

**KERALA STATE SCIENCE AND TECHNOLOGY MUSEUM  
AND  
PRIYADARSINII PLANETARIUM  
Vikasbhavan P.O., Thiruvananthapuram - 695 033.  
Phone: 0471-2306024, 2306025, 2304286, Fax :0471-2304286  
(A Government of Kerala Undertaking)**



**Tender for Supply, Installation, Testing and  
Commissioning of Scientific Equipments**

<b>Name &amp; Address of tenderer</b>	<b>:</b>	
<b>Last date of Sale of tender</b>	<b>:</b>	<b>30-06-2010 - 1 p.m.</b>
<b>Last date and time of submission of tender</b>	<b>:</b>	<b>30-06-2010 - 3 p.m.</b>
<b>Date &amp; Time of Opening of tender</b>	<b>:</b>	<b>30-06-2010 - 4 p.m.</b>
<b>PAC</b>	<b>:</b>	<b>Rs. 7,50,000/-</b>
<b>EMD</b>	<b>:</b>	<b>Rs. 7,500/-</b>

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Office of the Director  
Kerala State Science and Technology  
Museum, Thiruvananthapuram.

Tender No. C-1182-10

Dated: 11-06-2010

**TENDER NOTICE**

The Director, Kerala State Science and Technology Museum, Thiruvananthapuram invites, sealed tenders from Manufactures/Suppliers for Supply, Installation, Testing and Commissioning of Scientific Equipments

Cost of Tender form	: Rs. 1,125/- + 12.5% vat
Cost of duplicate form	: Rs.562.5/- + 12.5% vat
Last Date & time of Tender form Sale	: 30-06-2010 - 1 pm
Last date & time of Submission of tender	: 30-06-2010- 3 p.m
Date & Time of Opening of tender	: 30-06-2010 - 4 p.m
PAC	: Rs. 7,50,000/-
EMD	: Rs.7,500/-

The tender forms and other details can be had from the office of the undersigned during working hours from 11-06-2010 to 30-06-2010 up to 1 PM remitting the cost of tender forms.

The tender documents can be downloaded from ***www.kstmuseum.com***. In that case the tenderer has to enclose a D.D for Rs 1,260/- favoring the Director, KSSTM, Thiruvananthapuram towards the cost of tender form.

The filled up sealed tenders superscribing "Tender No. C/ 1182/10" will be accepted at the office on 30-06-2010 up to 3 pm. The Tenders will be opened at 4 pm on 30-06-2010 in the presence of the tenderers available at that time.

Director.

**FORM OF TENDER**

*From*

*To*

*DIRECTOR  
KERALA STATE SCIENCE AND  
TECHNOLOGY MUSEUM,  
VIKASBHAVAN P.O.,  
THIRUVANANTHAPURAM – 33.*

*Sir,*

Having the examined the specifications, and tender schedule, having examined the schedule of work and having acquired the requisite information relating these to affecting the tender in all respects. I/We. ... .. hereby offer to execute the works specified at the rate, mentioned in the schedule of work attached in accordance with the specifications, conditions of the tender, the article of the agreements and such other materials as may be prescribed from time to time.

Should this tender be accept I/We. .... hereby agree abide by and fulfill the terms and provisions of the said conditions of the contract annexed hereto so far as they may be applicable or in default thereof to forfeit the EMD and pay the Kerala State Science and Technology Museum, the amount mentioned in the said condition.

I/We . . . . . have deposited a sum of Rs 7,500/-as EMD in the form of crossed demand draft in favor of the Director, Kerala State Science and Technology Museum, payable at SBT, Thiruvananthapuram main branch. Should I/We fail to execute the agreement when called upon to do so, or to commence the execution of the work as provided in the conditions, I/We do hereby agree that the Kerala State Science and Technology Museum shall without prejudice to any right or remedy be at liberty to forfeit the EMD absolutely and also recover from me/us the entire loss that may be caused to Kerala State Science and Technology Museum by retender arrangement of the work otherwise, under the provisions of Revenue Recovery Act or otherwise.

I/We agree that arbitration shall not be a means of settlement of any dispute or claim arising out of this contract.

Name & Full Address:

Signature of the Tenderer

## **INSTRUCTIONS AND GENERAL CONDITIONS**

### **1) Submission of Tenders**

Tender shall be submitted in sealed covers superscribing the name of the work and shall contain the following:

- a) Complete set of Tender documents as issued by the Museum together with addenda/corrigenda, if any filled in and signed by the tenderer, with address stamps/seals wherever stipulated.
- b) EMD of Rs. 7,500/- (Rupees Seven thousand and Five hundred only) in the form of crossed demand draft drawn in favor of the Director, Kerala State Science and Technology Museum, Thiruvananthapuram payable at Thiruvananthapuram.
- c) The rate quoted shall be inclusive all taxes, duties, insurance,
- d) The equipments has to be delivered at the office of KSSTM at Thiruvananthapuram
- e) The offer shall be valid for a period of 60 days from the date of opening of the tender.

### **2) Acceptance / Rejection of Tenders.**

The tenders submitted after the stipulated time of submission shall be rejected. The tenders not submitted in the prescribed form not duly signed at the places marked incomplete/form off tender forms etc. shall be rejected. The Director, Kerala State Science and Technology Museum reserves the right to accept/reject any of the tenders without assigning any reasons thereof.

### **3) Time of Supply:**

The time of supply of the equipments covered in this tender shall be 30 days from the date of execution of the agreement.

**DIRECTOR.**

**CONTRACTOR**

**4) Security Deposit and Agreement**

With in five working days after the date when the acceptance of tender has been intimated to him, the tenderer shall deposit a sum together with the EMD equal to 5% of the agreed value of the work as security deposit for the proper fulfillment of the work and shall execute an agreement for the proper fulfillment of the contract in the prescribed format. If the selected tenderer fails to execute the agreement in the prescribed form at and deposit the security deposit, the EMD of such tenderers shall be forfeited and the next one will be given the chance. The security deposit shall in the form of demand draft drawn in favors of Director, Kerala State Science and Technology Museum, payable at Thiruvananthapuram. The EMD of all the tenderers except the successful tenderer will be released immediately on execution of the agreement and depositing the security deposit by the successful tenderer.

**5) Supply of Items**

The equipments are to be supplied to the museum in good condition. The contractor has to look after the insurance and other statutory requirements till handing over the items to the Museum authorities at the office of Kerala State Science and Technology Museum, Thiruvananthapuram.

**6) Guarantee**

The equipments shall be guaranteed for a period of one years from the date of supply items. Any defects found during the guarantee period shall be rectified by the supplier absolutely free of cost. If the supplier fails to rectify such defects in a reasonable period of time. The Director, Kerala State Science and Technology Museum shall have the powers to arrange the rectification work, through other agencies at the risk and cost of the tenderer.

**7) Payment Terms**

100% payment will be effected on handing over of the items to the fullest satisfaction of the museum.

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## **LIST OF SCIENTIFIC EQUIPMENTS FOR EXPLORATARIUM**

The systems should have facility for digital interfacing using USB/universal port and the same need to be mentioned in the offer.

### **1. Two axis force platform**

Equipment to measure the sideways force during a broad jump, measure the normal and parallel forces etc.

### **2. Hand grip Heart meter**

Equipment to measure resting and exercise heart rate, To investigate how heart rate changes when a student sits, reclines, stands or moves suddenly.

### **3. EKG (ECG)**

Equipment to generate a personal EKG graph and to Compare EKG graphs before and after mild exercise ( with self adhesive pads -100 nos ).

### **4. PH calculating System**

Equipment to measure the hydronium ion concentration in a solution (Titrate an acid into a base, Investigate the chemistry of buffers, Monitor water quality)

### **5. Weather Anemometer**

Equipment to measure wind speed in direction of running on a track & Study wind and pressure changes as a storm approaches.

### **6. Humidity Sensor**

Equipment to Conduct weather station experiments & Measure dew point.

### **7. Barometer**

Equipment to conduct weather station experiments & Compare classroom data to local weather reports to predict weather.

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**8. GPS position Sensor**

Equipment to measure latitude, longitude, elevation, velocity (speed and bearing), number of satellites & To collect GPS data simultaneously with other sensor measurements, automatically synching the data to one's latitude, longitude, altitude, and velocity.

**9. Centripetal Force Experiment**

Equipment to measure centripetal force ( hand held ) with force sensor and motion sensor.

**10. Roller coaster system**

Equipments for the quantitative study of Energy Conservation.

**11. Physical Pendulum Accessory**

Equipment to Study Physical pendula, Moments of Inertia, and the Parallel Axis Theorem.

**12. Coin and feather tube with all accessories.**

**13. Ballistic pendulum**

Equipment to Study the combined effects the laws of Conservation of Momentum and Conservation of Energy to determine the muzzle velocity of the projectile.

**14. Projectile motion**

Equipment to demonstrate the projectile motion with all accessories.

**15. Demonstration Spring Set**

Equipment to Demonstrate Hooke's Law & Conservation of Energy.

**16. Hook's Law**

Equipment to Investigate the relationship between the force applied to a spring and the amount of stretch on the spring, with all accessories.

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**17. Magnetic Levitation**

**Equipment to Determine Lift and Drag Force on a Permanent Magnet Suspended Over a Spinning Aluminum Disk.**

**18. Archimedes principle**

**Equipment for proving the Archimedes principle, with all accessories.**

**19. Ideal Gas law**

**Equipment to Study the relationships between pressure, temperature and volume, with all accessories.**

**20. Energy Transfer (Solar)**

**Equipment to Demonstrate the Greenhouse Effect.**

**21. Vande Graff generator**

**Equipment to Demonstrate that Large Sphere Creates Higher Voltage, with all accessories.**

**22. Newtons laws**

**Equipment to demonstrate the newton's three laws of motion, with all accessories.**

**23. Variable gravity pendulum**

**Equipment to study variable gravity pendulum experiment with necessary computer interface.**

**24. Sliding friction**

**Equipment for the study of sliding friction, with all accessories.**

**25. Data acquisition and display unit with not less than three universal ports and 2 USB to connect sensors.**

**The unit should have not less than 12 MB data storage facility.(2Nos)**

**26. Colour video display unit with screen size not less than 5" (diagonal) and Resolution 640x480 with provision for connecting universal and USB ports-- (1No)**

DIRECTOR

CONTRACTOR