplifier, Frequency Response 20 Hz to 20 kHz, 100 Watts Dynamic Power per Channel at 8/4 Ohms, both channels driven, Dual Bridge Mode Power 200 Watts at 8/4 Ohms & 350 Watts at 70/100 V, 80 Hz High Pass Filter when used in Bridged Mode in 70/100V, Front Panel Power, Per Channel Signal & Clip LED, Maximum Input Level +24 dBu, Input Sensitivity +4 dBu, Maximum Voltage Gain 25 dB, Rack Mountable 1U Enclosure, Mounting Brackets to be included.	1	No.			
6	Music & Paging Mixer. 8 Inputs (4 Mic/Line and 4 mono-summed RCA pairs), 6 Outputs (4 balanced Line, 1 Music on hold transformer balanced, 1 3.5mm stereo Cue. Input Processing - 4-band parametric EQ with high/low shelving option, variable 24/octave HPF and LPF, Dynamics - Gate, choice of Auto Gain Control (AGC) or Compressor. Output Processing - 1/3 octave GEQ, 12-band variable notch filters (Anti-feedback filters), Comp/limiter, ducker, loudness, 100 msec Delay. iOS/Windows/Android/Mac application for Confirguration and iOS/Android appliaction for end user control functions. 2 GPI inputs.Phantom Power-All microphone inputs (+12 volts), Indicators-Blue POWER LED, blue STATUS LED	1	No.			

Sr.No	Description of Item	Quantity	Unit	Rate	GST %	Amount in Rupees including GST
7	19" Gooseneck microphone. Cardioid pattern. 70 to 16000 Hz, Condenser microphone . Base with Switch ON/OFF Led Indicator	1	No.			
8	Headworn Microphone with cardiod condenser microphone with 4 pin locking connector, 55" cable including windscreen & head clip. Microphone system with UHF Frequency, 10 Channel system, The system to work in Frequency band of 487.125-506.500 MHz. The system to be compatible with Antenna distribution system.	1	No.			
9	Handheld Microphone with unidirectional dynamic element, Microphone system with UHF Frequency, 10 Channel system, The system to work in Frequency band of 487.125 to 506.500 MHz MHz. The system to be compatible with Antenna distribution system.	1	No.			
10	4K conferencing camera:- Supply, Installation, testing, and commissioning of conferencing Camera, shall be designed to connect with soft codec conferencing systems, shall be capable of transmitting video signals of up to 1080p resolution at 30 frames per second, Should have a 120° field-of-view, shall include a camera with 5x zoom and electronic pan, tilt, and zoom (ePTZ), Should have multi-microphone array, shall include auto framing capabilities that adjusts the ePTZ to intelligently track users, Should be connected through USB Type C, shall offer simple installation and shall be mountable on a wall or display, Should certified Zoom & Microsoft Teams, shall be CE marked and compliant with the RoHS directive etc. complete.	1	No.			
11	Installation, testing, and commissioning of conferencing hub, It shall be designed to connect soft codec conferencing systems with in-room audio and video devices, Shall connect to a Windows® or Mac OS X computer via a Universal Serial Bus (USB) connection using a standard USB type B connector, It shall be equipped with one USB 3.0 type A port and two USB 2.0 type A ports, shall be able to receive and transmit audio streams over USB via a USB Class 1 Audio device, shall be equipped with one HDMI port to connect a monitor to a BYOD computer using DisplayLink USB graphics technology, shall be equipped with one 3.5mm jack for analog stereo audio input and one 3.5mm jack for analog stereo audio output, It shall be CE marked, UL listed, and compliant with the RoHS directive etc. complete.	1	No.			
12	Certified meeting room bundle; includes 1 TesiraFORTE X 400, 1 Parlé TCM-XA (white), 1 pair of Desono C-IC6 loudspeakers (white), 1 BPAK, (1) 25 ft (7.5m) plenum-rated Cat5e cable, (4) 10 ft (3m) plenum-rated Cat5e cable:- Supply, Installation, testing, and commissioning of Conferencing Room Bundle, This equipment shall be TWO ceiling mounted loudspeakers Nominal Maximum SPL @ 1m Peak 112 dB, 60W @ 8Ω (240W peak),Supports both standard category cables and traditional speaker wiring for audio connections . One Beamtracking® ceiling mounted microphones, one integrated PoE+ powered amplifier, and one room hub and audio digital signal processor that shall connect all other devices to an Ethernet network via RJ-45 connectors, The system shall connect to a UC Codec via a USB interface , speaker and DSP both should be Zoom and Microsoft Teams certified. DSP ,Supports simultaneous operation of AVB, Dante, and AES67 digital audio networking protocols, 2 mic/line level inputs, 2 mic/line level outputs, Five 1 Gigabit Ethernet ports, Four ports support PoE+ power (IEEE 802.3.at Class 4, 30W),Up to 2x2 channels of configurable USB audio,4 AEC channels assignable to any input. etc. Complete	1	No.			
13	Installation, testing, and commissioning of HDMI Extender 4K60 Over Ethernet (RX/TX) (70M), The HDMI Extender shall meet the following performance criteria: Supports resolutions up to 4K@60Hz 4:4:4 8bit and HDCP 2.2, Supports HDR (High Dynamic Range), including HDR10 and Dolby Vision*, Over a Cat 6a/7 cable, HDBT transmits 4K@60Hz 4:4:4 8bit up to 40m/130ft and 1080P up to 70m/230ft, Over a Cat 5e/6 cable, HDBT transmits 4K@60Hz 4:4:4 8bit up to 35m/115ft and 1080P up to 60m/200ft, Bi-directional PoC, one power adapter at either transmitter or receiver side can power both units, Supports bi-directional IR and RS232 pass-through. etc. Complete	1	No.			
14	Installation, testing, and commissioning of 4K 4x2 HDMI Matrix Switcher, The Matrix switcher shall meet the following performance Criteria: 4xHDMI 2.0b inputs and 2 outputs with HDCP 2.2 compliant, 4K UHD @60Hz with 4:4:4 sampling, plus various HDR support incl., Dolby Vision, HDR10/10+, and HLG, Both HDMI outputs support 4K to 1080P downscaling automatic EDID management HD audio freely crosses from HDMI inputs to HDMI outputs, incl., Dolby Atmos and DTS-X HDMI audio de-embedding for both HDMI outputs with digital S/PDIF and analog stereo outputs, HDMI output 2 supports ARC via optical output Control methods by front buttons, IR and RS-232 etc. complete.	1	No.			
15	installation, testing and commissioning of Cable cubby, Flip-top Table Interface with 2 Universal Power, Allows to add 2 optional plates or pass-throughs for AV connectivity, BLACK. Note - add plates & keystones as needed	1	No.			
16	Installation, testing, and commissioning of Wireless Presentation hub, The wireless presentation hub shall be designed to connect web-based soft codec conferencing systems with in-room audio and video devices. It shall also allow multiple session participants to directly receive content from in-room audio/video devices on their compatible computing devices via the use of custom USB drivers, Shall connect to AV peripherals via a Universal Serial Bus (USB) connection using a standard USB 3.0 A-type connector, Shall be equipped with one HDMI port on the rear panel. The wireless presentation hub shall connect to an Ethernet network via an RJ-45 connector to allow participants using client devices to join a shared session. The client devices shall operate using Windows, Mac OS X, iOS or Android operating systems, The wireless presentation hub shall be CE marked, UL listed, and compliant with the RoHS directive	1	No.			

Sr.No	Description of Item	Quantity	Unit	Rate	GST %	Amount in Rupees including GST
17	installation, testing and commissioning of 10'' Touch Panel, The touch panel shall utilize an Ethernet network via an RJ-45 connector for networking as well as software configuration and control, shall include a 10" capacitive touch high contrast LCD for function selection, shall be made from PVC/ABS material with UV protection additive, shall include sensors that detect ambient light levels and adjust display brightness automatically, shall be powered by PoE (IEEE 802.3at Class 3, 15W), shall be CE marked, UL listed, and compliant with the RoHS directive	1	No.			
18	installation, testing and commissioning of Room Manager room booking system, Should have 8'' capacitive touch Display with anti-fingerprint treatment, shall include a 3-way indirect light aura to make room status visible from a distance, shall support power over internet (PoE) or 12V AC/DC power adapter, shall include a proximity sensor to unfold detailed information as you approach the display, shall include support for RFID cards, shall include mounting options for both standard walls and glass walls, Should supports 23 different user interface languages, shall be CE marked and compliant with the RoHS directive	1	No.			

NAME OF WORK: PREPARATION OF ESTIMATE FOR INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE LIGHT, STAGE CRAFT, DIGITAL CLASSROOM, AND ANCILLARY CIVIL AND ELECTRICAL WORKS OF VARIOUS BUILDINGS OF EDUCATIONAL COMPLEX AT DR. BABASAHEB AMBEDKAR UNIVERSITY OF TECHNOLOGY, LONARE.

STAGE LIGHT WORK

Sr.No	Description	Quantity	Unit	Rate	GST %	Total Including GST
Part 1	**Electrical wiring.**					
1	ITC.of MAIN LT. panel comprising of i. 1 No 100 A 3 Pole & N. MCCB 25 KA. ii 1 100 A TPN bus bar. Allu. iii6 Nos. 40 A 4 pole MCB 10 kA iv 9 Nos.25 A 2 pole RCBO 30 MA. iii 48 Nos. I0A to 20 A.SPMCB 10 KA. iv. 1 Set. **VM/AM/KWH** meter,R.Y..B. indicators,ffuse c.t.s Fabricated with 16/18 swg.CRCA sheet ,floor mount type, cable chamber, neutral links,hinged door with panel lock ,earth studs 2 Nos.powder coated paint	1	No			
2	ITC.of circuit wiring in pvc.rigid,ISI.HMS.conduit with all accessories and 2 Nos.2.5 sq.mm+I no 2.5 earth multi stranded copper,ISI.FRLSH wires from panel to each point location on light bars and stage level. approx,	1	Mtrs.			
3	fixing 16 A./6 A socket with 16 A switch with PVC,box Anchor/GM make	1	Nos			
4	fixing perforated cable trey 150x50 mm size with cover and necessary G.I. Hard ware. Approx.	1	Mtrs.			
5	Supply,fixing maintenance free earthing with copper bonded G.I pipe,back fill chemical, chamber cover.	1	No			
6	fixing 25 sq.mm copper insulatd wire in PVC. riigid ISi conduit from earth station to panel. Approx.	1	Mtrs			
7	fixing xlr 2 core cable in pvc.rigid ,conduit.aprx.	1	Mtrs			
8	fxing XLR connect socket male or female with m.s.box. I No on each box.	1	Nos			
9	fixing splitter Sway	1	Nos			
10	fixing 16 A /6 A.Anchor or bakelite socket with M.S.box mat finish powder coated paint.	**1**	Nos			
11	Providing earthing to panels,switch boards,light bars, with copper insulated wire from nearest available source.a. 2.5 sq.mm wire approx. b. 6 sq.mm wire.approx.	l	Mtrs Mtrs			
12	Providing,fixing stage light operating mini pearl consol	1	No			
13	Providing,fixing caution board	1	Nos			
14	Providing,fixing electronic dimming system OMX {6 CH. X 2) 12 channels 2 .5 kw./ch. With 16 A 3 pin sockets 2 Nos/ch. Operation with over voltage protction, SPMCB for out going supply ,mounted on rack .	1	No			
15	Providing,fixing 4 Nos. 6 sq.mm+ 1 No 4 sq.mm multi strand copper,ISI FR wires in PVC. conduit.apprx.	1	mtrs			
16	Providing,fixing Stand STD.4	1	No			
17	**Stage light fittings with suspension hook,lock chain** barn door. M.R. MAKE LIGHT FITTINGS. a. 1000 Watt.fresnel spot light fitting with lamp b. 1000 watt floodlight with lamp c.1000 wa. d.LEDblinder 200 watt e.LED PAR 54 x 3 RGBW **OMX.**	1 1 1 1 1	Nos Nos Nos Nos Nos			
18	FITC.OF patch penel 24 Nos dimming sockets and 12 Nos direct sockets with SPMCB for each socket, patching leads wirh 3 core 2.5 flex.cable and 16 A 3 pin plug.	1	Nos			

NAME OF WORK: PREPARATION OF ESTIMATE FOR INTERIOR WORK, FALSE CEILING WORK, ACOUSTIC, STAGE LIGHT, STAGE CRAFT, DIGITAL CLASSROOM, AND ANCILLARY CIVIL AND ELECTRICAL WORKS OF VARIOUS BUILDINGS OF EDUCATIONAL COMPLEX AT DR. BABASAHEB AMBEDKAR UNIVERSITY OF TECHNOLOGY, LONARE.

AV WORK

S. No.	Description	Quantity	Unit	Rate	GST %	Total Including GST
AUDIO SYSTEM						
1.1	FOH Line Array Loudspeaker System. Two-way passive/bi-amp line array loudspeaker array module. LF Transducer - Single 12-inch with 2.5-inch voice coil or better, HF Transducer - 2 x Compression driver, 1.75-inch voice coil or better, Frequency Range -53Hz-20 kHz or better, Sensitivity - 102dB or better, Max continuous SPL - 129dB or better. Power Continuous - 300W or better, Horizontal Coverage - 90° or better, Vertical Coverage - 15° or better. Minimum 4 array modules with 60° of total vertical coverage in each set for better control.IP-54 rated or better.	1	No.			
1.2	OEM supplied Array Frame for Line Array Speakers.	1	No.			
1.3	Eight-Channel Class-D Network Amplifier. Total Power - 8000W or better, which can be asymmetrically distributed across amplifier channels. Should support 16Ω,8Ω,4Ω,70V,100V on each channel individually. Amplifier shall support Power sharing and Bridge and Parallel modes for combining multiple channels. Frequency Response (8 Ω)- 20 Hz - 20 kHz or better, Noise Weighted output muted->104 dB or better, Input impedance->8k balanced and >4k unbalanced or better, Front Panel Display for Indication and Control with Knobs and buttons or better. Four or More Routable Mic/Line Inputs or better. Ethernet Ports - 2 Gigabit ethernet ports for network redundancy or better.	1	No.			
1.4	Passive subwoofer in bass reflex enclosure. Transducers - 18-inch with 4-inch voice coil. Continuous Power - 900W or better, Frequency Range - 34-100Hz or better, Senitivity - 96dB or better, Max continuous SPL - 140dB or better, Omni-directional or cardioid radiation modes. IP-54 rated or better.	1	No.			
1.5	Eight-Channel Class-D Network Amplifier. Total Power - 8000W or better, which can be asymmetrically distributed across amplifier channels. Should support 16Ω,8Ω,4Ω,70V,100V on each channel individually. Amplifier shall support Power sharing and Bridge and Parallel modes for combining multiple channels. Frequency Response (8 Ω)- 20 Hz - 20 kHz or better, Noise Weighted output muted->104 dB or better, Input impedance->8k balanced and >4k unbalanced or better, Front Panel Display for Indication and Control with Knobs and buttons or better. Four or More Routable Mic/Line Inputs or better. Ethernet Ports - 2 Gigabit ethernet ports for network redundancy or better.	1	No.			
1.6	10" 2-way, externally powered, live sound-reinforcement loudspeaker. Available in black only.	1	No.			
1.7	Powder coated steel yoke for mounting the E110 vertically or Horizontally to structures.	1	No.			
1.8	Light weight, class-D professional power amplifier with DSP, 2 channels, 800 watts/ch at 8Ω, 1200 watts/ch at 4Ω, total power capacity of 4500 watts.	1	No.			
1.9	Powered 2-way active speaker. Transducers: LF-10-inch or better, HF-1.4-inch or better. Frequency Range - 50Hz to 20kHz or better, Nominal Coverage-90° axisymmetric or better, Maximum SPL - 130dB peak or better, Amplifier - Class-D 2000W Peak or better. Controls and Indicators for Power, Gain, Signal, Limit etc. or more. XLR Mic/Line inputs and Outputs. Inbuilt DSP with Presets, Delay etc. or more. Material - Impact Resistant ABS or similar.	1	No.			
1.10	5.25" Two-way surface speaker, 70/100V transformer with 8 Ω bypass, 115° conical DMT™ coverage, includes X-Mount™ and weather input cup. Color - Black. Priced individually but must be purchased in pairs.	1	No.			
1.11	400W FlexAmp technology Hi-Z / Lo-Z amplifier, 2 x 200W into 4Ω, 8Ω, 70V and 100V, Highpass filter per channel, GPIO for Remote Standby and Amp Status	1	No.			

AV WORK

S. No.	Description	Quantity	Unit	Rate	GST %	Total Including GST
1.12	Unified Core with 24 local audio I/O channels, 128x128 total network I/O channels with 8x8 Software-based Dante license included, USB AV bridging, dual LAN ports, POTS and VoIP telephony, 16x16 GPIO, 16 next-generation AEC processors, 1RU.	1	No.			
1.13	Touch-screen digital audio mixer with 16 mic/line inputs, 2 stereo inputs, 4 effects, 6 mono aux sends, 2 stereo aux sends.	1	No.			
1.14	Gooseneck Microphone with Base.	1	No.			
1.15	Digital Wireless Headworn Microphone set.	1	No.			
1.16	Digital Wireless Handheld Microphone set.	1	No.			
1.19	Wired vocal Microphones.	1	No.			
1.20	Wired instrumental Microphones.	1	No.			
DISPLAY / PROJECTION SYSTEM						
2.1	Active LED System / Projection System 7000 Lumens with 150" Diagonal Motorised Projection Screen and mounting arrangements	1	No.			
2.2	65" or better 4K professional display with HDMI, RS232, Ethernet ports and mounting.	1	No.			
SWITCHING & INTERFACE SYSTEM						
3.2	Wall/Floor Plate with 1xHDMI, 1xUSB C, complete with Transmitter, Receiver set.	1	No.			
3.3	1:4 4K60 4:4:4 HDMI to Long–Reach DGKat 2.0 DA, 1:4 HDMI extender distributor, 1 HDMiLOop Out, Up to 60m (200ft) at 4K60 (4:4:4), Remote PoC powering, Monitoring and cascading loop connection	1	No.			
3.4	4K HDR HDMI Compact PoC Receiver over Long–Reach DGKat 2.0	1	No.			
VIDEO CONFERENCING & RECORDING SYSTEM (Optional)						
4.1	20x Optical Zoom 60° Horizontal Field of View, PTZ Network Camera, PoE, with HDMI and SDI output. Includes PTZ-WMB1 wall mount bracket.	1	No.			
4.2	20x Optical Zoom 60° Horizontal Field of View, PTZ Network Camera, PoE, with HDMI and SDI output. Includes PTZ-WMB1 wall mount bracket.	1	No.			
4.3	Camera supported joystick	1	No.			
4.4	Recorder and Streamer with 4xHDMI Simultaneous recording and streaming. Internal Storage - 400GB or better.	1	No.			
4.5	4K60 4:4:4 Network Video Endpoint for the Q-SYS Ecosystem, software configurable as Encoder or Decoder. 3 HDMI 2.0 Inputs, 2 HDMI 2.0 Outputs, on-board AV Bridging. Supports optional stand-alone "Q-SYS Core Mode" operation for audio DSP with local video switching (no encoding or decoding) and AV Bridging.	1	No.			
PROCESSING & CONTROL SYSTEM PROGRAMING						
5.1	Software or Hardware based control system with required ports to enable the third-party device control via Ethernet, RS232, GPIO and IR. It shall allow the use of third-party control modules/Plug-ins and custom scripts to control the devices. It shall allow open-source scripting language for writing custom scripts. License shall be perpetual and should not have any limit on no of devices to be used as Touch Controller or to be controlled.	1	No.			
5.2	Q-SYS 10.1" PoE Touch Screen Controller for In-Wall Mounting. Color - Black only	1	No.			
5.3	Table top mounting accessory for TSC-70-G3 and TSC-101-G3.	1	No.			
5.4	WiFi Network for connectivity	1	No.			
5.5	10-port network switch preconfigured for Q-SYS Audio, Video and Control with 8x PoE++ ports and 125 Watts PoE budget. Features advanced QoS and IGMP configuration to also support AES67 and Dante within the same VLAN.	1	No.			
5.6	Programing the control system for integrating the complete Audio Video System	1	No.			
CABLE, CONNECTORS, ACCESSORIES						
6.1	Providing, Installation, Testing and Comminssioning of Equipment rack with standard accessories	1	No.			

AV WORK

S. No.	Description	Quantity	Unit	Rate	GST %	Total Including GST
6.2	Providing, Installation, Testing and Comminssioning of rack mountable Network controllable PDU	1	No.			
6.3	Providing , Laying , Testing & Commissioning of Microphone Cable 23/0.76 ATC PVC Sheathed	1	No.			
6.4	Providing , Laying , Testing & Commissioning of Speaker Cable, 2 Core 2.5 Sqmm stranded ETP high-conductivity copper conductors, PVC insulation, parallel: (1) tinned, (1) bare etc. complete with installation as per the site requirement.	1	No.			
6.5	Providing , Laying , Testing & Commissioning of Speaker Cable, 2 Core 4 Sqmm stranded ETP high-conductivity copper conductors, PVC insulation, parallel: (1) tinned, (1) bare etc. complete with installation as per the site requirement.	1	No.			
6.6	Providing , Laying , Testing & Commissioning of 18Gbps HDMI Cables	1	No.			
6.7	Providing, Laying , Testing & Commissioning of CAT6 cable.complete with installation as per the site requirement.	1	No.			