



**KERALA STATE
SCIENCE AND TECHNOLOGY MUSEUM
Vikasbhavan P.O. Thiruvananthapuram – 695 033**

**Tender for the
Supply, Installation, Testing and Commissioning of
3D Printer at Regional Science Centre, Chalakkudy
(Innovation Hub)**

Name and address of the Contractor :

.....

.....

.....

Last date and time for submission of Tender: 25.03.19 3.00 p.m.

Date and time of Opening Tender : 25.03.19 4.00 p.m.

Tender Notice

Sealed Tenders are invited by the Director, Kerala State Science and Technology Museum from reputed manufactures / firms for the following work.

Supply, Installation, Testing and Commissioning of 3D printer at RSC, Chalakkudy, Innovation Hub.

Name of work	Supply, Installation, Testing and Commissioning of 3D printer at Regional Science Centre, Chalakkudy (Innovation Hub).
--------------	------------------------------------------------------------------------------------------------------------------------

PAC	-	Rs. 400000/-
EMD	-	Rs. 10,000/-
Time of completion	-	30 days
Last date of sale of tender	- 25.03.19	1.00 p.m.
Last date of receipt of tender	- 25.03.19	3.00 p.m.
Date & time of Opening of tender	- 25.03.19	4.00 p.m.
Cost of tender form	-	Rs. 1000+18%GST

The tender documents can be had from the office of the undersigned on remittance of tender form cost. The tender form can be downloaded from our website www.kstmuseum.com. In that case the tenderer has to enclose a D.D for an amount of **Rs. 1180/-** in favour of Director, Kerala State Science and Technology Museum, Thiruvananthapuram -33 towards cost of tender form.

Director
KSSTM

Notice inviting tenders

Detailed Tender Notice

- 1.1** Sealed tenders are invited by the Director, Kerala State Science and Technology Museum, Thiruvananthapuram for the **Supply, Installation, Testing and Commissioning of 3D printer at RSC, Chalakkudy (Innovation Hub)**.
- 1.2** Tenders should be addressed to the Director, Kerala State Science and Technology Museum, Vikas Bhavan P.O., Thiruvananthapuram – 33 superscribed “Supply, Installation, Testing and Commissioning of Laserjet printer at Kerala State Science and Technology Museum and send so as to reach them not later than **3 pm, 25.03.19** Tenders will be opened in the presence of such tenderers or their authorised representatives as may be present.
- 1.3** The Director reserves the right to reject all or any of the tenders and to accept in whole or part of any of the tenders without assigning any reasons for doing so.
- 1.4** The successful tenderer will be required to sign an agreement on stamp paper in a form approved by the Director for the due fulfilment of the contract. But the written acceptance of a tender by the Director will constitute a binding agreement between the Director and the persons so tendering whether any formal contract is subsequently entered into or not.
- 1.5** Earnest Money. Each tender must be accompanied by EMD of **2.5% of PAC** in the form of DD drawn in favour of the Director, KSSTM. Tenders not accompanied by the EMD shall not be considered.
- 1.6** Validity of the tender
- 1.6.1** The tender shall remain valid for a period of **90 days** from the date of opening of the tender.

1.6.2 The tenderer shall sign at the right hand bottom of each page of the tender documents. The Director, Kerala State Science & Technology Museum, does not find himself, to accept the lowest or any tender or to assign any reason thereof and also reserves the right to accept the whole or part of the tender and the tenderer shall in such an event be bound to perform the contract at the same rates quoted in the tender for the different segments of the work.

2 General Conditions of Contract

2.1 The following general conditions of the contract shall be read in conjunction with the conditions of the contract. The following clauses shall be considered as extend and not limitation of the obligations of the contractor. The special conditions attached to the conditions also will form part of the conditions of the contract.

3 General terms and conditions of tendering, contract and execution.

3.1.1 For this tender and subsequent contract, unless in consistent with or otherwise indicated by the context, the following terms shall have the meaning defined here under:-

3.1.2 'Director' shall mean, Director, Kerala State Science and Technology Museum, Thiruvananthapuram or His representative duly authorised to deal with matters regarding this work on his behalf.

3.1.3 'Tender' shall mean tender notice, and all pertaining documents related to the tender.

3.1.4 'Contractor' shall mean the individual, or firm or company whose tender with or without later amendments has been accepted and to whom a letter of intent/work order has been issued by the Director.

3.1.5 'Contract' shall mean and include the tender notice/invitation to tender, the tender and all pertaining documents, the letter of intent, the purchase / work order, the correspondence exchanged after receipt of tenders and before issue of the letter of intent, the drawing, technical specification and standards relating to the contract work and the formal agreement executed by the successful tenderer/vendor with the Director, Kerala State Science and Technology Museum.

3.1.4 'Work/Works' means and included all the works specified or set forth and required in

any, by the specifications drawings and other documents which form part of this contract or to be implied therefore or incidental there or to be here after specified or required in such further explanatory instructions, drawings etc. as shall from time to time during the progress of the work, be given by the Museum.

3.1.5 “MUSEUM shall mean the Kerala State Science & Technology Museum, Vikasbhavan P.O. Thiruvananthapuram-33

3.2.1 **Security Deposit**

A sum of 5% value of contract, shall be deposited by the tenderer whose tender is accepted, as security deposit with Director within ten days of receipt of notification accepting the letter of intent/work order issued by the Director. Security deposit will be refunded after the period of guarantee, whenever applicable or after final settlement of dues whichever is later.

3.2.2 No interest will be paid to contractor on EMD or Security deposits by the Museum.

3.2.3 EMD will be released after execution of agreement by the successful vendor.

3.3 **Tender rates and validity**

3.3.1 Tenderer should **quote both in figures as well as in words the rates and amount tendered** by him for each item in such a way that interpolation is not possible. All corrections and alterations in the entries of tender papers will be signed in full by the tenderer with the date. In case of conflict, between words and figures, the lower amount will only be considered as correct.

3.3.2 Tenders submitted by tenderers shall remain valid for acceptance for a period of 90 days from the date of opening of the tender. The tenderer shall not be entitled, during the said period of 90 days without the consent in writing of the Director, to revoke or cancel his tender or to vary the tender given or any term thereof.

3.3.3 Price Escalation

The rates quoted shall be deemed to be free from escalation of any kind. The Museum shall not accept for any reason, whatsoever, price and tax escalations or any other item in respect of any material and or any category of labour during the whole period of operation of contract. The rates accepted by the contract agreement shall not be changed for any reason.

3.3.4 The tenderer should submit a statement along with his tender giving details of the tenderers previous experience of similar works of comparable nature, also the type and size of the organisation owned by him especially in Kerala.

3.3.5 The Director does not bind himself to accept the lowest tender and reserves to himself the right to reject any or all the tenders received without assigning any reason whatsoever Director also retains the right to negotiate with any one or all the tenderers after the opening of the tender and any of the terms or clauses of the tender. The work may be split up and awarded in part, if considered expedient.

3.3.6 The rate quoted by the tenderer shall include all cost of labour, materials, supervision thereof, hire for all tools and implements, all related electrical works, incidental charges, and cover the insurance, taxes, duties, delivery, loading and unloading at site etc.

3.3.7 The work should conform to general standards. The selection of materials also will be general standards.

3.3.8 The work site should always be kept clean of unwanted materials, rubbish etc. and all necessary safety precautions, should be taken by the contractor as per safety rules.

3.3.9 Tenders which are incomplete in any respect, shall be rejected.

3.4 Terms of payment, completion time and penalty guarantee

3.4.1 The payment shall be made as under:

Full payment of the completed works will be paid immediately after satisfactory completion, testing and necessary certification from the Engineer concerned of the Museum.

3.4.2 The contractor shall guarantee that all equipments & installation shall be free from any defect and the equipment shall operate satisfactorily and that the performance and efficiency of the equipment shall not be less than the guaranteed values. The guarantee shall be valid for minimum period of two years or the period offered by the concerned OEM from the date of satisfactory reliability and performance tests. Any part found defective during the guarantee period shall be replaced by the contractor free of cost to the Museum. The prompt service of the contractor for such works shall be made available free of cost to the Director.

Inspection and testing

3.4.3 Director's authorised representative shall have all powers to inspect any portion of the equipment, examine the materials and workmanship at the contractor's work.

3.4.4 Rejection of defective equipment and materials

If any portion of material thereof before it is taken over found defective or fails to fulfill the extend of the requirement, the contractor shall on receipt of a written notice from the Director forthwith to replace the defective materials within a stipulated period mentioned in the written notice or replace the equipments at no extra cost to Museum. Any damage caused during the transit, testing etc. shall be made good by the contractor without any extra charges to the Museum.

3.4.5 Bye-Laws

The Contractor shall comply with Bye-laws and regulations of local and statutory authorities having jurisdiction over the work and shall be responsible for payment of all necessary notices and keep the Director informed of the said compliance with Bye-Laws, payment made, notices issued and received.

3.4.6 Completion time.

The work covered by the contract shall be commenced and executed in accordance with the schedule within **30 dyas** from the date of award of work.

3.4.7 Extension of Time

If the contractor shall desire extension of the time for completion of the work on the grounds of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the Director who reserves the right to decide on the matter.

3.4.8 Cancellation of contract and alternative arrangement for effecting the supply/executing the work.

In case of the failure of the contractor to keep up to the executing and delivery schedules and if in spite of a written notice given to him by the Director he fails to improve his rate of performance of work within reasonable period there after (two week) the Director can terminate the contract immediately without any legal notice and thereafter the Director shall have every right to get the work completed through other agency / agencies at the risk and cost of the contractor. Further any loss or extra cost in this regard will be deducted from the amount due to the contractor.

3.4.9 Arbitration

Arbitration shall not be a means of settlement or disputes or claims arising out of this contract relating to the work. In case of any dispute or difference between the parties of the contract, either during or after the completion of the work or after termination or breach of contract, or as to the interpretation of the provisions of the contract or as to any matter of thing arising there under except as to any matter left to the discretion of the Museum under the clauses of the contract, such dispute or difference shall be referred to the Civil Courts of Thiruvananthapuram and the jurisdiction of such matter will be confined to Courts at Thiruvananthapuram only.

3.5. Extra items and additions

3.5.1 Power to make alterations:

The Director shall have the power to make in writing any alterations, omissions, additions or substitutions for original specifications, drawings, designs, patterns and instructions that may appear to him, necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with any instructions which may be given to him by the Director or his representative. Such omissions, additions alterations or substitutions shall not invalidate the contract. Any altered, additional or substituted work, which the contractor may be directed to do in the manner specified above as part of the work shall be carried out by the contractor on the same conditions in all respect on which the main work was agreed to be done, and the rates according to clause 3.5.3. Addition to existing items and quantities will not constitute an extra item. The agreed rates for all item shall remain unchanged till the completion of the contract.

3.5.2 No alterations, omissions, amendments, additions, substitutions or deviations of the work under the contract as shown by the contract, drawings of the specifications shall be made by the contract.

3.5.3 Rates for additional items

- a) The rates for such additional, altered or substituted work if directly available in the contract for the work, the contractor shall be bound to carry out the work at the same rate as are available in the contract for the work.
- b) If the rates for the additional, altered or substituted work are not directly available in the contract for the work, the rates for a similar class of work as specified in the contract shall be worked out and agreed mutually.
- c) In the absence of any agreed rate or similar item in the contract, the rate for the extra item of work shall be mutually agreed based in the evaluation of cost and other charges, if ascertained from the market and other agencies.

4 Particular Specifications:

4.1 General

Work shall be carried out in accordance with the specifications in the schedule, local rules, relevant standards and as per directions of Officer-in-charge.

4.2 All materials are to be supplied by the contractor

4.3 All materials shall have to confirm to relevant standards.

4.4 Supplier should supply all necessary accessories required for normal functioning of the machine supplied.

4.5 Tenderer should attach the brochures including the technical details, models no., features, brand name etc.

Specification of 3D Printer
Tender No.A/2373/16(3) dt.02/03/2019

Sl. No.	Item	Quantity	Unit
1	3D Printer	1	Nos.
Detailed Specification			
1	Print Technology	Fused filament fabrication (FFF)	
2	Build Volume	XYZ: 330 x 240 x 300 mm	
3	Print Head	Dual-extrusion print head with an auto-nozzle lifting system and swappable print cores	
4	Layer Resolution	0.25 mm nozzle: 150 - 60 micron	
		0.4 mm nozzle: 200 - 20 micron	
		0.8 mm nozzle: 600 - 20 micron	
5	Filament Diameter	2.85 mm	
6	Supported materials	Optimized for: PLA, Tough PLA, Nylon, ABS, CPE, CPE+, PC, TPU 95A, PP, PVA	
7	Feeder type	Dual-gearred, abrasion-resistant	
8	Material recognition	Auto-recognition with NFC scanner	
9	Nozzle Diameter	0.25 mm, 0.4 mm, 0.8 mm	
10	Build Plate	Heated glass build plate Heated aluminium build plate	
11	Build Plate Levelling	Active Levelled	
12	Display	10 to 15 cm colour touchscreen	
13	Supported File Types	STL, OBJ, X3D, 3MF, BMP, GIF, JPG, PNG Printable formats: G, GCODE, GCODE.gz, UFP	
14	Operating Systems	Mac OS, Windows and Linux	
15	Power rating	300 to 800 W	
16	Connectivity	Wi-Fi, LAN, USB port	
17	Monitoring	Live camera (view from desktop or app)	

- Note:
1. The rate shall be inclusive of all taxes and duties, supply, installation, testing and commissioning of the entire items (including training).
 2. The entire work has to be carried out as per direction of Officer-in -charge of KSSTM.
 3. List and specifications of accessories are to be clearly mentioned in the offer.
 4. Make & model of the machine is to be mentioned in the offer.

Director

Contractor

