

**Name of Work : Design, Supply, Installation, Testing, Commissioning of Museum Galleries for Tamil Nadu Maritime Heritage Museum at V.O. Chidambaranar Port
, Tuticorin, Tamilnadu**

BUDGETARY QUOTATION

S.no.	Item	Description	Unit	Quantity	Rate	Amount
1.00	Part-1 : Sangam Age During and Post					
1.01	Model/Replica	Providing and Fixing Boat replica models of Sangam Age During and Post with Ramp as approved by Museum Consultant and Subject Expert on the floor in a space of size upto 7000 mm long and 3000 mm wide, made in F.R.P./ wood/ mud plaster/ solid acrylic/ terracotta/ 3D Printing/ rammed earth or resin. 5 fallen structure of size 1000mmx1000mm each usinf FRP/wood/ mud plaster/ solid acrylic/ terracotta/ 3D Printing/ rammed earth or resin/ The fixing of the model has to be seamless, grooveless, and minimal as the details are to be approved by the Museum Consultant. The cost is inclusive of prototyping, fixtures, fittings, hardware, hanging/ bolting systems, electrical, mechanical, or any other mechanism required to make it functional. All detailed drawings, research, and approvals from relevant authorities are in the scope of the contractor. Appropriate finishing to be done as a part of excavation site setting with original look and feel of the thebrick structure. Complete and as directed by the Departmental officers.	nos	1		
1.02	Dislpay	Supply, Installation, Testing, and Commissioning (S.I.T.C.) of Free Standing Floor Mounted showcase of size up to 1200 x 600x 2400 mm, with a base made up of a metal pedestal of appropriate finish, treatment, and color as approved by the Museum Consultant. The showcase is to house actual archaeological artifacts. The showcase's components must fulfill the specifications mentioned in the notes above. The cost is inclusive of prototyping, fixtures, fittings, hardware, hanging/ bolting systems, electrical, mechanical, or any other mechanism required to make it functional. All detailed drawings, research, and approvals from relevant authorities are in the scope of the display case maker and contractor.Complete and as directed by the Departmental officers.	nos	4		
1.03	Touch 13" display	Providing and fixing of 13" FHD display with 10-point multi-touch functionality provides a user-friendly experience Professtional with 3 year Warranty , WIFLLAN,HDMI,Compact and slim design enables efficient use of space,inbuilt Processor : Cortex A72 1.7GHz Quad Core CPU etc. Complete and as directed by the Departmental officers.		1		
1.04	Mini PC	Providing and fixing of Mini PC, Intel NUC i7/16GB/500GB/Win 10 Pro 64bit/Wireless KM/HDMI cable Approved makes: Intel/Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	2		
1.05	Interaction with RFID	Providing and fixing of RFID Tags (30 UHF Tags) with 2 Reader, Tags will be pasted on objects and object trigger content on screen. Includes all hardware and software to exhibit functional as Approved make. Complete and as directed by the Departmental officers.	Jobs	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
1.06	Accessories	Supply and laying of 1 Nos HDMI HDBaseT Extender (Tx Rx Pair) which Extends HDMI signals up to 100 m over a single Cat 5e/6/6a cable ; HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible; EDID Technology enabled; with Local Output; Control signal support - IR, RS-232 & Ethernet ; Plug-and-play; CEC compliant, CAT 6 cables,ConDigital Projectiontorsi, Network Rack with accessories,Patch Panel network switch, and other accessories to required to it fuctional Approved makes: ATEN/KRAMER/Dlink/Netrack/Comrack. Complete and as directed by the Departmental officers.	Nos	1		
1.07	Installation & Integration	All the wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc.Complete and as directed by the Departmental officers.	Job	1		
1.08	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
		Review of all the design and reference presentations and video links for the museum design for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency. Complete and as directed by the Departmental officers.	Job	1		
2.00	Part -2 : Pearl Fishing					
2.01	Model/Replica	Providing and Fixing replica models of OYSTER AND PEARL ART INSTALLATION (INLIT) as approved by Museum Consultant and Subject Expert on the floor in a space of size upto 2000 mm long and 2000 mm wide, made in F.R.P./ wood/ mud plaster/ solid acrylic/ terracotta/ 3D Printing/ rammed earth or resin. 5 fallen structure of size 1000mmx1000mm each usinf FRP/wood/ mud plaster/ solid acrylic/ terracotta/ 3D Printing/ rammed earth or resin/ The fixing of the model has to be seamless, grooveless, and minimal as the details are to be approved by the Museum Consultant. The cost is inclusive of prototyping, fixtures, fittings, hardware, hanging/ bolting systems, electrical, mechanical, or any other mechanism required to make it functional. All detailed drawings, research, and approvals from relevant authorities are in the scope of the contractor. Appropriate finishing to be done as a part of excavation site setting with original look and feel of the thebrick structure. Complete and as directed by the Departmental officers.	Nos	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
2.02	65" Display	Providing and fixing of Diagonal Size 65",Type Edge LED BLU,Resolution 3840*2160 (4K UHD) Pixel Pitch(mm) 0.315 x 0.315,Active Display Area(mm) 1209.6(H) x 680.4(V),Brightness(Typ.): 500 nit Contrast Ratio 4,000:1 ,Viewing Angle(H/V) 178/178,Response Time(G-to-G) 8ms(Typ.),Display Colors 16.7M,Color Gamut 92% (DCI-P3, CIE 1976 Operation Hour, 24/7 Haze,25% (Without Glass),Special Features H/W: Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT S/W: Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting) with 5 year onsite warranty. Approved makes: - Samsung/ Christie. Complete and as directed by the Departmental officers.	Nos	1		
2.03	Mini PC for Info Kisok	Providing and fixing of Mini PC, Intel NUC i7/16GB/500GB/Win 10 Pro 64bit/Wireless KM/HDMI cable Approved makes: Intel/Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	1		
2.04	Sensor with Accessories	Providing TF Mini Lidar Sensor with all accessories Approved makes: TF Mini etc. Complete and as directed by the Departmental officers.	Nos	1		
2.05	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc. Complete and as directed by the Departmental officers.	Job	1		
2.06	General note	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
		Review the design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency. Complete and as directed by the Departmental officers.	Job	1		
2.07	Display Graphics	Providing and fixing of Stretch fabric Partitions (Backlit) : Providing, fixing & application of Backlit Graphic Panel fixed to the wall with necessary support also known as Silicon Edge Graphics (SEG) of 150 - 300 gsm polyester fabric(make:- Barisol,LG,Dinolax), FR rated, giving a edgeless or frameless feel made out of metal frame, and a fabric material using a UV printing process the setup to be Complete with all the necessary hardwares and graphic as per the approval of the museum design consultant. The surface should be in the organic forms with necessary accessories with flexi ply . The light should be evenly lit and the provision for the programmable lighting with the auomation feature as per the design and the satisfaction of the engineer in charge / museum design consultant. The cost is inclusive of all necessary hardwares , LED lights, and frame work for different organic shapes as per the design/ approval of museum design consultant.	sqm	36		
2.08	Sound	Providing Immersive sound System of leading brands for the interaction.Complete and as directed by the Departmental officers.	job	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
3.00	Part-3 : Boats & Sail Ships					
3.01	Model/Replica	Providing and Fixing replica models of Boats & Sail Ships with Wall as approved by Museum Consultant and Subject Expert on the floor in a space of size upto 4000 mm long and 3000 mm wide, made in F.R.P./ wood/ mud plaster/ solid acrylic/ terracotta/ 3D Printing/ rammed earth or resin. 5 fallen structure of size 1000mmx1000mm each usinf FRP/wood/ mud plaster/ solid acrylic/ terracotta/ 3D Printing/ rammed earth or resin/ The fixing of the model has to be seamless, grooveless, and minimal as the details are to be approved by the Museum Consultant. The cost is inclusive of prototyping, fixtures, fittings, hardware, hanging/ bolting systems, electrical, mechanical, or any other mechanism required to make it functional. All detailed drawings, research, and approvals from relevant authorities are in the scope of the contractor. Appropriate finishing to be done as a part of excavation site setting with original look and feel of the thebrick structure. Complete and as directed by the Departmental officers.	nos	12		
3.02	65" Display	Providing and fixing of Diagonal Size 65",Type Edge LED BLU,Resolution 3840*2160 (4K UHD) Pixel Pitch(mm) 0.315 x 0.315,Active Display Area(mm) 1209.6(H) x 680.4(V),Brightness(Typ.): 500 nit Contrast Ratio 4,000:1 ,Viewing Angle(H/V) 178/178,Response Time(G-to-G) 8ms(Typ.),Display Colors 16.7M,Color Gamut 92% (DCI-P3, CIE 1976 Operation Hour, 24/7 Haze,25% (Without Glass),Special Features H/W: Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT S/W: Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting) with 5 year onsite warranty. Approved makes: - Samsung/ Christie. Complete and as directed by the Departmental officers.	Nos	1		
3.03	Mini PC for Info Kisok	Providing and fixing of Mini PC, Intel NUC i7/16GB/500GB/Win 10 Pro 64bit/Wireless KM/HDMI cable Approved makes: Intel/Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	1		
3.04	Sensor with Accessories	Providing TF Mini Lidar Sensor with all accessoeries of approved makes: TF Mini. Complete and as directed by the Departmental officers.	Nos	1		
3.05	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc.Complete and as directed by the Departmental officers.	Job	1		
3.06	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the neccessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
3.07		Review all the research, design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency.Complete and as directed by the Departmental officers.	Job	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
4.00	Part-4 : Navigation					
4.01	Kiosk	Providing and fixing inposition of Sailor wheel kiosk for navigation. Complete and as directed by the Departmental officers.	Job	1		
4.02	Sound	Providing and fixing of Immersive sound during interaction of approved /leading brand etc. Complete and as directed by the Departmental officers.	Job	1		
4.03	Projector	Supply of DLP LASER Phosphor Multimedia Projection system having, 9000-10000 Lumens 20000 hours lamp life, 1920 x 1200 WUXGA Native Resolution, , 3D ready, 10000:1 Contrast Ratio, inputs: HDBaseT,HDMI2.0, DVI-D, Manual/Motorised zoom and focus, alongwith 0.65-0.85 ratio zoom lens & projector mountin bracket etc. complete with installation as per the site requirement. Approved makes: Christie,Barco,Digital Projection etc. Complete and as directed by the Departmental officers.	Nos	5		
4.04	Media Server	Providing and fixing of Display media server/Workstation with 4K outputs as required , synced together. It should be capable of capturing content.Intel® i9 10th Gen, Rack Mountable workstation with 5 Year Onsite Warranty RAM- 32GB DDR4,SSD- 1TB(For WINDOWS BOOT), HDD: 2 TB , Nvidia Quadro GFX, 8GB, 3DP, Windows 10 Pro 64 Bi or higher config.It should also have genlock and framelock capability. Should also have Art-net Ethernet in/out. to complete the job with all respects. Approved makes: Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	2		
4.05	Mapping Software	Providing and fixing of 3D Projection mapping software, Playback control System to manage, schedule and control the media severs. It should have direct control on inputs and media timelines. It should have an option of being controlled by an external unit integrated with the software. to complete the job with all respects. Approved makes: Dataton/Coolux/Pixera etc. Complete and as directed by the Departmental officers.	Nos	2		
4.06	Acessories	Providing and fixing of Supply and laying of 8 nosHDMI HDBaseT Extender (Tx Rx Pair) which Extends HDMI signals up to 100 m over a single Cat 5e/6/6a cable ; HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible; EDID Technology enabled; with Local Output; Control signal support - IR, RS-232 & Ethernet ; Plug-and-play; CEC compliant, CAT 6 cables,ConDigital Projectiontors, Network Rack with accessories,Patch Panel network switch, and other accessories to required to it fuctional Approved makes: ATEN/KRAMER/Dlink/Netrack/Comrack etc. Complete and as directed by the Departmental officers.	Nos	6		
4.07	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc. Complete and as directed by the Departmental officers.	Job	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
4.08	Content	Development of a projection film of duration 7-10 minutes to be projected on the replica Port and the architectural, functional and aesthetical details . The film will have mixed media content including information graphics, illustrations, 2D animation/Motion Graphics/3D animation and models with live action shoot wherever required as per the theme and storyline of the film. The content should be supported by appropriate sound design. The content should be supported by appropriate sound design and voiceover in 3 languages - English, Tamil. The rate for photoshoot, video shoot, documentation of the related content to be included. The cost includes the human resources and suitable equipments required for the shoot. The cost includes drone shooting with appropriate equipments required to do the same. The film will have a original musical score to support the visuals. All sound processing, dubbing, mixing, etc. costs are included in the cost. The cost for any resources such as music composers, singers, artists, instrumentalists, sound engineers, recording studio charges, etc. required to be included in the cost. The content should be made in appropriate resolution as per screen size.Complete and as directed by the Departmental officers	job	1		
4.09	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipments, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
4.10		Review all design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the technonological intent of the installation shall be under the scope of the bidder/execution agency. Complete and as directed by the Departmental officers.	Job	1		
5.00	Part - 5 : Coin and Artefacts Display					
5.01	Display	Supply, Installation, Testing, and Commissioning (S.I.T.C.) of Free Standing Floor Mounted showcase of size up to 4800 x 1200x 2400 mm, with a base made up of a metal pedestal of appropriate finish, treatment, and color as approved by the Museum Consultant. The showcase is to house actual archaeological artifacts. The showcase's components must fulfill the specifications mentioned in the notes above. The cost is inclusive of prototyping, fixtures, fittings, hardware, hanging/ bolting systems, electrical, mechanical, or any other mechanism required to make it functional. All detailed drawings, research, and approvals from relevant authorities are in the scope of the display case maker and contractor.Complete and as directed by the Departmental officers.	nos	2		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
5.02	Fibre Reinforced Plastic (F.R.P) Replica of Coin	Providing and Fixing a circular Fibre Reinforced Plastic (F.R.P.) replica model of size up to 50-350 mm diameter of a coin from Period 03 of the City Timeline of variable thickness ranging from 10 mm - 100 mm. The model's finish and color should be able to allow projection/ projection mapping on it, with details and motifs of the original coin in relief form. The cost is inclusive of all framework, prototyping, fixtures, hardware, hanging/ bolting system for wall/ floor mounted/ ceiling suspended, electrical, mechanical, or any other mechanism required to make it functional. The model should have stability, color as per approval, and appropriate finishing. The design and finishing are to be approved by the Museum Consultant with the approval of the onboard Structural Consultant on the stability and fixing details of the model. All detailed drawings, research, and approvals from relevant authorities are in the scope of the contractor. Refer Design reference presentation.	Job	1		
5.03	65" Display	Providing and fixing of Diagonal Size 65",Type Edge LED BLU,Resolution 3840*2160 (4K UHD) Pixel Pitch(mm) 0.315 x 0.315,Active Display Area(mm) 1209.6(H) x 680.4(V),Brightness(Typ.): 500 nit Contrast Ratio 4,000:1 ,Viewing Angle(H/V) 178/178,Response Time(G-to-G) 8ms(Typ.),Display Colors 16.7M,Color Gamut 92% (DCI-P3, CIE 1976 Operation Hour, 24/7 Haze,25% (Without Glass),Special Features H/W: Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT S/W: Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting) with 5 year onsite warranty. Approved makes: - Samsung/ Christie etc. Complete and as directed by the Departmental officers.	Nos	1		
5.04	Mini PC for Info Kisok	Providing and fixing of Mini PC, Intel NUC i7/16GB/500GB/Win 10 Pro 64bit/Wireless KM/HDMI cable Approved makes: Intel/Dell/HP/ASUS etc. Complete and as directed by the Departmental officers.	Nos	1		
5.05	Sensor with Accessories	Providing and fixing of TF Mini Lidar Sensor with all accessories Approved makes: TF Mini etc. Complete and as directed by the Departmental officers.	Nos	1		
5.06	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc. Complete and as directed by the Departmental officers.	Job	1		
5.07	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
5.08		Review all the design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency.Complete and as directed by the Departmental officers.	Job	1		
6.00	Part 6 : Ship Stairs					

S.no.	Item	Description	Unit	Quantity	Rate	Amount
6.01	32" Display	Providing and fixing of Diagonal Size 32"Dia ,Type Edge LED BLU,Resolution 3840*2160 (4K UHD) Pixel Pitch(mm) 0.315 x 0.315,Active Display Area(mm) 1209.6(H) x 680.4(V),Brightness(Typ.): 500 nit Contrast Ratio 4,000:1 ,Viewing Angle(H/V) 178/178,Response Time(G-to-G) 8ms(Typ.),Display Colors 16.7M,Color Gamut 92% (DCI-P3, CIE 1976 Operation Hour, 24/7 Haze,25% (Without Glass),Special Features H/W: Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT S/W: Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting) with 5 year onsite warranty. Approved makes: - Samsung/ Christie. Complete and as directed by the Departmental officers.	Nos	3		
6.02	Mini PC for Info Kiosk	Providing and fixing of Mini PC, Intel NUC i7/16GB/500GB/Win 10 Pro 64bit/Wireless KM/HDMI cable Approved makes: Intel/Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	1		
6.03	Sensor with Accessories	Providing and fixing of TF Mini Lidar Sensor with all accessoeries Approved makes: TF Mini. Complete and as directed by the Departmental officers.	Nos	1		
6.04	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc.Complete and as directed by the Departmental officers.	Job	1		
6.05	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
6.06		Review the design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency.Complete and as directed by the Departmental officers.	Job	1		
6.07	Sound	Providing and fixing of Immersive sound system as per Area of Museum and Complete and as directed by the Departmental officers.	Job	1		
7.00	Part 7 : VOC & Swadeshi Steam Co. Maritime Resistance & Revolution					
7.01	Projector	Supply of DLP LASER Phosphor Multimedia Projection system having, 9000-10000 Lumens 20000 hours lamp life, 1920 x 1200 WUXGA Native Resolution, , 3D ready, 10000:1 Contrast Ratio, inputs: HDBaseT,HDMI2.0, DVI-D, Manual/Motorised zoom and focus, alongwith 0.65-0.85 ratio zoom lens & projector mountin bracket etc. complete with installation as per the site requirement. Approved makes: Christie,Barco,Digital Projection etc.Complete and as directed by the Departmental officers.	Nos	4		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
7.02	Media Server	Providing and fixing of Display media server/Workstation with 4K outputs as required , synced together. It should be capable of capturing content.Intel® i9 10th Gen, Rack Mountable workstation with 5 Year Onsite Warranty RAM- 32GB DDR4,SSD- 1TB(For WINDOWS BOOT), HDD: 2 TB , Nvidia Quadro GFX, 8GB, 3DP, Windows 10 Pro 64 Bi or higher config.It should also have genlock and framelock capability. Should also have Art-net Ethernet in/out. to complete the job with all respects. Approved makes: Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	1		
7.03	Mapping Software	Providing and fixing of 3D Projection mapping software, Playback control System to manage, schedule and control the media servers. It should have direct control on inputs and media timelines. It should have an option of being controlled by an external unit integrated with the software. to complete the job with all respects. Approved makes: Dataton/Coolux/Pixera. Complete and as directed by the Departmental officers.	Nos	1		
7.04	Accessories	Supply and laying of 8 nosHDMI HDBaseT Extender (Tx Rx Pair) which Extends HDMI signals up to 100 m over a single Cat 5e/6/6a cable ; HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible; EDID Technology enabled; with Local Output; Control signal support - IR, RS-232 & Ethernet ; Plug-and-play; CEC compliant, CAT 6 cables,ConDigital Projectors, Network Rack with accessories,Patch Panel network switch, and other accessories to required to it functional Approved makes: ATEN/KRAMER/Dlink/Netrack/Comrack. Complete and as directed by the Departmental officers.	Nos	2		
7.05	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc.Complete and as directed by the Departmental officers.	Job	1		
7.06	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipments, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
7.07		Review, design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency.Complete and as directed by the Departmental officers.	Job	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
7.08	Content	Development of a projection film of duration 7-10 minutes to be projected on the replica Port and the architectural, functional and aesthetical details . The film will have mixed media content including information graphics, illustrations, 2D animation/Motion Graphics/3D animation and models with live action shoot wherever required as per the theme and storyline of the film. The content should be supported by appropriate sound design. The content should be supported by appropriate sound design and voiceover in 3 languages - English, Tamil. The rate for photoshoot, video shoot, documentation of the related content to be included. The cost includes the human resources and suitable equipments required for the shoot. The cost includes drone shooting with appropriate equipments required to do the same. The film will have a original musical score to support the visuals. All sound processing, dubbing, mixing, etc. costs are included in the cost. The cost for any resources such as music composers, singers, artists, instrumentalists, sound engineers, recording studio charges, etc. required to be included in the cost. The content should be made in appropriate resolution as per screen size. Complete and as directed by the Departmental officers.	job	1		
7.09		Providing and installing an VOC Model model at a scale of 1:20 in 1000mm high model pit. The model will be constructed using heavy-duty and durable FRP (Fiber Reinforced Plastic) material with a thickness of 450mm with necessary detail and custom colour. The model's frame will be made of galvanized iron (G.I.) angler and pipe, ensuring structural stability and support. The frame will be designed according to the detailed drawing or reference presentation, ensuring accurate proportions and dimensions for the model. For the finishing touch, the model can be painted using either Duco or polyurethane weather coat with a shiny finish.Complete and as directed by the Departmental officers.	job	1		
7.10	Sound	Providing and fixing Immersive sound system of approved and leading brand for the Area of Museum in first floor.Complete and as directed by the Departmental officers.	job	1		
8.00	Part- 8 : Immersive Room cum auditorium					
8.01	Projector	Supply of DLP LASER Phosphor Multimedia Projection system having, 9000-10000 Lumens 20000 hours lamp life, 1920 x 1200 WUXGA Native Resolution, , 3D ready, 10000:1 Contrast Ratio, inputs: HDBaseT,HDMI2.0, DVI-D, Manual/Motorised zoom and focus, alongwith 0.65-0.85 ratio zoom lens & projector mountin bracket etc. complete with installation as per the site requirement. Approved makes: Christie,Barco,Digital Projection. Complete and as directed by the Departmental officers.	Nos	14		
8.02	Media Server	Providing and fixing of Display media server/Workstation with 4K outputs as required , synced together. It should be capable of capturing content.Intel® i9 10th Gen, Rack Mountable workstation with 5 Year Onsite Warranty RAM- 32GB DDR4,SSD- 1TB(For WINDOWS BOOT), HDD: 2 TB , Nvidia Quadro GFX, 8GB, 3DP, Windows 10 Pro 64 Bi or higher config.It should also have genlock and framelock capability. Should also have Art-net Ethernet in/out. to complete the job with all respects. Approved makes: Dell/HP/ASUS.Complete and as directed by the Departmental officers.	Nos	3		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
8.03	Mapping Software	Providing and fixing of 3D Projection mapping software, Playback control System to manage, schedule and control the media servers. It should have direct control on inputs and media timelines. It should have an option of being controlled by an external unit integrated with the software. to complete the job with all respects. Approved makes: Dataton/Coolux/Pixera.Complete and as directed by the Departmental officers.	Nos	5		
8.04	Accessories	Supply and laying of 8 nosHDMI HDBaseT Extender (Tx Rx Pair) which Extends HDMI signals up to 100 m over a single Cat 5e/6/6a cable ; HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible; EDID Technology enabled; with Local Output; Control signal support - IR, RS-232 & Ethernet ; Plug-and-play; CEC compliant, CAT 6 cables,ConDigital Projectorntors, Network Rack with accessories,Patch Panel network switch, and other accessories to required to it fuctional Approved makes: ATEN/KRAMER/Dlink/Netrack/Comrack.Complete and as directed by the Departmental officers.	Nos	28		
8.05	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc.Complete and as directed by the Departmental officers.	Job	1		
8.06	General	Review the the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
8.07		Review the design and reference presentations and video links provided for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency. Complete and as directed by the Departmental officers.	Job	1		
8.08	Content	Development of a projection film of duration 7-10 minutes to be projected on the replica Port and the architectural, functional and aesthetical details . The film will have mixed media content including information graphics, illustrations, 2D animation/Motion Graphics/3D animation and models with live action shoot wherever required as per the theme and storyline of the film. The content should be supported by appropriate sound design. The content should be supported by appropriate sound design and voiceover in 3 languages - English, Tamil. The rate for photoshoot, video shoot, documentation of the related content to be included. The cost includes the human resources and suitable equipments required for the shoot. The cost includes drone shooting with appropriate equipments required to do the same. The film will have a original musical score to support the visuals. All sound processing, dubbing, mixing, etc. costs are included in the cost. The cost for any resources such as music composers, singers, artists, instrumentalists, sound engineers, recording studio charges, etc. required to be included in the cost. The content should be made in appropriate resolution as per screen size. Complete and as directed by the Departmental officers	job	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
8.09	Sound	Providing and fixing Immersive sound system for the area. Complete and as directed by the Departmental officers.	job	1		
8.10	DRY WALL Treatment :	Supplying & Fixing of double layer of Sound Dampner 12mm1218x1218 mm made of 10 mm compressed wood cement composites 1250Kg/m3 and 2mm dampner sheet. (37 STC as per IS:9901(part-3)-1981and ISO: 140 (part-3)-1995). To be installed on MS framing (to be provided by the client) and FR Wooden studs on which the panels are mechanically screwed on size 47x47mm fire and termite resistant hardwood studs spaced at 600x600mm centre to centre with infill of 50mmx1000 GSM thick absorb wool tested as per Fire Retardant ASTMD 635-1991 and IS 15061-2002. All the joints needs to be properly sealed with special Acoustic sealant. Complete and as directed by the Departmental officers.	Sqm.	108		
8.11	Ceiling Treatment	Providing and Fixing 'APHONY FIBRETTE' tiles made of Wood Fibre 1mm width cement composites 15mm thick (Non-magnisite) with an option of colours as per the choice of the Architect/ person in charge of size 600x600/600x1200 mm . Has excellent noise absorption of 1 NRC as per ISO: 354-1985 and ASTM 423-90 a, Density 400 Kg/m3, meets stringent Fire Ratings ASTMD-876 and Fire Class -1 as per BS 476 part 5 and 6,Class P-not easily ignitable as per BS-476-Part 5 (Ignitability for material).This is applicable for core and class 1 as per BS 476-Part 7 (Method for classification of surface spread of flame) , weather resistance as per IS 3308, Thermal Insulation as per IS:3346-1980 with relative humidity of 90% RH at 60o Celsius(140o Fahrenheit) for 15 days= No deterioration. Conforms to En 131682001 and are RoHS Complaint and Anti-Bacterial test as per JIS-Z2801-2010.. To be installed on G.I studs 600x600mm centre to centre 2400mm X 50mm web thickness 0.5mm, flanges 15 & 50mm fully knurled giving it high strength, hot dipped galvanized steel with 120GSM zinc coating specially designed for Acoustic vibration management and long life with a backing of HIMALYAN ACOUSTICS. 50mm thick,1000 GSM absorb wool tested as per Fire Retardant ASTMD 635-1991/Insulation and IS 15061-2002 for excellent results. Complete and as directed by the Departmental officers.	Sqm.	38		
8.12	Acoustic Door :	Supplying and Fixing of Acoustic Door of 55 mm having an STC rating upto 59.6 @ 100 Hz as per ISO:140/ASTM90/413. The Door will be filled with high acoustic materials of 2 layers of 8 mm Water Proof Acoustic Ply with Dampner Sheet, 2 Layers of 10mm thick Absorb wool 300 GSM, Sound Dampner 12mm 1218x1218 mm made of 10 mm compressed wood cement composites 1250Kg/m3 and 2mm dampner sheet 37 STC as per ISO 140 (Part-III) - 1995. Final Finish with Teak Ply 4mm thick interior and Exterior Side. Door frame will be made of teak wood Teak Wood/ Engineered Wood. Frame on all four sides or three sides frame and drop seal below will be provided along with the door. High load bearing hinges will be provided along. FR tested as per IS:3614 (Pt. II) & BS: 476-(Pt.20 & 22). Complete and as directed by the Departmental officers.	Nos	2		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
8.13	Projection Paint :	Providing & applying plastic projection Finish paint on walls matt finish and high gain, columns & ceilings. The rate shall include scrapping, levelling & preparing the surface. Primer coat (Asian/ Nerolac/ Berger) + (minimum) 3 coats to get evenly spread quality finish (roller finish) of approved make, quality & finish shall be provided as directed by Museum Consultants. Finish with wall putti wherever necessary before paint etc.Complete	Sqm.	200		
9.00	Part-9 : Lighthouse					
9.01	Display	Supply, Installation, Testing, and Commissioning (S.I.T.C.) of Free Standing Floor Mounted showcase of size up to 4800 x 1200x 2400 mm, with a base made up of a metal pedestal of appropriate finish, treatment, and color as approved by the Museum Consultant. The showcase is to house actual archaeological artifacts. The showcase's components must fulfill the specifications mentioned in the notes above. The cost is inclusive of prototyping, fixtures, fittings, hardware, hanging/ bolting systems, electrical, mechanical, or any other mechanism required to make it functional. All detailed drawings, research, and approvals from relevant authorities are in the scope of the display case maker and contractor. Complete and as directed by the Departmental officers.	nos	2		
9.02	Fibre Reinforced Plastic (F.R.P) Replica of Coin	Providing and Fixing a circular Fibre Reinforced Plastic (F.R.P.) replica model of Light House size up to 50-350 mm diameter of a coin from Period 03 of the City Timeline of variable thickness ranging from 10 mm - 100 mm. The model's finish and color should be able to allow projection/ projection mapping on it, with details and motifs of the original coin in relief form. The cost is inclusive of all framework, prototyping, fixtures, hardware, hanging/ bolting system for wall/ floor mounted/ ceiling suspended, electrical, mechanical, or any other mechanism required to make it functional. The model should have stability, color as per approval, and appropriate finishing. The design and finishing are to be approved by the Museum Consultant with the approval of the onboard Structural Consultant on the stability and fixing details of the model. All detailed drawings, research, and approvals from relevant authorities are in the scope of the contractor. Complete and as directed by the Departmental officers.	nos	12		
9.03	55" Display	Diagonal Size 55",Type Edge LED BLU,Resolution 3840*2160 (4K UHD) Pixel Pitch(mm) 0.315 x 0.315,Active Display Area(mm) 1209.6(H) x 680.4(V),Brightness(Typ.): 500 nit Contrast Ratio 4,000:1 ,Viewing Angle(H/V) 178/178,Response Time(G-to-G) 8ms(Typ.),Display Colors 16.7M,Color Gamut 92% (DCI-P3, CIE 1976 Operation Hour, 24/7 Haze,25% (Without Glass),Special Features H/W: Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT S/W: Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting) with 5 year onsite warranty. Approved makes: - Samsung/ Christie.Complete and as directed by the Departmental officers.	Nos	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
9.04	Mini PC for Info Kisok	Mini PC, Intel NUC i7/16GB/500GB/Win 10 Pro 64bit/Wireless KM/HDMI cable Approved makes: Intel/Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	1		
9.05	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc Complete and as directed by the Departmental officers.	Job	1		
9.06	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
9.07		Review all the design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency. Complete and as directed by the Departmental officers.	Job	1		
10.00	Part- 10 : Modern Shipping					
10.01	Projector	Supply of DLP LASER Phosphor Multimedia Projection system having, 9000-10000 Lumens 20000 hours lamp life, 1920 x 1200 WUXGA Native Resolution, , 3D ready, 10000:1 Contrast Ratio, inputs: HDBaseT,HDMI2.0, DVI-D, Manual/Motorised zoom and focus, alongwith 0.65-0.85 ratio zoom lens & projector mountin bracket etc. complete with installation as per the site requirement. Approved makes: Christie,Barco,Digital Projection. Complete and as directed by the Departmental officers.	Nos	2		
10.02	Media Server	Providing and fixing of Display media server/Workstation with 4K outputs as required , synced together. It should be capable of capturing content.Intel® i9 10th Gen, Rack Mountable workstation with 5 Year Onsite Warranty RAM- 32GB DDR4,SSD- 1TB(For WINDOWS BOOT), HDD: 2 TB , Nvidia Quadro GFX, 8GB, 3DP, Windows 10 Pro 64 Bi or higher config.It should also have genlock and framelock capability. Should also have Art-net Ethernet in/out. to complete the job with all respects. Approved makes: Dell/HP/ASUS.Complete and as directed by the Departmental officers.	Nos	1		
10.03	Mapping Software	Providing and fixing of 3D Projection mapping software, Playback control System to manage, schedule and control the media severs. It should have direct control on inputs and media timelines. It should have an option of being controlled by an external unit integrated with the software. to complete the job with all respects. Approved makes: Dataton/Coolux/Pixera. Complete and as directed by the Departmental officers.	Nos	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
10.04	Accessories	Supply and laying of 8 nosHDMI HDBaseT Extender (Tx Rx Pair) which Extends HDMI signals up to 100 m over a single Cat 5e/6/6a cable ; HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible; EDID Technology enabled; with Local Output; Control signal support - IR, RS-232 & Ethernet ; Plug-and-play; CEC compliant, CAT 6 cables,ConDigital Projectiontors, Network Rack with accessories,Patch Panel network switch, and other accessories to required to it fuctional Approved makes: ATEN/KRAMER/Dlink/Netrack/Comrack.Complete and as directed by the Departmental officers.	Nos	1		
10.05	Installation & Integration	All wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc as per the required intent and direction of consultant.	Job	1		
10.06	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the neccessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Please refer to the design presentation for further details. Complete and as directed by the Departmental officers.	Job	1		
10.07		Review all the design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency. Complete and as directed by the Departmental officers.	Job	1		
10.08	Content	Development of a projection film of duration 7-10 minutes to be projected on the replica Port and the architectural, functional and aesthetical details . The film will have mixed media content including information graphics, illustrations, 2D animation/Motion Graphics/3D animation and models with live action shoot wherever required as per the theme and storyline of the film. The content should be supported by appropriate sound design. The content should be supported by appropriate sound design and voiceover in 3 languages - English, Tamil. The rate for photoshoot, video shoot, documentation of the related content to be included. The cost includes the human resources and suitable equipments required for the shoot. The cost includes drone shooting with appropriate equipments required to do the same. The film will have a original musical score to support the visuals. All sound processing, dubbing, mixing, etc. costs are included in the cost. The cost for any resources such as music composers, singers, artists, instrumentalists, sound engineers, recording studio charges, etc. required to be included in the cost. The content should be made in appropriate resolution as per screen size. Complete and as directed by the Departmental officers	job	1		
10.09	Sound	Providing and fixing of Immersive sound as per Area Mention in Layout and Design.Complete and as directed by the Departmental officers.	job	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
10.10	Display	Stretch fabric Partitions (Backlit) : Providing, fixing & application of Backlit Graphic Panel fixed to the wall with necessary support also known as Silicon Edge Graphics (SEG) of 150 - 300 gsm polyester fabric(make:- Barisol,LG,Dinolax), FR rated, giving a edgeless or frameless feel made out of metal frame, and a fabric material using a UV printing process the setup to be Complete with all the necessary hardwares and graphic as per the approval of the museum design consultant. The surface should be in the organic forms with necessary accessories with flexi ply . The light should be evenly lit and the provision for the programmable lighting with the auomation feature as per the design and the satisfaction of the engineer in charge / museum design consultant. The cost is inclusive of all necessary hardwares , LED lights, and frame work for different organic shapes as per the design.Complete and as directed by the Departmental officers.	sqm	64		
11.00	Part- 11 : Indian Coast Guard					
11.01	Projector	Supply of DLP LASER Phosphor Multimedia Projection system having, 9000-10000 Lumens 20000 hours lamp life, 1920 x 1200 WUXGA Native Resolution, , 3D ready, 10000:1 Contrast Ratio, inputs: HDBaseT,HDMI2.0, DVI-D, Manual/Motorised zoom and focus, alongwith 0.65-0.85 ratio zoom lens & projector mountin bracket etc. complete with installation as per the site requirement. Approved makes: Christie,Barco,Digital Projection etc.Complete and as directed by the Departmental officers.	Nos	4		
11.02	Media Server	Display media server/Workstation with 4K outputs as required , synced together. It should be capable of capturing content.Intel® i9 10th Gen, Rack Mountable workstation with 5 Year Onsite Warranty RAM- 32GB DDR4,SSD- 1TB(For WINDOWS BOOT), HDD: 2 TB , Nvidia Quadro GFX, 8GB, 3DP, Windows 10 Pro 64 Bi or higher config.It should also have genlock and framelock capability. Should also have Art-net Ethernet in/out. to complete the job with all respects. Approved makes: Dell/HP/ASUS. Complete and as directed by the Departmental officers.	Nos	2		
11.03	Mapping Software	Providing and fixing of 3D Projection mapping software, Playback control System to manage, schedule and control the media severs. It should have direct control on inputs and media timelines. It should have an option of being controlled by an external unit integrated with the software. to complete the job with all respects. Approved makes: Dataton/Coolux/Pixera. Complete and as directed by the Departmental officers.	Nos	2		
11.04	Acessories	Supply and laying of 8 nosHDMI HDBaseT Extender (Tx Rx Pair) which Extends HDMI signals up to 100 m over a single Cat 5e/6/6a cable ; HDMI (3D, Deep Color, 4K); HDCP 2.2 compatible; EDID Technology enabled; with Local Output; Control signal support - IR, RS-232 & Ethernet ; Plug-and-play; CEC compliant, CAT 6 cables,ConDigital Projectiontors, Network Rack with acessories,Patch Panel network switch, and other accessories to required to it fuctional Approved makes: ATEN/KRAMER/Dlink/Netrack/Comrack.Complete and as directed by the Departmental officers.	Nos	8		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
11.05	Installation & Integration	The cost includes all wiring and other Digital Projectionessary items required on site for conDigital Projection from DB to the mentioned technology item all complete with integration, mapping etc as per the required intent and direction of consultant. Complete and as directed by the Departmental officers.	Job	1		
11.06	General	Review the quality, mechanism and finish of the work should conform to the International standards of museums. The installation is inclusive of all the necessary tech equipmets, softwares, applications, accessories, special effects or any other mechanism required to make it functional. Complete and as directed by the Departmental officers.	Job	1		
11.07		Review all the design and reference presentations and video links provided by the museum design consultants for understanding the concept, intent and quality of the installation to provide appropriate technical solution for the same. All the items required to meet the techonological intent of the installation shall be under the scope of the bidder/execution agency. Complete and as directed by the Departmental officers.	Job	1		
11.08	Content	Development of a projection film of duration 7-10 minutes to be projected on the replica Port and the architectural, functional and aesthetical details . The film will have mixed media content including information graphics, illustrations, 2D animation/Motion Graphics/3D animation and models with live action shoot wherever required as per the theme and storyline of the film. The content should be supported by appropriate sound design. The content should be supported by appropriate sound design and voiceover in 3 languages - English, Tamil. The rate for photoshoot, video shoot, documentation of the related content to be included. The cost includes the human resources and suitable equipments required for the shoot. The cost includes drone shooting with appropriate equipments required to do the same. The film will have a original musical score to support the visuals. All sound processing, dubbing, mixing, etc. costs are included in the cost. The cost for any resources such as music composers, singers, artists, instrumentalists, sound engineers, recording studio charges, etc. required to be included in the cost. The content should be made in appropriate resolution as per screen size.Complete and as directed by the Departmental officers	job	1		
11.09	Sound	Providing and fixing Immersive sound system as per area of the Museum & Concepts and Design etc. Complete. The cost including all the materials, labour, finishing etc. Complete and as directed by the Departmental officers.	job	1		

S.no.	Item	Description	Unit	Quantity	Rate	Amount
11.10	Display	Providing and fixing Stretch fabric Partitions (Backlit) : Providing, fixing & application of Backlit Graphic Panel fixed to the wall with necessary support also known as Silicon Edge Graphics (SEG) of 150 - 300 gsm polyester fabric(make:- Barisol,LG,Dinolax), FR rated, giving a edgeless or frameless feel made out of metal frame, and a fabric material using a UV printing process the setup to be Complete with all the necessary hardwares and graphic as per the approval of the museum design consultant. The surface should be in the organic forms with necessary accessories with flexi ply . The light should be evenly lit and the provision for the programmable lighting with the auomation feature as per the design and the satisfaction of the engineer in charge / museum design consultant. The cost is inclusive of all necessary hardwares , LED lights, and frame work for different organic shapes as per the design etc. Complete and as directed by the Departmental officers.	sqm	64		
11.11	Innteravtive	Providing and fixing of 75" TV SCREEN WITH CAMERA AND AI and Complete and as directed by the Departmental officers.	job	1		
12.00	Part- 12 : Genrel items					
12.01	Electrical	Providing S.I.T.C. natural / forced air-cooled, ON-LINE modular UPS suitable to operate in 'Hot Standby' or 'Parallel' or 'Stand-alone' mode, with bypass switch mode, work at 45° C temperature and relative humidity of 95% with IGBT technology complete with battery bank etc.Complete and as directed by the Departmental officers.	job	1		
		Total (excluding GST)				
		GST				
		Total (including GST)				