

KERALAM MUSEUM OF HISTORY & HERITAGE

Park View, Thiruvananthapuram-33

(Nodal agency of all museums under Cultural Affairs Dept. Govt. of Kerala) Website: www.museumkeralam.org | Email: info@museumkeralam.org Phone: 0471-2320231, +91-9567019037

KIM- 83 /2013/ DHM

Date - 13/01/2020

REQUEST FOR PROPOSAL

Selection of Museum Consultancy Firm for Setting up of galleries and museum related exterior works at District Heritage Museum, Palakkad.

Request For Proposal is invited by Interactive Museum of Cultural History of Kerala (Keralam Museum of History and Heritage) from the Empanelled/Non Empanelled, reputed, experienced, and competent museum Consultancy Firms for Setting up of galleries and museum related exterior works at District Heritage Museum, Palakkad, The Non-Empanelled firms should furnish company details and other required data with in the prescribed date and should get pre-qualification before fixing the bid. The details relating to the nature and scope of the project, eligibility criteria, terms and conditions and other information relating to the Request For Proposal as detailed below.

Executive Director

Interactive Museum of Cultural History of Kerala (Keralam Museum of History and Heritage)

<u>Name of Work</u> - Setting up of galleries and museum related exterior works at District Heritage Museum, Palakkad

CONTENTS

a. Scope and Objective of the Museum

Palakkad District is been continuously bolstering the art of music, from singers, musical instruments players to musical instruments makers. Many eminent maestros arose from the soil similarly many folk as well as tribal musical traditions find their roots to back in Palakkad District. Our primary objective is to highlight the peculiar features of the culture, history and heritage of Palakkad District. Along with that objective, the mission of the museum includes few other objectives that to commemorate the stalwarts, to propagate the skills, to document the history of the music in the district, to conserve the intangible heritage of Palakkad. To pursue the primary objectives, museum will undertake education and outreach programs, temporary exhibition.

b. Location of the Museum

The District Heritage Museum of Palakkad is proposed to be set up at Mani Iyer Memorial Auditorium, behind Rosi School compound in the Palakkad Town. At present there is a moderately large hall built by DTPC funds in 2009 and used as a music concert hall and the Center for training of Temple Arts and Percussion Musical Instruments. The center is managed by Kerala Folklore Academy, Kannur, which also serves as the Regional Center of Kerala Folklore Academy. A large collection of musical instruments are at present kept in the hall. The musical instruments are kept inside the hall in a disorderly manner.

c. Physical condition of Mani Iyer Hall

The Mani Iyer Hall in which the musical instruments are at present kept is a semi-permanent structure with aluminum roofing. There is a performance cum concert stage where musical concerts are very occasionally held. On inspecting the site, it has come to our notice that the structure has no climate insulation to preserve these instruments considering Kerala's extremely humid climate. Fenestration of the hall is suggested to provide insulation as well as seamless experience of displays. Changing of false ceiling is also proposed as per the new requirements of interior with respect to acoustics, climate insulation and lighting. Also we have designed HVAC system, Fire safety system and Electrical and lighting layout as per interior requirements. The moisture condition has to be corrected and proper drainage facilities are to be implemented as part of physical conservation of the structure for which necessary provision has been provided in the estimates.

Vision

- To exhibit the of musical traditions in the culture of Palakkad District.
- To encourage people to explore the music from the multi-layered social fabric of Palakkad.
- To illustrate the codependent relation between the festivities, cultural performances, music and musical instruments.

Mission

- To accomplish the vision, diverse mediums of communication will be employed.
- Detailed information will be imparted through multiple layers of communication.
- To target a diverse audience, as per the demographics, appropriate mediums will be employed

Narrative - The Sounds, the Stories of Palakkad

"The Sounds, the Stories of Palakkad" refers to the diverse variety of music in Palakkad. Storytelling through music and performing arts is an integral aspect of the culture of Palakkad. The theme for this narrative, therefore, primarily focuses on sound as the precursor of music and how music has evolved through time leading us up to the present day culture of music in Palakkad.

The experience at this museum starts with, the visitors being greeted into a dark and quiet room. The stillness and the quiet in the room highlights the absence of sound. Gradually one can hear the wind starting to blow gently, the rustling of the leaves in the wind, the rain, the thunder, and other such sounds of the elements of nature.

The walls around the room come to life with scenes of the lush green paddy, bamboo and coconut fields of Palakkad. The wind now blows through the hollow bamboos and the coconut shells clank with each other to create a melodious sound. A child is seen trying to replicate and then repeat these sounds as he makes and plays a drum. This human intervention gives rise to music. He is then joined by others with different instruments, coming together to form a community. The visitors are immersed in a sensorial experience of nature that prepares them for the oncoming extravaganza of the culture of Palakkad. This initial group of men create music that has a definite structure to it and the visitors hear this music evolving into what is now introduced as *Panchavadyam*.

A Year In Palakkad:

A grandiose musical play of *Panchavayam* heralds the beginning of the next part of the journey: "A Year in Palakkad". This part of the narrative celebrates the major festivals of Palakkad in a chronological order. The storyline for this narrative begins with the festival of *Chingam* which takes place in the month of August-September and is regarded as the beginning of New Year. The storyline ends with *Karkatakam* in July-August according to the traditional *Malayali* calendar.

P.T.O

The stories in this narrative highlight the role of traditional orchestras and performances which are integral to the celebrations of each corresponding month. Immersive illustrations, sound showers and life-size video projections bring the enthusiasm and the colors of Palakkad to life. The various instruments are on grand display, along with a glimpse of how they are made, the places where they are played, by who they are played etc. Throughout the linear storyline, the prominence of the instruments will be highlighted with respect to which different kinds of performing arts or temple arts, etc. they are used in.

The bright colorful characters, the masks and costumes along with the musical instruments are displayed against earthy neutral backdrop which also gives a glimpse of the architecture as well as the natural scenic beauty of Palakkad.

The rich colorful masks and costumes tell further stories of the other art forms that are enjoyed throughout the year. Stories about the many maestros of different genre of music are narrated through engaging video performances and archival images. The rich vibrancy and spirit of celebrations is experienced throughout the museum.

Kerala is known for its rich agricultural produce and during the months of intensive labor on the fields, the festivities take a backseat. Correspondingly, our visitors enter breathing spaces where they can sit and enjoy certain kinds of art forms which are played all around the year with no specific time frame like the tribal art forms and practices that are not confined to the calendar months. This alternates with the space pockets of festivals throughout the museum to provide a rhythm to the otherwise linear story.

The journey concludes on a high note with a display of unique performance arts followed by *Tholpavakoothu* (shadow puppetry) narrating the story of how music is that binding thread which brings together the diverse communities of Palakkad together in harmony. Like the beginning, the end of the museum experience is concluded with the musical play of *Panchavadyam* thus completing one full cycle of festivities. The visitors hear the *Panchavadhyam* again as Palakkad gets ready to welcome another year of prosperity.

Takeaway: Music is a common thread for storytelling which celebrates life in Palakkad and binds the community together in harmony.

Story - The Sounds, The Stories of Palakkad

We enter a dark, quiet space. We are engulfed by silence. Slowly, we hear the sound of birds chirping. The wind makes palm leaves rustle in the distance. We see that we are standing in a paddy field, it is sunrise and nature is at its full glory. In the corner, a child is playing with coconut shells. He is trying to imitate the clanging of coconuts on the tree. Eventually he figures out the trick to creating a rhythm and this primitive instrument evolves....into a definite musical instrument. He is joined by 4 other children, each with their own contraption. They lead us into Palakkad, we are welcomed by a traditional doorway and vibrant upbeat music. As we step inside, we see the initial instruments transformed into what is now introduced as *Panchavadyam*. Surrounding them are visuals of important elements/places in Palakkad.

We have arrived in Palakkad in the period of the months of *Chingam, Kanni* and *Thulam.* We see the harvest-related festivities during this time. The monsoons have arrived and there is life and growth to be celebrated. People have every reason to rejoice: the mesmerising weather, a bountiful harvest and a sense of gratefulness for all that they have received. Kathakali, Mohiniyattam, Theyyam and Koodiyattam are some of the best known performance art forms from Kerala. The performances, their costumes and masks are seen. Simultaneously, there are festivals like Onam, Navarathri and Kalpathi Ratholsavam, which is grandly celebrated in Palakkad. Centrally, *Kalamezhuthum Pattum* is being depicted. Tying all these festivities together are the musical instruments used here. We see these highlighted and understand their roles. Now it is time to move on to the next part of the year.

The months of *Vrishchikam* and *Dhanu* take Palakkad farmers back to the fields. It is a time of hard work and toil. The celebrations take a backseat. Here, our journey takes us back into nature, towards a group of people who live surrounded by nature: the tribal communities of Palakkad. We get a glimpse of their art forms, their way of life and we see that music and dance is integral to their celebrations and festivity. The musical instruments of the Malayar, Erawala and Irula tribes are seen. This lush green zone is a much needed breathing space between the festivities that we have seen and those that we will soon experience.

P.T.O.

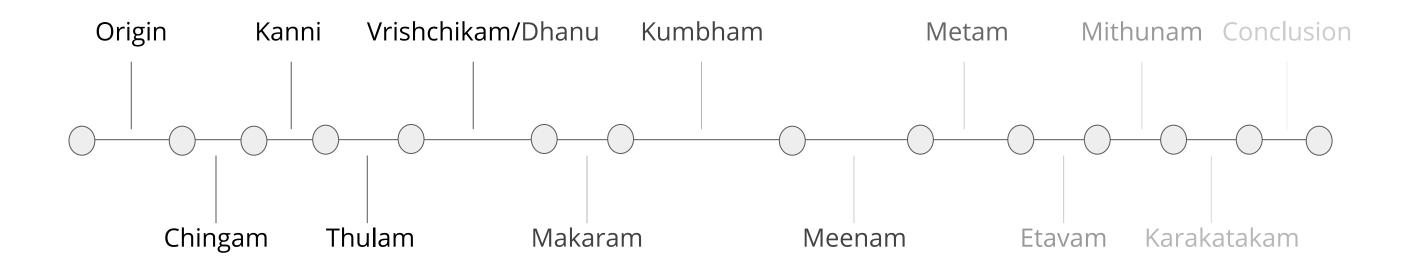
The next time period is that of *Makaram-Kumbham-Meenam-Metam*. The festivals and celebrations are at a peak and all communities come together to give thanks and share their joy. We see a range of festivals, cutting across all community lines. The history of the Muslim community in Kerala (their migration from the Middle East, settling on the coast, following trade routes) is explained. Along with them, we learn about their instruments and art forms, particularly the Nerchas and Arabana Muttu, Duff Muttu and Oppanna performances. The next category of festivals are the Velas. Here, people acknowledge the importance of the animals that help them throughout the year. Horse races, effigies are important elements of these celebrations. During this period, the Chembai Ekadasi Festival is one more important happening. We understand how indispensable classical music, in its various forms, is to this region, the instruments used and of course, we learn about the man himself, Chembai Vaidyanatha Bhagavathar and his contributions to the art form. In line with this air of prosperity and celebrations, we head towards the various Poorams of Palakkad. Walking through the procession, we feel as though we are a part of this extravagant revelry. We also catch sight of the multitude of performances and the instruments that are essential to them, that occur in a designated temple area called 'Koothambalam'.

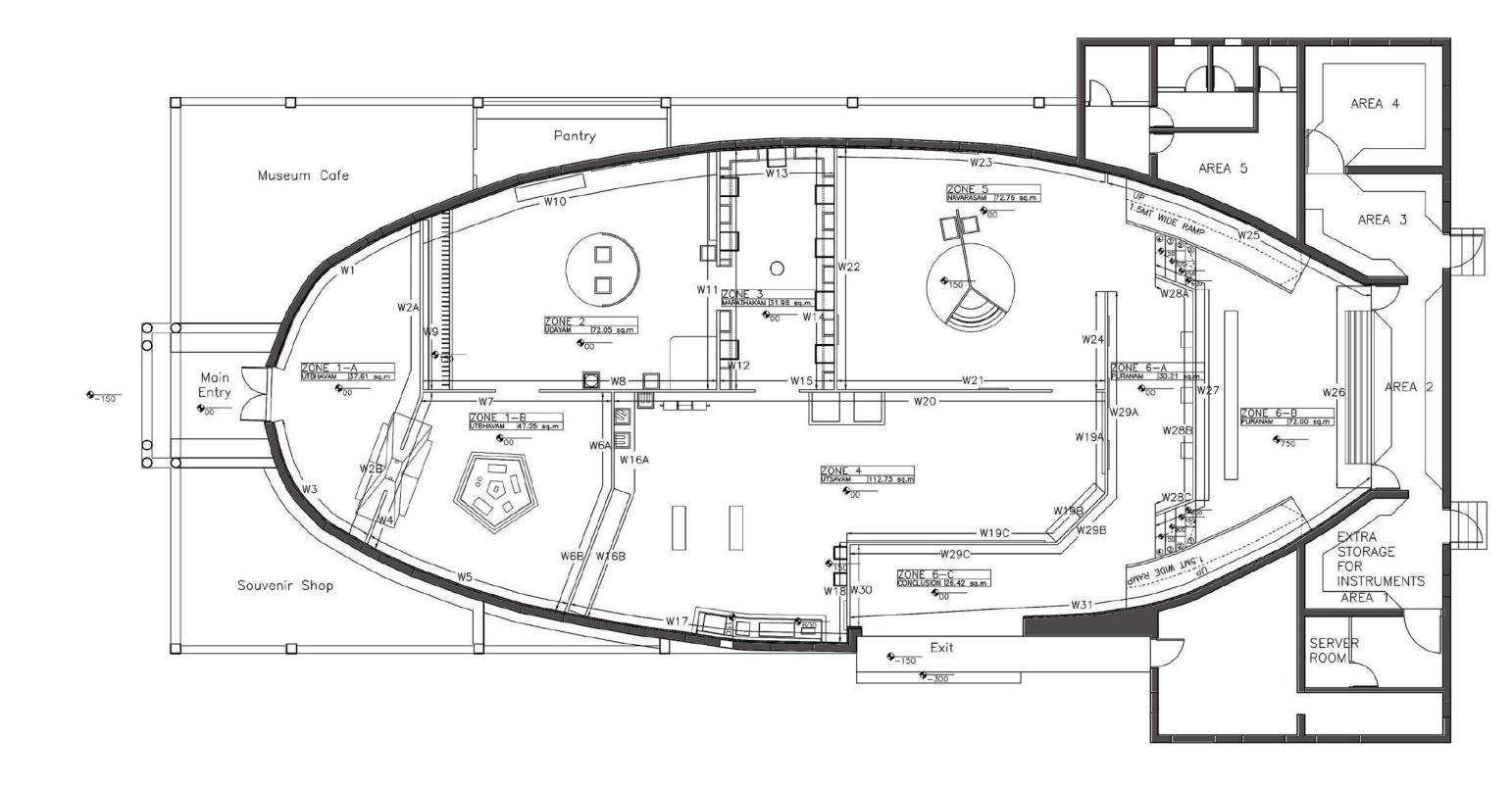
The next zone is again one of work in the fields, as per the prevalent climate. Here, we dive into theatrical art forms of Thullal, which originated in Palakkad, Chavittu Natakam, a Christian dance-drama-musical performance and Porattu Natakam, a satire-based drama practised mainly in villages. We see characters from all these performances, their costumes and accompanying instruments. We also realise that, even if the forms and stories told by these varied art forms are different, they all have similar messages and comments on society. Whether it is through stories of deities and figures from myths, or comments on daily agrarian life and community, the essence of it involves morality and community.

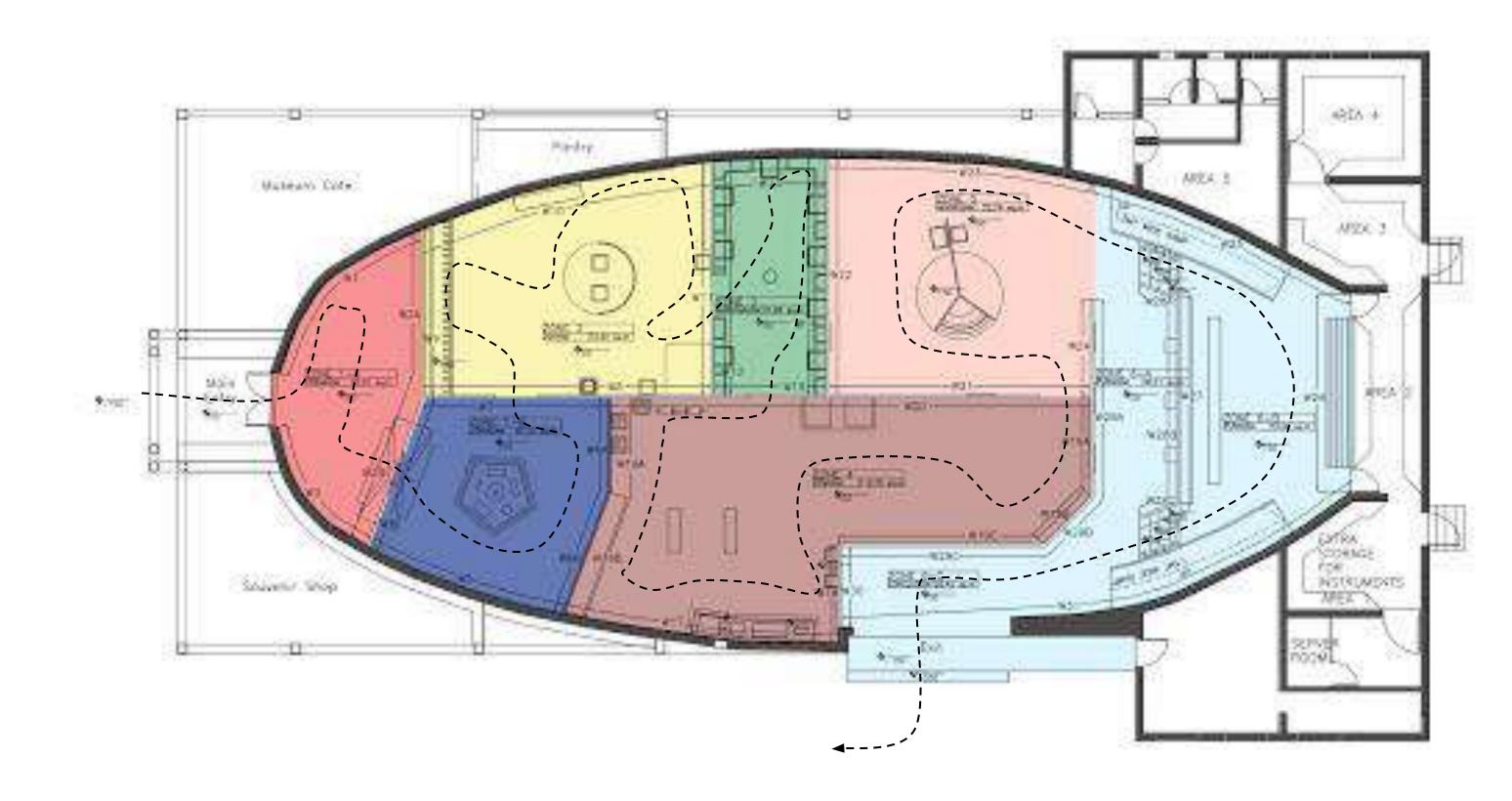
The final stage of our journey involves a *Pavakoothu/Tholpavakoothu* performance. Both the puppetry and shadow puppetry forms are unique to Palakkad. The storyline of this show will be a reference to the very beginning of our travels. There will also be a separate provision to gain a deeper understanding of the maestros of the performances and instruments seen so far, for those who are interested. The last leg of the journey brings us full circle, with the sound of Panchavadyam following us out, heralding another prosperous year in Palakkad.

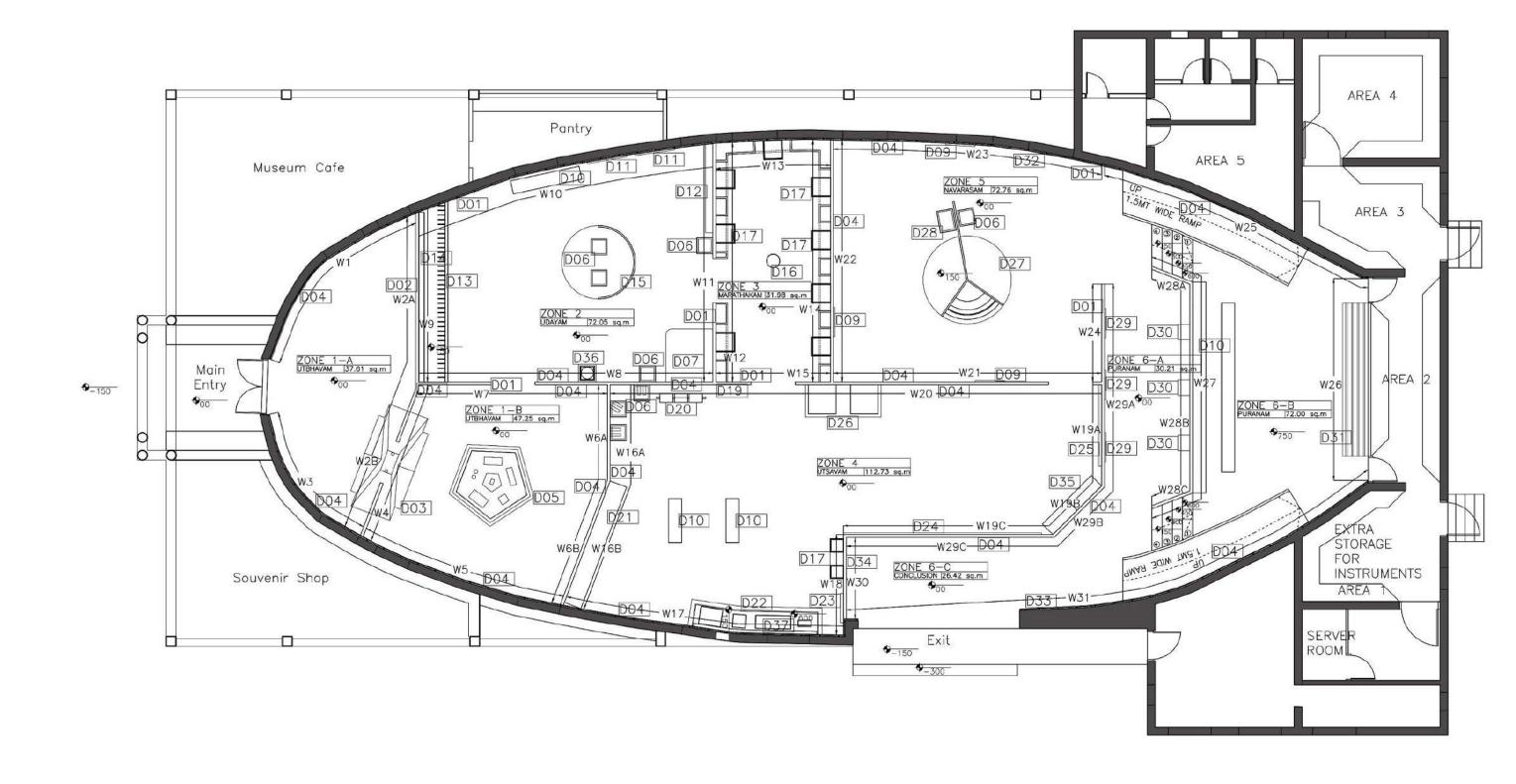
Zoning

Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Utbhavam	Udayam	Marathaka	Utsavam	Navarasam	Puranam









CODE	DESCRIPTION
D01	Illustration - Introduction
D02	Immersive Projection
D03	Scaled Replica of a Paddipura
D04	Illustration
D05	Island display - Punchvadyam
D06	Island display - Type 1
D07	Projection
D08	Illustration - Text
D09	TV Screen
D10	Seating
D11	Ornamental Information Panel
D12	Acrylic Backlit Panel
D13	Replica of typical Kerala house Balcony
D14	Backlit Scroll Box
D15	Information Panel
D16	Replica of Tree
D17	Wall mount display
D19	Illustration - Canvas

CODE	DESCRIPTION
D20	Interactive stand alone display
D21	Layered cutouts - Pooram
D22	Instrument display case - Classical
D23	Manuscript Replica
D24	Illustration - Map
D25	Low relief mural
D26	Scaled replica of effigies
D27	2D cutouts with background
D29	TV screens - Digital Archive
D30	Interactive Kiosk (Maestros)
D31	Roller Curtains
D32	Illustration - Message
D33	Illustration - Credits
D34	Illustration - Thank you
D35	Instrument display with Illustrations
D35	Island display - Mishavu

Zone	Instruments	Exhibit	Panel Type	Medium of Communication
		Story - origin of music		Immersive Projection
		Doorway to Palakkad		Doorway
Zone 1: Utbhavam	Kombu, Maddalam, Elathalam, Timila, Idakka, Shanku	Panchavadyam Display	Placard	Display with cutouts
Otbiiavaiii		Backdrop		Black and white illustration with information
		Introduction Panel to next zone: Intro to Palakkad	Wall Sticker	Panel over Palakkad streetscape
		Ratholsavam	On the balcony wall	Balcony and anaglyph
		Onam, Navarathri	On the wall	Panel with text
		Pulluvan Community	Panel with Structure	Central structure with panels
Zone 2: Udayam	Pulluvan Veena, Pulluvan Kudum	Instrument Display	Placard	Instrument Display
		Performance Wall: Mohiniattam, Koodiyattam, Kathakali	Standalone	Back lit cutout panel
	Mizhavu	Chakyar Koothu, Nangyar Koothu	Integrated with display	Instrument Display and Wooden Panels

Zone	Instruments	Exhibit	Panel Type	Medium of Communication
	Nanthuni, Valam Thalam	Instrument Display	Placard	Instrument Display
		Introduction to: Vrishchikam/Dhanu	Wall sticker	Panel
Zone 2: Udayam	Kurumkuzhal, Chilanka	Instrument Display	Placard	Instrument Display
		Kalamezhuthum Pattum	Standalone	Floor Projection
		Theyyattu	Standalone	Animation on screen
		Tribes of Palakkad	On the wall	Information on wall with greenery images
Zone 3: Marathakam	KottuMaram, Maram, Maravetti, Peepi, Para, Kinnam, Urumi, Kogal, Devil	Tribal Instruments	Placard	Instrument Display
		Introduction to: Makaram to Metam	Wall sticker	Panel
		Kanyarkali	On the wall	Illustration
Zone 4:	Veekku Chenda, Urukku Chenda, Muri Chenda	Chenda	On the wall	Cut-outs with Hand Mannequin
Utsavam		Pooram	On the wall	Layered Cut-outs
		Sopan Sangeetham	On the wall	Illustration
		Chembai Ekadasi	Manuscript-style	Statues with Manuscript style panels

	Harmonium, Shruti, Veena, Thampura, Mursing, Mridangam, Chengila(sop.sang.), Nadaswaram	Classical Music	Placard	Instrument Display
		Effigy	On the wall	Effigy recreation
7000 At		Vela	On the wall	Wall illustration with information
Zone 4: Utsavam		History :the Duff and Arabana	On the wall	Projection on the topograph
	Duff, Arabana	the Duff and Arabana	On the wall	Book recreation with instrument display
		Oppanna, Nercha	On the wall	Wall Mural with continuation of Book elements
		Introduction to: Etavam to Karkatakam	Wall sticker	Introduction Panel
	Kuzhithalam	Thullal	On the wall	Central stage recreation with instrument display
Zone 5: Navarasam	Thavil	Porattu Natakam	On the wall	Central stage recreation with instrument display
		Pavakoothu, Tholpavakoothu	On the wall	Central Stage recreation with two tier display
		Common message	On the wall	Central stage recreation with instrument display

Zone 5:	Corresponding audience	On the wall	Illustration, information, TV screens
Navarasam	Introduction to: Maestros, Performance	Wall sticker	Panel
	Digital archive		Screens
	Maestros		Interactive kiosk
Zone 6: Puranam	Tholapavakoothu, Pavakoothu	on stage	Performances
T di diidii	Credits	On the wall	Panel
	Musical Traditions India	On the wall	Wall Graphics

Eligibility Criteria For Application

Those who are including Empanelled/Non Empanelled firms should attend the **Pre-bid meeting**.

Pre-bid meeting date - 25.01.2020 11 am at Keralam Museum, Parkview, Trivandrum 33

Non Empanelled persons who are willing to participate in the Request Of Proposal shall submit their Firm details as described below on before **23.01.2020**. They will be informed the eligibility before the Pre-bid meeting.

- 1. The details of minimum 3 years experience in the Museum related works.
- 2. The details of minimum turnover of 3 crore in last 2 years.
- 3. The details of completed work with Project cost in last 3 years Minimum value of project 5 crores.
- 4. The firm should have a consortium containing the following Technical persons.
 - a. Curator
 - b. Museum designer
 - c. Historian with sufficient experience in said subject
 - d. Implementation team with minimum 5 years experience
 - e. Graphic Designer
 - f. MEP consultant
 - g. Other experts

Kindly submit the testimonials proving qualifications of the above persons.

5. The Details shall be furnished on International/National/State/District or any other awards related to winning design competitions/ Museum exhibition works. (Enclose copy of documentary proof of winning design competitions/awards).

Eligibility criteria for application - Subjective Evalauation

1. Company incorporation & and their presence

10 marks - Up to 3 years

15 marks - More than 3 years and less than 5 years

20 marks - Above 5 years

2. Average annual turn over

10 marks - Up to 3 crores for the last two years

15 marks - More than 3 crores and less than 4 crores for the last two crores

20 marks - Above 4 crores for the last two years

3. Project cost in last 3 years

10 marks - Up to 5 crores

15 marks - More than 5 crores and less than 7 crores

20 marks - Above 7 crores

4. Number of employees in the consortium

10 marks - Up to consortium of 5 members

15 marks - More than 5 members and less than 7 members

20 marks - More than 7 members

5. Winning awards

10 marks - For State/District level awards

15 marks - For National level awards

20 marks - For International level awards

The bidder who secure at least 50 % of score in the evaluation will be treated as qualified for submitting final bid.

Consultants/Firms attending the Pre-bid meeting will get more details about nature and scope of the project, eligibility criteria, terms and conditions and other information relating to the Request For Proposal. Those who are participated in the bid shall pay Cost RFP documents Rs 5000/- by way of DD drawn in the name of Executive Director, Interactive Museum of Cultural history of Kerala before attending the pre-bid meeting for getting Detailed Project documents. RFP documents is includes with detailed drawing, designs and gallery wise details

Technical presentation and Financial bid

Eligible candidates can participate in Technical presentation and Financial bid. Details of Technical presentation and Financial bid are given below.

1.Technical Presentation (Subjective evaluation)

The technical presentation should be entirely based on the design already prepared.

20 marks - Understanding the brief

20 marks - Respecting the historicity of the building and demonstrative adaptive reuse

20 marks – Understanding the Design flow/strength

20 marks - Economics of design

20 marks - Confidence in executing

Total marks = 100 marks

2. Financial Bid

The Financial bid should be based on the design and estimate already prepared

Estimate Amount = ₹ 3,79,76,649.56 + **GST**

- a) The bidder who secure at least 70% of score in the technical presentation will be treated as technically qualified.
- b) The Financial Bids of the technically qualified bidders will be opened on the prescribed date in the presence of the bidder or their representatives who are authorized by bidder.
- c). The lowest financial bidder (L1) will be awarded 100% score.
- d) Financial Scores for other than L1 bidders will be evaluated using the following formula:

 Financial Score of a Bidder = {(Financial Bid of L1/Financial Bid of the Bidder)

 X 100}% (Adjusted to two decimal places)
- e) Only fixed price financial bids indicating total price for all the services specified in this bid document will be considered.
- f) The bid price will include all taxes and levies and shall be in Indian Rupees.
- g) Errors & Rectification: Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail".

Combined Evaluation of Technical presentation & Financial Bids

a) The technical and financial scores secured by each bidder will be added using weightage of 70% and 30% respectively to compute a Composite Bid Score.

- b) The bidder securing the highest Composite Bid Score will be declared as the Best Value Bidder for award of the Project.
- c) In the event the bid composite bid scores are 'tied', the bidder securing the highest technical score will be declared as the Best Value Bidder for award of the Project.
- d). The successful bidder has to provide a letter of acceptance to Interactive Museum of Cultural History of Kerala (Keralam Museum of History and Heritage, Trivandrum) within seven days of receiving communication about his/her selection from the Department.
- e). The successful bidder shall to sign an agreement with payment schedule at the time of award of the work.
- f). Keralam Museum of History and Heritage reserves all the rights to accept or reject any/all Request For Proposal applications, without assigning any reason. The Department takes no responsibility for the delay, loss or non-receipt of any submission or letter sent by post, within the prescribed time period.

Conditions and Notes

- *The work is planned in two phases based on fund availability
- * The first phase work will be separated according to priority.
- *Completion of first phase work is 4 months
- *First phase amount is limited as rupees 2,36,00,000.00/-(including GST)
- * Those who are participated in the bid shall pay Cost RFP documents Rs 5000/- by way of DD drawn in the name of Executive Director, Interactive Museum of Cultural history of Kerala before attending the pre-bid meeting for getting Detailed Project documents. RFP documents is includes with detailed drawing, designs and gallery wise details.
- *Excess over estimate/ below estimate rate shall be allowed by the committees constituted for Museum setting works if necessary.
- *Estimate is separately attached along with this documents.
- *DPR details will be available in the Keralam Museum at the Office time. You can contact directly for getting details of the project.
- *The technical presentation should be entirely based on the design already prepared.
- *The Financial bid should be based on the design, drawing and estimate already prepared
- *If the mentioned brand and model equipments is not available in the market, other brands with the equivalent specification can be used at their present market rate

Application / Request For Proposal in sealed cover with complete details in all respects and superscribed as Selection of Museum Consultancy Firm for Setting up of galleries and museum related exterior works at District Heritage Museum Palakkad shall be submitted at the following address. A soft copy of Request For Proposal shall be sent along with this application. Interested consultants/ consortia of consultants can download the Request For Proposal documents from the website www.museumkeralam.org. The last date for receipt of application is 5 pm on February 12, 2020.

The Executive Director
Interactive Museum of Cultural History of Kerala
(Keralam Museum of History and Heritage), Park View
Vikas Bhavan P.O,
Trivandrum – 695033.

	PALAKKAD DISTRICT HERITAGE MUSEUM				
Sr. No.	Description	Amount			
1	INTERNAL ELECTRICAL WORK	₹ 18,00,000.00			
2	CIVIL WORKS AND INTERIOR WORKS	₹ 1,58,30,660.30			
3	LIGHTING & DIMMING SYSTEM	₹ 52,35,619.64			
4	AV INTEGRATION	₹ 91,84,219.62			
5	MUSEUM CONTENT DEVELOPMENT	₹ 59,26,150.00			
	GRAND TOTAL	₹ 3,79,76,649.56 + GST			

I	agree	to	execute	the	work	at		
Es	timate r	ate /	′%	belo	w /	% ab	oove	

Executive Director

Consultant

Estimate				
Specification	Unit	Rate	Qty	Amount
Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator	each	1508.00	1.00	1508.00
12 way, Double door				
Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface / recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)	each	2882.00	1.00	2882.00
4 way (4+12), Double door				
Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required .(Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.)	each	7423.00	2.00	14846.00
8 way (4 + 24), Double door				
Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator	each	1390.00	5.00	6950.00
8 way, Double door				
Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.	each	2253.00	1.00	2253.00
_	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 12 way, Double door Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface / recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) 4 way (4+12), Double door Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.) 8 way (4 + 24), Double door Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 8 way, Double door Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 12 way, Double door Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface / recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) 4 way (4+12), Double door Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.) 8 way (4 + 24), Double door Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 8 way, Double door Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 12 way, Double door Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface / recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) 4 way (4+12), Double door Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.) 8 way (4 + 24), Double door Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 8 way, Double door Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 12 way, Double door Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface / recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) 4 way (4+12), Double door Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, neutral link, earth bar, din bar for mounting MCB's (but without MCB's and incomer) as required. (Note: 'Vertical type MCB TPDB is normally used where 3 phase outlets are required.) 8 way (4 + 24), Double door Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCBIRCCB/Isolator 8 way, Double door Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning

	Supplying and fixing following rating, four pole, (three				
6	phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.	each	2747.00	6.00	16482.00
	25 amps				
7	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.	each	3017.00	7.00	21119.00
	63 amps				
8	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Single pole	each	227.00	34.00	7718.00
	Supplying and fixing 5 amps to 32 amps rating,				
9	240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.	each	607.00	1.00	607.00
	Double pole				
10	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.	each	2793.00	1.00	2793.00
	40 amps				
11	Supplying and fixing TP sheet steel enclosure on surface/ recess along with 16/25/32amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required.	each	1151.00	5.00	5755.00
12	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.	metre	90.00	950.00	85500.00
	25 mm				
13	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required.	metre	30.00	950.00	28500.00
	1 x 1.5 sq. mm				
14	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required.	metre	69.00	860.00	59340.00
	2 x 2.5 sq. mm				

15	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required. 2 x 4 sq. mm	metre	104.00	90.00	9360.00
16	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	point	718.00	4.00	2872.00
17	Group A Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/ recess including cutting the wall and making good the same in case of recessed conduit as required.	metre	75.00	100.00	7500.00
18	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required	metre	147.00	250.00	36750.00
19	2x1.5 sq.mm + 1x1.5 sq.mm earth wire Supplying and laying of Cat 6 UTP cable in 25 mm MMS LSHFT OVC conduyit with necessary accessories (Keypad, Gobo projectors, Data & WIFI, Cameras) 1 run of Cable	metre	45.00	2333.00	104985.00
20	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.	set	516.00	5.00	2580.00
21	3 1/2X 70 sq. mm (38mm) Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.	set	632.00	5.00	3160.00
22	3 1/2X 95 sq. mm (45mm) Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3 1/2 X 120 sq. mm (45mm)	set	655.00	25.00	16375.00
23	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3 1/2 X 150 sq. mm (50mm)	set	776.00	5.00	3880.00

24	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.	set	334.00	125.00	41750.00
25	4 X 16 sq. mm (28mm) Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc. as required.	each	119.00	9.00	1071.00
	3 Module				
26	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc. as required. 4 Module	each	132.00	3.00	396.00
27	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc. as required. 8 Module	each	198.00	9.00	1782.00
28	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 5/6 amps switch	each	110.00	30.00	3300.00
29	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.	each	106.00	32.00	3392.00
	3 pin 5/6 amp socket outlet				
30	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.	metre	515.00	120.00	61800.00
	150 mm width X 50 mm depth X 1.6 mm thickness				
31	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.	metre	603.00	55.00	33165.00
	225 mm width X 50 mm depth X 1.6 mm thickness				
32	Supplying and installing following size of perforated pre-painted M.S. cable trays bends with perforation not more than 17.5%,, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.	no	1661.00	5.00	8305.00
	300 mm width X 62.5 mm depth X 2.0 mm thickness				

Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	set	10864.00	1.00	10864.00
Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required.(Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	metre	111.00	65.00	7215.00
Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	metre	1143.00	10.00	11430.00
Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	metre	114.00	50.00	5700.00
Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.	metre	997.00	10.00	9970.00
Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required. 3.5 core 120 sq mm	metre	835.00	25.00	20875.00
Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.	metre	663.00	10.00	6630.00
	3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm) Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required. Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required. Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required. 3.5 core 150 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required. 3.5 core 150 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required. 3.5 core 120 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of cl	3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm) Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required. Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required. Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps note along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 150 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 120 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.	3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm) Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required. Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required. Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps note along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 150 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 120 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 120 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.	a mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm) Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required. Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required. Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 150 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 120 sq mm Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required.

40	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.	metre	559.00	10.00	5590.00	
	3.5 core 70 sq mm					
41	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.	metre	253.00	125.00	31625.00	
	4 core 16 sq mm with factory made clamp					
42	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured copper power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.	metre 338.00	metre 338.0	338.00	45.00	15210.00
	3 core 6 sq mm with factory made clamp					
43	Supply & laying of one No. PVC insulated and PVC sheathed armoured copper power cable of 1.1 KV grade of the following sizes in the existing masonry open duct as required.	metre	341.00	10.00	3410.00	
	4 core 4 sq mm					
44	Supply & laying of one No. PVC insulated and PVC sheathed armoured copper power cable of 1.1 KV grade of the following sizes in the existing masonry open duct as required. 4 core 6 sq mm	metre	metre 454.00 60.00		27240.00	
1	1 . 55.5 5 59					

45	Supply and drawing the following sizes of multi-core PVC insulated & FRLS PVC sheathed 650/1100 V grade copper conductor round flexible cables conforming to IS 694 part I 1960 in the existing surface / recess conduit as required including giving necessary connections of the following sizes. 3 core 1.50 sq mm	metre	72.00	8100.00	583200.00
46	Supply and drawing the following sizes of multi-core PVC insulated & FRLS PVC sheathed 650/1100 V grade copper conductor round flexible cables conforming to IS 694 part I 1960 in the existing surface / recess conduit as required including giving necessary connections of the following sizes. 2 core 1.50 sq mm	metre	73.00	2915.00	212795.00
	Fabrication, supply, conveyance, installation testing and commissioning of floor or wall mounting, dust and vermin proof, cubicle type MV panel board comprising of the following components/ devices & complying to IS 8623.			11.00	
47	Fabrication of fully partitioned, dust and vermin proof enclosure for panel assembly as per form 4 of IS 8623 (with latest amendments) using CRCA sheet as per approved design and requirement, with front and rear access facility, bus bar chambers, hinged doors for all switch gear compartments, earthing the doors using 4 sq mm braided copper conductor, providing necessary cut-outs for mounting meters, relays, indication lamps, bus bar interconnection etc, detachable covers for bus bar chamber and cable alley, powder coating the assembly after subjecting to 7 tank process etc as required. CRCA sheet alone be used for the fabrication. Angles/flats/ slotted angles etc shall not be used for the fabrication of panel assembly. The measurments will be taken the area of the complete sheets used for panel board including partitions, folding, shrouding etc.	sqm	2554.00		28094.00

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	Supply and fabrication of MV panel board using 2.00mm CRCA sheet, powder coated (excluding base frame) including 3 nos P LED phase indication lamps controlled by 20 A HRC fuse units with 2 A HRC fuse links and Danger Notice Board				
47.01	Supply and providing 2mm SMC sheet as shrouding for bus interconnection / terminations etc. including required nut & bolt etc.	sqm	2952.00	0.60	1771.20
47.02	U' section rubber beeding suitable for 1.60/ 2.00 mm sheet	metre	7.00	50.00	350.00
47.03	Supply and fabrication conveyance and installation of base frame of panel board using 75 x 40 mm rolled steel channel (ISMC)	metre	916.00	4.00	3664.00
47.04	Supply and providing copper bus bars including finger type SMC bus bar supports in the bus chamber, suitable size nut & bolt, providing heat shrink sleeves etc. as required.	Cum cm	6.00	2000.00	12000.00
47.05	Supply and providing copper earth bus in the panel board	Cum cm	6.00	500.00	3000.00
47.06	Supply, conveyance and fixing the following types & current rated control gears & switchgears conforming to IS 13947 suitable for 440 V, 50 Hz, AC supply in the existing panel assembly as required.	no	23067.00	1.00 23067.00	
	200A, 35/36 kA (Ics=100%Icu), 4 pole, current limiting type MCCB with microprocessor based release with overload setting of 50 - 100% having adjustable OL & SC				
47.07	Supply, conveyance and fixing the following types & current rated control gears & switchgears conforming to IS 13947 suitable for 440 V, 50 Hz, AC supply in the existing panel assembly as required.	50	4774 ∩∩	8.00	20160 NN

47.07	16 A-100A, 25/35 kA (Ics=100%Icu), 3 pole, current limiting type MCCB having thermal setting range of 80 - 100% with thermal magnetic release having adjustable OL (3 Nos 100 A and 5 Nos 63 A)	IΙU	4//1.UU		30100.UU
47.08	MCCB Accessories Supply and fixing rotary handle, External type (including BUC handle with door interlock) in the existing MCCB of rating up to 250 A	no	1826.00	9.00	16434.00
48	Supply & Laying 25 mm MMS PVC conduit (For Workstation)		40.00	400.00	16000.00
49	SITC of Compact Precision Stranded High Recusation Speaker cable, 16 guage speaker wire 100 Mtr role 2 conductor, original digital audio signal stereo component home theater sound and Amplifiuer/ Receiver cables Square and Round with 25 mm PVC conduit & accesories,		750.00	100.00	75000.00
50	SITC of VGA cable (10 Mtr)		975.00	9.00	8775.00
51	SITC o9f USB cable (10 Mtr)		1775.00	1.00	1775.00
52	SITC of HDMI cable (10 Mtr)		1175.00	9.00	10575.00
	Total				1789103.20
	LS				10896.80
	Grand total				1800000.00

Civil Works and interior works Estimate SI.No **Specification** Unit Qty Rate Amount Demolishing internal existing brick walls, tile skirting, Marble / Tile Flooring, False ceiling etc. and carting 1 LS LS 35000.00 away debris from site. Toilet flooring - Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS: 15622, of approved make in 2 colours White, Ivory, Grey, fume Red Brown, laid on 1077.90 Sqm 46.00 49583.40 20 mm thick cement mortar 1:4 (1 cement : 4 Coarse sand), including grouting the joints with white cement and matching pigments etc., complete. vvail tiling - Providing and fixing I st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer -in-3 976.13 Sqm 180.00 175703.40 Charge, in skirting, risers of steps and dados, over 12 thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sgm, including pointing in white cement mixed with pigment of matching shade complete Step to be converted in ramp - Construction of new ramp after demolishing steps including filling, brick 4 2.00 62944.92 Nos 31472.46 work, PCC, Handrail etc as per direction of Engineer in charge (drawing attached) Doors and windows covering - Providing and fixing, in position concealed G.I. section for wall paneling using board of required thickness fixed on the 'W' profile (0.55 mm thick) having a knurled web of 51.55 mm and two flanges of 26 mm each with lips of 10.55 mm, placed @ 610 mm C/C in perimeter channel having one flange of 20 mm and another flange of 30 mm with thickness of 0.55 mm and web of length 27 mm.Perimeter channel is fixed 5 Sqm 69.00 985.70 68013.30 on the floor and the ceiling with the nylon sleeves @ 610 mm C/C with fully threaded self-tapping dry wall screws. Board is fixed to the 'W' profile with 25 mm countersunk ribbed head screws @ 200 mm C/C., all complete as per the drawing & directions of engineerin-charge, the joints of the boards are finished with specially formulated jointing compound and 48 mm wide jointing tape to provide seamless finish. Gypsum board conforming to IS: 2095 Part - I12.5 mm thick

6	Providing wooden Door as per proposed drawing with teakwood including cost of labour, conveyance etc.	Nos	2.00	45526.27	91052.54
7	Providing HVAC system		LS	LS	1500000.00
8	Internal electrification including arrangement of Three phase electric connection and related works		LS	LS	200000.00
9	Providing and laying paver tile laid in various colour including earth work, gravel filling etc as per direction	Sqm	420.00	1105.19	464179.80
10	Providing and laying sand including cost of conveyance, labour charges etc.	Sqm	19.00	4619.46	87769.74
11	Providing and laying in position ready mixed plain cement concrete, with cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for plain cement concrete work, including pumping of R.M.C. from transit mixer to site of laying andcuring, excluding the cost of centering, shuttering and finishing, including cost of curing, admixtures inrecommended proportions as per IS:9103 to accelerate/retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Note: 1) Excess /less cement used than specified in this item is payble / recoverable separately.All works upto plinth level:M-15 grade plain cement concrete (cement content considered @ 240 kg/cum)	Cum	2.00	8113.53	16227.06
12	Providing and fixing RCC drain covers, having concrete of strength not less than M 25 of size 1000 x 450 x 50 mm reinforced with 8mm dia bars all as per direction of Engineer in charge.	Nos	150.00	1257.31	188596.50
13	12 mm cement plaster of mix:1:4 (1 cement : 4 coarse sand)	Sqm	370.00	237.02	87697.40
14	Land scaping and vertical garden		LS	LS	50000.00
15	Providing RCC pillars for sit out space (drawing attached)	Nos	20.00	2735.63	54712.60

16	Providing and fixing wooden rectangular shape portion for sit out space including selected wood, labour charges and polishing etc.	Sqm	10.00	8272.82	82728.20
17	Bricl work With F.P.S (non modular) bricks (above plinth level up to below floor 2 level)	Sqm	4.00	6759.03	27036.12
18	Providing and fixing 18 mm thick gang saw cut, mirror, polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations, of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement: 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade Area of slab upto 0.50 sqm	Sqm	10.00	4393.07	43930.70
19	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-incharge (Door handle, lock and stopper etc to be paid separately)	Sqm	2.10	6040.36	12684.76
20	Providing and fixing M.S. Grills of required pattern with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. bryFixed to steel windows by welding	Kg	150.00	137.10	20565.00
21	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work	Sqm	1230.00	110.68	136136.40
22	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	1230.00	114.55	140896.50
23	Providing Mural painting in compound wall area	LS			50000.00
24	Providing coffee furnitures including chair and table etc	LS			300000.00

25	Additional carpentry works	LS			6000.00
26	Glass paneling - Providing, assembling and supplying vision glass panels with 12mm toughned glass including cost of material, adhesives, labours etc as per direction of officer in charge.	Sqm	40.00	3707.94	148317.60
27	Roller blinds wooden type	Sqm	108.00	2843.62	307110.96
28	Souvenir shop designing of display wall & middle portion	LS			690000.00
29	fiber reinforced plastic paneling - Providing FRP paneling with given design including the cost of designing charges, labour charges, conveyance, cost of material etc.	sqm	200.00	1804.49	360898.00
	Ticket Counter and Security room				
1	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.All kinds of soil	Cum	5.75	165.07	949.15
2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	Sqm	10.00	164.81	1648.10
3	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	6.00	5197.64	31185.84
4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	3.00	7184.64	21553.92
5	Brick work with common burnt clay machine moulded perforated bricks of classdesignation 12.5 conforming to IS: 2222 in superstructure above plinth level up tofloor five level in cement mortar 1:6 (1 cement : 6 coarse sand):With Modular bricks	Sqm	6.80	7471.08	50803.34

6	12 mm cement plaster of mix:1:4 (1 cement : 4 coarse sand)	Nos	70.00	237.02	16591.40
7	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work	Nos	80.00	110.68	8854.40
8	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete	Sqm	40.00	114.55	4582.00
10	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20 mm thick cement mortar 1:4(1 cement: 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete.Size of Tile 600 x 600 mm. 1 27.0 27.000	Sqm	27.00	1467.09	39611.43
11	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete. Hot finished welded type tubes	Sqm	600.00	118.28	70968.00
12	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+0.05%), total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling/self tapping screws of size (5.5x55mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Kg	40.00	721.35	28854.00

14	Providing and fixing factory made uPVC white colour sliding glazed window above 1.50 m in height dimension comprising of uPVC multi-chambered frame with in-built roller track and sash extruded profiles duly reinforced with 1.60 +/- 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), appropriate dimension of uPVC extruded glazing beads, uPVC extruded nterlocks and uPVC extruded Inline sash adaptor (if required), EPDM gasket, wool pile, zinc alloy (white powder coated) handle on one side of extreme panel along with zinc plated mild steel multi point locking having transmission gear with keeps, zinc alloy (white powder coated) touch lockwith hook (if required for wire mesh panel), stainless steel (SS 304 grade) by stainless steel (SS 304 grade) capacity to be 120 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealent over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes, wire mesh and silicon sealent shall be paid separately). Note: For uPVC frame and sash extruded profiles minus 5% tolerance in-cbr-dimension i.e. in depth & width of profile shall be acceptable. Two track two panels sliding window made of (big series) frame 67 x 50 mm & sash 46 x 62 mm both having	Sqm	5.40	7575.05	40905.27
16	Providing and fixing wooden door with pincoda wood including material cost, labour cost, conveyance etc as per direction of engineer in charge		LS	LS	48368.00
	Museum Interior works				
1	Paneling - Providing & fixing Structure of 35mm x 35mm M.S. hollow pipe framing with 18mm Marine ply as a base material, 12mm Exterior grade MDF as surface material finish with Luster Paint, with necessary hardware ike fevicol, nails, screws etc.	Sqm	325.00	4393.21	1427793.25
2	Partition - Providing & fixing Structure of 35mm x 35mm M.S. hollow pipe framing with 18mm Marine ply as a base material From both side, 12mm Exterior grade MDF as a surface material finish with Luster Paint From both sides, with necessary hardware like fevicol, nails, screws etc	Sqm	656.00	7248.76	4755186.56

3	PLATFORM - Providing & fixing of platfome strucure made in 18mm Marine ply framework, 18mm Marine Ply for Base, Surface Finish with Selected 4mm veneer with matt melamine polish, with necessary hardware like fevicol, nails, screws etc.	Sqm	31.00	3510.79	108834.49
4	REPLICA OF PADDIPURA :- Providing & fixing of Replica of Paddipura, Structure made in 18mm, 12mm plyood, surface finish with wired cut bricks & Roof finish in Manglore tiles with required Hardawre & Etc.	each	1.00	69477.27	69477.27
5	WOODEN RAILING - Providing & fixing of wooden railing structure made in solid wood as per drawings, surface finish with Melamine polish with required hardware	cum	0.75	136620.14	102465.11
6	INFORMATION PANEL- Providing & fixing of Ornamental Inforamation panels, structure made in 12 mm MDF, surface finish with paint.	Sqm	15.00	1433.08	21496.20
7	Providing and fixing MDF or equivalent make paneling 12 mm thick, to frame, backing or studding with screws etc. complete as per the direction of site Engineer-in-charge.	Sqm	10.00	2017.28	20172.80
8	Instrument display - Providing & fixing glass display for instumnts , structure made in 18mm, 12mm ply, 12mm Toughened glass from front side, fixed in twinpro profile.	Sqm	30.00	8539.08	256172.40
9	Wall mount display - Providing & fixing of wallmount boxes, structure made in 18mm & 12mm plywood & glass, surface finish MDF with luster paint with required hardware & adhesive	No	11.00	11981.66	131798.26
10	Providing Island counter - Providing & fixing of 12mm toughen glass island cubical counter with varies sizes (300/600/900 mm) Plywood base structure made in 18mm ply,finish with selected 4mm veneer, Matt melamine polish, Glass boxes on it with necessary hardware like fevicol, nails, screws etc.	Sqm	1.00	16853.98	16853.98
11	Providing and fixing acrylic panel or equivalent make paneling 12 mm thick, to frame, backing or studding with screws etc. complete as per the direction of site Engineer-in-charge.	Sqm	5.00	5876.36	29381.80
12	Providing site cleaning and pest control	LS	LS	LS	100000.00
13	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special GI sections with aqustic gypsum ceiling	Sqm	580.00	1488.19	863150.20
14	ISLAND COUNTERS -Providing & fixing of 12mm toughen glass island cubical counter with varies sizes (300/600/900 mm) Plywood base structure made in 18mm ply,finish with selected 4mm	no	1.00	30814.60	30814.60

	necessary hardware like fevicol, nails, screws etc				
15	ISLAND COUNTERS - Providing & fixing of 12mm toughen glass island cubical counter with varies sizes (300/600/900 mm) Plywood base structure made in 18mm ply,finish with selected 4mm veneer, Matt melamine polish, Glass boxes on it with necessary hardware like fevicol, nails, screws etc.	no	8.00	24650.51	197204.08
16	ISLAND COUNTERS - Providing & fixing of 12mm toughen glass island cubical counter with varies sizes (300/600/900 mm) Plywood base structure made in 18mm ply, str>finish with selected 4mm veneer, Matt melamine polish, Glass boxes on it with necessary hardware like fevicol, nails, screws etc.	no	1.00	15510.67	15510.67
17	ISLAND COUNTERS - Providing & fixing of 12mm toughen glass island cubical counter with varies sizes with wooden carving work Plywood base structure made in 18mm ply,finish with selected 4mm veneer, Matt melamine polish, Glass boxes on it with necessary hardware like fevicol, nails, screws etc.	no	1.00	178730.46	178730.46
18	INTRACTIVE STAND ALONE DISPLAY: Providing & fixing of intreactive stand alone displays, structure made in 18mm, 12mm ply, finish with MDF & paint finish, Round wooden member br>for rotating with reuired hardware.	Nos	1.00	41639.78	41639.78
19	PUPPET SHOW COUNTER: Providing & fixing of puppet show counter, structure made in 18mm, 12mm ply round shape surface finish with 4mm veneer, finish with melamine br>polish with reuired Hardware	Sqm	8.50	13879.93	117979.41
20	SEATING BENCH :Providing & fixing of seating benche, structure made in 18mm ply, surface finish with selected veneer finish with melamine polish with required br>hrdware & adhesive. (size - 2400 x 450)	Nos	6.00	27950.34	167702.04
21	MANUSCRIPT REPLICA: Providing & fixing of manuscript replica structure made in MDF surface finish with selected paint.	Sqm	1.20	18489.92	22187.90
22	STORAGE RACK :>Providing & fixing of Storage rack strucure made in 18mm Marine ply framework, Surface Finish with Selected 4mm veneer with matt 	Sqm	112.00	4437.94	497049.28
23	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work	Sqm	3500.00	110.68	387380.00

	Grand total				15830660.29
25	French spirit polishing:Two or more coats on new works including a coat of wood filler	Sqm	800.00	274.90	219920.00
24	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	2000.00	114.55	229100.00

DETAILED BOQ - LIGHTING & DIMMING SYSTEM

(If the mentioned brand and model equipments is not available in the market, other brands with the equivalent specfication can be used at their present market rate)

Sr. No.	Manufactuer	Model	Description	Qty	Unit	Wattage per Unit	Unit Cost INR	Line Total INR	Comments
Α	LIGHT FIXTURES	Fitting Reference							
1	CDN	CL-01	4W/m Blue LED Strip Light fixture with AL Extrusion, IP67, DALI Dimmable/ YYZ Lighting - LFX - 4.8W/m CRI 80 - lue LED Strip Light fixture -IP67 Meanwell Power Supply ELG-150-24DA - Dali Dimmable	43	Mtrs	4	₹1,475.00	₹63,425.00	
2	CDN	CL-02	10W/m LED Strip Light fixture with AL Extrusion, 3000K, IP20,DALI Dimmable/ YYZ Lighting - LFX - 9.6W/m -CRI 80 - 3000K - IP20 Meanwell Power Supply ELG-150-24DA - Dali Dimmable	67	Mtrs	10	₹1,240.00	₹83,080.00	
3	CDN or equivalent	CL-03	6W/m LED Flexible Strip Light fixture, 3000K, IP20, DALI Dimmable/ YYZ Lighting - LFX - 7.4W/m -CRI 80 - 3000K - IP20	43	Mtrs	6	₹1,235.00	₹53,105.00	
4	CDN or equivalent	R-01	10W 20°, LED Recessed (Built in) Mounted Down Light, IP20, 3000K, DALI Dimmable	14	No's	10	₹7,200.00	₹100,800.00	
5	CDN or equivalent	R-02	25W 40°, LED Recessed Ceiling Mounted Adjustable Down Light, IP20, 3000K, DALI Dimmable	32	No's	25	₹14,500.00	₹464,000.00	
6	CDN/ Halcyon Lighting or equivalent	R-03	3W LED Recessed in Glass box Adjustable Downlight, 3000K, DALI Dimmable/ Halcyon Lighting - Recessed Led Downlight - 3 watt - 20 Degree - 3000K - Ip 20 - Dali Dimmable Drivers	69	No's	3	₹1,868.00	₹128,892.00	
7	Kapoor Lamps Shade or equivalent	RG-01	3W 20°, LED Recessed In Ground Mounted Uplight With Honeycomb Louver, IP66, 3000K, DALI Dimmable	11	No's	3	₹12,500.00	₹137,500.00	
	Kapoor Lamps Shade or equivalent	RG-02	10W 40°, LED Recessed In Ground Mounted Uplight With Honeycomb Louver, IP66, 3000K, DALI Dimmable	4	No's	10	₹19,800.00	₹79,200.00	
9	Philips Selecon or equivalent	P-01	40W LED Suspended Gobo Projector DALI Dimmable, 3000K, IP20	21	No's	40	₹65,000.00	₹1,365,000.00	

Lighting & Dimming System - Phase 1

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10	Kapoor Lamps Shade/ Silver Star Professional Lighting or equivalent	P-02	56W LED RGB PAR CAN Light Fixture Mounted On Lighting Bar / Silver Star Professional Lighting - CAM3/EMZ 14x4W 4 in 1 RGBW Beam angle 16° including Nicolaudie - SLESA-UE7 - RGB Controller	6	No's	56	₹56,000.00	₹336,000.00	
11	Kapoor Lamps Shade/ Halcyon Lighting or equivalent	D-01	25W, LED Decorative Suspended Ceiling Light Fixture, 3000K, IP20, DALI Dimmable/ Halcyon Lighting - Track Light - 25 Watt - Degree - 3000k -Dali Dimmable Driver	9	No's	25	₹7,256.00	₹65,304.00	
12	Kapoor Lamps Shade/ Halcyon Lighting or equivalent	D-02	25W, LED Decorative Glass Suspended Ceiling Light Fixture, 3000K, IP20, DALI Dimmable/ Halcyon Lighting - 25W, LED Decorative Glass Suspended Ceiling Light Fixture, 3000K, IP20, DALI Dimmable	4	No's	25	₹18,965.00	₹75,860.00	
13	CDN/ Halcyon Lighting or equivalent	T-01	18W 15° LED Recessed Track Spot Light Fixture, 3000K, IP20, DALI Dimmable/ Halcyon Lighting - Track Light - 18 Watt - 15 Degree - 3000k -Dali Dimmable Driver	46	No's	18	₹7,225.00	₹332,350.00	
14	CDN/Halcyon Lighting or equivalent	T-02	18W,110° LED Recessed Track Mounted Wall Wash Light Fixture, 3000K, IP20, DALI Dimmable/ Halcyon Lighting - Track Light - 18 Watt - 110 Degree - 3000k -Dali Dimmable Driver 3 Phase Dali Track System	122	No's	18	₹8,500.00	₹1,037,000.00	
15	CDN/ Halcyon Lighting or equivalent	T-03	18W 30° LED Recessed Track Spot Light Fixture, 3000K, IP20, DALI Dimmable/ Halcyon Lighting - Track Light - 18 Watt - 30 Degree - 3000k -Dali Dimmable Driver	4	No's	18	₹7,225.00	₹28,900.00	
16	CDN or equivalent	TR-01	3 Circuit Suspended DALI Dimmable Track	122	Mtrs		₹3,500.00	₹427,000.00	
17	Kapoor Lamps Shade/ Halcyon Lighting or equivalent	W-01	2W, Blue LED Wall Recessed Light Fixture, IP65, Non Dimmable/ Halcyon Lighting - Wall Recessed Step Light - 2 Watt - IP65	8	No's	2	₹2,700.00	₹21,600.00	
18	Kapoor Lamps Shade or equivalent	S-01	20W, Surface Mounted LED Batten Light Fixture, IP20, Non Dimmable	9	No's	20	₹950.00	₹8,550.00	
			Total					₹4,807,566.00	
В	DIMMING SYSTEM								
1	Helvar or Approved Equivalent	920	2 Channel DALI Network Router with DMX Control	4			₹98,500.00	₹ 394,000.00	
2	Helvar or Approved Equivalent	135W	7 Buttons Configurable Control Panel Module Buttons: Preset-1, 2, 3, 4, Off, Raise, Lower	2			₹11,797.64	₹ 23,595.28	

Lighting & Dimming System - Phase 1

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3	Helvar or Approved Equivalent	234\$	Single Gang Frame Stainless Steel	2		₹3,729.18	₹ 7,458.36	
4	D-Link or Approved Equivalent	1005A	4 Port Network Switch	2		₹1,500.00	₹ 3,000.00	
5	Approved Equivalent		Supply & Installation of Wall Box for the wired control panels	2			₹ 0.00	To be provided by Client or Electrical Contractor
6	Approved Equivalent		Automation Panel for Housing of Dinrail Units	1			₹ 0.00	To be provided by Client or Electrical Contractor
7	Approved Equivalent		Supply & Installation of 2 Core 1.5 Sq.mm Control Cable From DB to Fixture				₹ 0.00	Quantity to be advised by MEP Team as per site requirement
8	Approved Equivalent		Supply & Installation of Cat6 E cable for conneccting processor to server computer For Processer to Server Computer				₹ 0.00	Quantity to be advised by MEP Team as per site requirement
			Total				₹ 428,053.64	
			GRAND TOTAL				₹ 5,235,619.64	

Lighting & Dimming System - Phase 1

DETAILED BOQ - AV INTEGRATION

(If the mentioned brand and model equipments is not available in the market, other brands with the equivalent specfication can be used at their present market rate)

					Wattage	Unit Cost	Line Total	
(Manufactuer	Model	Description	Qty	per Unit	INR	INR	Comments
A	AV Equipments							
	Audio System							
1	Tannoy or equivalent	11.17.54	4" Recessed Ceilng speaker with 15 W @70.7 V with Necessary mounting brackets	15		8700	₹ 130,500.00	
2	Tannoy or equivalent		6" Surface mount speaker with with 30W power @70.7V with Necessary mounting brackets	1		27737	₹ 27,737.00	
3	Biamp or equivalent	Nexcia CS	10 mic/line inputs and 6 mic/line outputs Audio DSP with Rs232 Control and RCB Hub	1		140000	₹ 140,000.00	
4	Biamp or equivalent	Voltage Control Box	Voltage Control Box	1		21420	₹ 21,420.00	
5	Crown or equivalent	CT875 + XFMR 8	8 Channel amplifier 75/100 Watts @ 70.7 /100 Volts	1		140000	₹ 140,000.00	
6	Beyerdynamic or equivalent	DT 770 Pro	Headset	9		14900	₹ 134,100.00	
7	Beyerdynamic or equivalent	A-20	2 Channel Headset Preamp	6		42600	₹ 255,600.00	
8	Meckenzie or equivalent	M3	Audio play back source / Server - 2 channel	3		125000	₹ 375,000.00	
	Video System						₹ 1,224,357.00	
	Panasonic or equivalent	LH-43RM1DX	43" LED LCD digital signage display with 1-HDMI, VGA, VGAA & RS232	3		₹38,900.00	₹ 116,700.00	
	Panasonic or equivalent		43" LED LCD digital signage display with 1-HDMI, VGA, VGAA, USB & RS232 with touch Overlay	3		₹38,900.00	₹ 116,700.00	

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	Wavex or equivalent)	WMT-6P-43XW	Interactive Touch Overlay for 43" Display with 6 Touch Point	3		₹108,000.00	₹ 324,000.00	
	B-Tech or equivalent	BT8421	Flat Screen Wall Mount with Tilt to support up to 55" (140cm) / 50kg (110lbs) display	6		₹4,650.00	₹ 27,900.00	
		TBA or equvalent	Minimum 1.6mtr x 1.8mtr ,2.2 mm OR lower Pixel Pitch Indoor LED Video Wall with rear/front access, Minimum1000 nits Brightness with Suitable LED wall Controller power distribution & Backend, Structure support & Mounting accessories to turn the video wall	1		₹620,000.00	₹ 620,000.00	
		TBA or equvalent	Minimum 1.6mtr x 3.1mtr ,2.2 mm OR lower Pixel Pitch Indoor LED Video Wall with rear/front access, Minimum1000 nits Brightness with Suitable LED wall Controller power distribution & Backend, Structure support & Mounting accessories to turn the video wall	1		₹1,068,000.00	₹ 1,068,000.00	
	Screen GOO or equvalent	Screen GOO	6000 x 1350mm (WxH) wall painted with screen goo paint	1		₹38,700.00	₹ 38,700.00	
	Ву	ID	Streachable fabric suitable for front porjection	1			₹ 0.00	
	Christie or equvalent	DHD630GS 140-119102-01 or other equvalent	5000 - 6000 ANSI lumens Laser Full HD projector with Projector with 1-HDMI, 1 -VGA, RS232 & RJ45 with Throw Ratio (0.75-0.95:1).	3		₹540,000.00	₹ 1,620,000.00	
			6000 - 6500 ANSI lumens Laser Full HD projector with Projector with 1-HDMI, 1 -VGA, RS232 & RJ45 with Throw Ratio minimum 1.52-2.89.	1		₹350,000.00	₹ 350,000.00	
	Kramer or equvalent	C-HM/HM-6	1.8mtr Standard HDMI (M) to HDMI (M) Cable	6		₹3,146.00	₹ 18,876.00	
	Kramer or equvalent	C-HM/HM-15	4.6mtr Standard HDMI (M) to HDMI (M) Cable	2		₹4,378.00	₹ 8,756.00	
	Kramer or equvalent	C-HM/HM-25	6 mtr Standard HDMI (M) to HDMI (M) Cable	2		₹6,977.00	₹ 13,954.00	
	Intel or equvalent	NUC8I5BEK	Ultra Slim Desktop PC with 500 GB HDD , HDMI , Display port output, Auido Outputs, USB ports, LAN and WiFi	3		₹40,500.00	₹ 121,500.00	
1	Aten or equvalent	UE250	5mtr USB 2.0 cable with equalizer	3		₹5,750.00	₹ 17,250.00	
2	TBA or equvalent	TBA	Server PC	1		₹150,000.00	₹ 150,000.00	

3	Christie or equvalent	900-100249-02	Pandoras Box Manager - Includes dongle and software license	1				
4	Christie or equvalent	157-021104-02	Manager - Show Control, 8 Seqences, 16 ASIO Audio Tracks, Media Encoder	1	₹18	88,000.00	₹ 188,000.00	
5	TBA or equvalent	ТВА	Client PC with graphics output card as per Gallery wise requirement	3	₹60	0,000.00	₹ 180,000.00	
6	Christie or equvalent	900-100250-02	Pandoras Box Software License - Includes dongle and software license	4	₹12	20,000.00	₹ 480,000.00	
7	Christie or equvalent	157-019101-02	Software Player License, 1 Output, unlimited graphics, 4 video and 4 ASIO audio tracks, 1 sequence	2	₹60	0,000.00	₹ 120,000.00	
							₹ 5,580,336.00	
	Control System							
1	Apple or equvalent	Pad Pro	12.9" IPAD with 64GB storage & Wifi,without GSM for show controller apps to run	3	₹71	1,910.00	₹ 215,730.00	
2	Integrator or equvalent	Custom	Wall mount for Pad Pro	3	₹10	0,000.00	₹ 30,000.00	
3	Apple or equvalent	IPAD	9.7" IPAD with 16GB storage & Wifi,without GSM for show controller apps to run	1	₹29	9,610.00	₹ 29,610.00	
4	Launch Port or equvalent	BaseStation	Induction based charging station for IPAD - Desktop Mount	1	₹18	8,000.00	₹ 18,000.00	
5	Launch Port or equvalent	AP.5 Sleeve	Sleeve for the IPAD	1	₹22	2,500.00	₹ 22,500.00	
6	Kramer or equvalent	FC-24ETH	1 IP to Minimum 3x RS232 convertor	2	₹53	3,200.00	₹ 106,400.00	
7	Medialon or equvalent		All in one show controller with 2 USB , Ethernet, 2 x Rs232, 4x relay, 4x lo, 1 DMX, 1x MIDI in & out, with necessary software	1	₹21	12,400.00	₹ 212,400.00	
8	Kramer or equvalent	FC-7P	IP to Minimum 2x IO / Relay covertor	5	₹57	7,000.00	₹ 285,000.00	

	Legrand or equvalent	CI-300	Recessed PIR sensor with GPIO controller	5	ТВА	ТВА	
10	Linksys or	WAP121-A-K9- IN	Ceiling Mount 802.11a/b/g Wireless Access Point w/PoE Injector	8	₹6,500.00	₹ 52,000.00	
						₹ 971,640.00	
	Digital Signage Solution						
	Brightsign or equvalent	HD1023	2K Digital Signage Player with standard I/O and HDMI 2.0a input	3	₹70,000.00	₹ 210,000.00	
	Brightsign or equvalent	Bright Author	Digital Signage Content management and Designer Software and License upgradable minimum 20 displays	1	FOC	FOC	
						₹ 210,000.00	
	Installation Equipment						
1	Integrator	Custom	Projector mounting Bracket along with relevent accessories	4	₹5,000.00	₹ 20,000.00	
2	Integrator		42 U Rack with Vent & Blank Panels, Shelves, Power distributor 12 No's - plus ID panel as required	1	₹50,000.00	₹ 50,000.00	
						₹ 70,000.00	
	Installation						
1	Extron/Belden	Various	Cables and Connectors - Audio, Video, Control and all necessary cables and connectors to execute the job	Lot	322253.32	₹ 322,253.32	
2	Integrator	Custom	Installation Labor	1	563943.31	₹ 563,943.31	
3	Integrator	Custom	Design and Project Management	1			
4	Integrator	Custom	Programming as required	1	241689.99	₹ 241,689.99	
5	Integrator	Custom	Design and As Built Drawings (Reproducible)	1			
6	Integrator	Custom	Operation and Maintenance Manuals - including Equipment Manuals	1			
7	Integrator	Custom	Training - Operation and Maintenance	1			

8	Integrator	II JIISTOM	Warranty - 24 Months extended Manufacturer's Warranty at same terms and conditions	1			
						₹ 1,127,886.62	
			Total			₹ 9,184,219.62	

DETAILED BOQ - MUSEUM CONTENT DEVELOPMENT

lc.	h NI -	Itawa /Bartawia!	Dataile (Circ) in more	Total Core	lot:	Considerations	Data in Da	A was a suit
Su	b No.	Item/Material	Details (Size) in mm (L x H)	Total Area	Qty	Specifications	Rate in Rs.	Amount
14	Utbh	avam						
1		Immersive Projection	6000 x 1350		1	Duration: 1 min Complexity: High		₹ 250,000.00
2		Illustration	7345 x 3250	23.87 sq. m	1	Illustration of paddy fields of Kerala on a vinyl sticker pasted on the wall. Complexity: high	68000	₹ 65,000.00
3		Illustration	1920 x 3250	6.24 sq. mm	2	Illustration of paddy fields of Kerala on a vinyl sticker pasted on the wall. Complexity: high	30000	₹ 60,000.00
4		Installation	5334 x 3250		1	A life-size replica of a doorway built in the traditional Palakkad style will welcome the visitors to the museum. It marks the beginnings of the journey through Palakkad and its festivals and culture. Red stone walls with traditional wooden door and Mangalore roof tiles (Traditional Palakkad style)	380000	₹ 380,000.00
1E	3 Utbh	avam						
5		Backdrop illlustration				Illustration showing important places and elements of Palakkad. Printed on a vinyl sticker. Complexity: Basic		
		Backdrop illlustration 1	7130 x 2000	14.26 sq. m	1		25000	₹ 25,000.00
		Backdrop illlustration 2	4530 x 2000	90.6 sq. m	1		25000	₹ 25,000.00
		Backdrop illlustration 3	3238 x 2000	64.76 sq. m	1		25000	₹ 25,000.00
		Backdrop illlustration 4	2361 x 2000	47.22 sq. m	1		30000	₹ 30,000.00
6		Introduction Panel	900 x 900	8.1 sq. m	1	Canvas printing with 2"x 2" wooden frame	4500 sq. m	₹ 36,450.00
Uc	dayam							
1		Installation	1000 x 3250		1	Traditional Kerala-style railing for balcony recreation with wood. Aging and other color treatment will be done to it. The procession with raths, shown through horizontal scroller. Complexity: High	260000	₹ 260,000.00
2		Automated horizontal scroller	2750 x 6050		1	An automated horizontal scroller with an illustration of Kalpathy ratholsavam.	275000	₹ 275,000.0

	Item/Material	Details (Size)	Total Area	Qty	Specifications	Rate in Rs.	Amount
Maratha	T	D		.		la	
Maratha	 akam						
10	Introduction Panel	900 x 900	8.1 sq. m	1	Canvas printing with 2"x 2" wooden frame	4500 per sq. m	₹ 36,450.00
9	Theeyattu Projection	840 x 1500			The projection shows Theeyattu performer in various stages of his performance. The projection will begin with him appearing to erase the kalam. Complexity: Medium Duration: 3 min		₹ 500,000.00
8	Theeyattu Illustration	1600 x 3200	5.12 sq. m	1	The illustration shows Bhagavathy Temple, in front of which the performances take place. The illustration will be printed on a vinyl stricker. Complexity: Basic	25000	₹ 25,000.00
7	Kalamezhuthum Pattum Projection	1500 x 1500		1	The projection of Kalam to be made of 20-30 sec will play in loop. Duration: 20 sec Complexity: Basic	2000 per sec	₹ 40,000.00
6	Mizhavu Backdrop illustration	3550 x 3250	11.5 sq. m	1	Performance set-up of Chakyar Koothu and Nangyar Koothu, with Mizhavu players in the background. The illustration is printed on a vinyl sticker. Complexity: Medium	47000	₹ 47,000.00
5	Performance Wall	1300 x 3030	40 sq. m		The panel will have a vinyl sticker with infographic printed on it. The light sequence will run as per the below sequence given in Content reference. Illustrations will be made by an artist and then printed and a backlit panel is made. Complexity: Basic	225000	₹ 225,000.00
4	Pulluvar Community installation			1	Life of the Pulluvar Community, performances especially Sarpam Pattu, instruments played. There will be 6 images printed on vinyl sticker which will then stick to the aluminium panels of the structure. 6 panels will have information of the community which content writer will write as per the brief given in the List of Panels. These will be welded together on MS frame which will look like a style reference provided on a previous slide. Complexity: Medium	260000	₹ 260,000.00
3	Custom engraved wooden frames	1400 x 1400	19.6 sq. m	2	Element suggestion for Onam: Decorated elephants, Pookalam, Pulikali/Kathakali performances coconut trees. Element suggestions for Navarathri: Decorated elephants, Lamps, Deities/Idols, Embellishments, elements of temple architecture.	25000	₹ 50,000.00
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1	Tree installation	as per design		1	A FRP tree will be made with artificial plastic leaves hanging from above. The ambient light will give a feel of a leaves shadow on the floor.	300000	₹ 300,000.00
2	Introduction Panel	900 x 900	8.1 sq. m	1	Canvas printing with 2"x 2" wooden frame	4500 per sq. m	₹ 36,450.00
Utsava		In	<u> </u>	Ta.	la		T
	Item/Material	Details (Size)	Total Area	Qty	Specifications	Rate in Rs.	Amount
1	Kanyarkali illustration	1220 x 915	11.16 sq. m	1	A more realistic illustration of the dancers, musicians, performance area and the Palakkad landscape at night. Complexity: High Canvas printing with 2"x 2" wooden frame	100000	₹ 100,000.00
2	Interactive scrolling display installation	300 x 300 x 450		1	Boxes acrylic 5mm thick and a stand of 18mm MDF with Veneer. Illustrations will be printed on a vinyl sticker and then pasted on each side of the box to display the stages of making a Chenda. Illustrations of making a Chenda will be done by an artist and then a vinyl stricker is pasted on these boxes.	₹ 380,000.00	₹ 380,000.00
3	Chenda display hands			3	FRP hand sculptures coming out of a wall. Aging and coloring to make it more realistic.	10000 each	₹ 30,000.00
4	Pooram Layered cutout	4420 x 3225	14.25 sq. m	1	Acrylic 5mm for layered cutout which will will fit into a 18mm MDF box. Quantity - 5 layers Layers sizes - Background illustration: 4413x3200mm Layer1: 4413x2200mm Layer2: 4413x1130mm Layer3: 4413x1205mm Layer4: 4413x495mm Layer5: 4413x175mm Layer5: 4413x175mm Layers with vinyl print Grooves: MDF box, 18 mm thickness with 6mm grooves.	₹ 125,000.00	₹ 125,000.00
5	Pooram illustration for cutout	4413 x 3225	14.25 sq. m	1	The illustration should be made in such a way that there should be 5 layers to it which can be made separate on software (Photoshop) and printed separately to achieve the desired output. Complexity: Medium	40000	₹ 40,000.00
6	Sopam sangeetham illustration	1977 x 2900	37.5 sq. m	1	A photographic illustration depicting people performing the Sopan Sangeetham. Complexity: Medium	40000	₹ 40,000.00
7	Chembai Ekadashi Manuscript panels	1000 x 1200	1.1 sq. m	1	Manuscript-style panels, for information about Carnatic Music. The copy will be written by the content writer as per the brief given in the List of Panels, 50 words per panel. Complexity: Basic	35000	₹ 35,000.00

5	Thullal illustration	2000 X 1473	10.8 sq. m	2	Complexity: Modium	20000 each	₹ 40,000.00
4	Porattu Natakam cutout	\	\	1	Cutouts of Porattu Natakam artists perfomring. It will be a MDF cutout of 18 mm sheet with duco paint and pasted with human illustration.	70000	₹ 70,000.00
3		2600 x 1475 2600 x 2675	10.8 sq. m	2	The illustration will be printed on a vinyl sticker; Complexity: Medium	20000 each	₹ 40,000.00
2	Tholpavakooth projection			1	Back projection of a shadow puppetry. The artist will have to capture a shadow puppetry show from a close range and project it at this exhibit. The TV screen will showcase the videos of Tholpavakooth. Complexity: Medium Duration: 1 min	1500 per sec	₹ 90,000.00
1		900 x 900	8.1 sq. m	1	Canvas printing with 2"x 2" wooden frame	4500 per sq. m	₹ 36,450.00
12 Navara		4104 x 900		1	The illustration will be with content which content writer will write of about 300 words. It will spread across the illustration as per illustrators composition. Complexity: Medium	50000	₹ 50,000.00
11	Effigy installation	as per design		2	Effigy Replica: fabric and ethafoam, MDF frame. Effigies are bright and eye-catching. Visitors will get to see the recreation of an effigy up close. A procession of the effigies is customary during velas.	75000 each	₹ 150,000.00
10	Low relief mural	1700 x 2770		1	Mural composition to be decided by artist. Oppanna content: women performing. Nercha content: Processions, performances, depiction of story of origin of festivals.	240000	₹ 240,000.00
9	Book installation	2600 x 2500		1	Acrylic 18mm sheets of 8 ft height with duco paint, Framing should with Aluminum for book like open movement by hand. Illustration stickers will be pasted on these sheets. Complexity: High	240000	₹ 240,000.00
8	Map Illustration	6742 x 1700	11.5 sq, m	1	An illustration of a map with journey of music and culture. The illustration is printed on a vinyl sticker. Complexity: High	125000	₹ 125,000.00

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	6	Thullal cutout	\	\	1	Cutouts of Thullal artists perfomring. It will be a MDF cutout of 18 mm sheet with duco paint and pasted with human illustration.	70000	₹ 70,000.00
	7	Message Panel	900 x 900	8.1 sq. m	1	The illustration will have characters from Porattu natakam (top left), Thullal (top right) and Chavittu Natakam (bottom), in a style and colours inspired by vintage posters. They are popular and appeal to the masses, will be used to convey the common message communicated by these art forms. Canvas printing with 2"x 2" wooden frame. Complexity: Medium	40000	₹ 40,000.00
	8	Backdrop Vinyl Print	(7324+8221+9293) x 2600	64.5 sq. m	1	Artistic Visualization of the illustration with appropriate content research. Complexity: Medium	180000	₹ 180,000.00
	9	Introduction Panel	900 x 900	8.1 sq. m	1	Canvas printing with 2"x 2" wooden frame	4500 per sq. m	₹ 36,450.00
6	Puranar	m						
	1	Back drops	1000 x 6904	7 sq. m	1	Illustrations of performances seen in the museum adorn the walls adjacent to the performance area. Vinyl sticker printing.	47000	₹ 47,000.00
	2	Back drops	1000 x 7490	7.5 sq. m	1	Illustrations of performances seen in the museum adorn the walls adjacent to the performance area. Vinyl sticker printing.	50000	₹ 50,000.00
	3	Curtains for Performance area	\	\	3	A provision for multiple backdrops, so that the space can be used for performances other than puppetry and shadow puppetry.	40000 each	₹ 120,000.00
	4	Classical music wall illustration	9497 x 1500	14.5 sq. m	1	Illustrations of performances seen in the museum adorn the walls adjacent to the performance area. Vinyl sticker printing.	102000	₹ 102,000.00
	5	Credits Panel	900 x 900	8.1 sq. m	1	Canvas printing with 2"x 2" wooden frame	4500 per sq. m	₹ 36,450.00
	6	Thank you Panel	900 x 900	8.1 sq. m	1	Canvas printing with 2"x 2" wooden frame	4500 per sq. m	₹ 36,450.00
8	Common Content							
	1	Content Writing			1	Content writing with the help of given content briefs.	100000	₹ 100,000.00
	2	Translation			1	Tranlsation of the written content in secondary language.	75000	₹ 75,000.00
	3	Audio Production			1	Recreation of given reference audios and videos if required.	250000	₹ 250,000.00