



DEPARTMENT OF ENGINEERING DESIGN
INDIAN INSTITUTE OF TECHNOLOGY MADRAS, IIT POST,
CHENNAI – 600 036, INDIA
PHONE: 044 22575630, FAX: 044 22574732

Dr. T. Asokan
Professor

Ref No: ED/TA/001/02/2023-24

Date: 13-2-2024

Due Date: 27-02-2024

Dear Sir,

Quotations are invited in duplicate for the various items **shown below**/overleaf/enclosed list.

1. The quotations are to be **in two parts** as:
Technical Offer and as Commercial offer
The two parts of the offer are to be clearly marked on the envelopes. The two parts of the offer in separate envelopes must be enclosed in one bigger envelope duly sealed and super scribed with reference number and due date and must be addressed to the undersigned so as to reach him on or before the due date stipulated above.
2. The quotations duly sealed and super scribed on the envelope with reference no. and due date, should be addressed to the undersigned so as to reach him or before the **due date** stipulated above.
3. Quotations should be valid for 60 days from the due date and period of delivery be indicated.
4. Local firms to quote for free delivery to this Institute. If quoted for Ex-godown delivery charges are indicated separately.
5. Relevant literature pertaining to the items quoted with full specifications.
6. Sales Tax/General Taxes/ED if applicable and such other taxes legally legible and intended to be claimed should be distinctly shown along with the price quoted. If this is not indicated no such claim will be admitted at any stage.
7. Goods should be supplied in carriage paid and insured.
8. Goods shall not be supplied without an official supply order.
9. Every effort will be made to make payment within 30 days from the date of bill/acceptance of goods whichever is later.
10. The Guarantee period of the item may be indicated clearly.
11. In case of LC. Payment 90% of the payment will be made after completion of the supply. The balance 10% of the payment will be made after satisfactory installation of the equipment.
12. IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
13. **Acceptance and Rejection-** I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or rejects it in full without assigning any reason.
14. **Fax and Email quotations are not acceptable.**

Yours faithfully,

Sd/-

Head of the Department -ED

Item required: Digital Pendulum System (Hardware and software setup)



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Technical Specifications:

General Specifications		
Item Name	Item Description	Quantity
Digital Pendulum System (Hardware and software setup)	<p>Digital Pendulum System (Hardware and software setup) The Digital Pendulum system is an experimental platform to teach classical control problem of erecting, and balancing a free-swinging pendulum in its inverted position or moving a hanging pendulum in a controlled manner. This is primarily used for teaching control systems performance through experiments to UG and PG students.</p> <p>Technical Specifications</p> <ul style="list-style-type: none">☑ Digital pendulum model comprising a cart with a free swinging dual arm pendulum attached and associated track.☑ Dual mode system – Crane or Inverted pendulum☑ Self erecting pendulum mode.☑ Controller integration with closed loop system (PID)☑ Ability to interface with MATLAB and similar software☑ Software and hardware capability to do multiple experiments.☑ Detailed manual for various experiments to be provided <p>Dimension and weight:</p> <ul style="list-style-type: none">☑ Length: 1700-1900 mm, Height (max): 650-750 mm, Depth 400-500mm, Weight :25 kg (max) <p>Power requirements:</p> <ul style="list-style-type: none">☑ Should be Operated with Line voltage 200/230 V , 50Hz	1 Nos

Terms and Conditions:

Payment : 100% against Delivery.

Delivery : 4 - 6 Weeks from the date of the confirmed order.

Installation & Commissioning : The Installation & Commissioning should be provided free of cost at IIT Madras.

Training : Training to be provided by the supplier for one to two days

☑ A minimum of 3 years warranty should be provided.

☑ Proof of supply of similar equipment to government or academic institutes to be provided.

☑ Distributors need to provide authorization certificate from the equipment supplier.

☑ Two-bid system will be followed. Technical compliance statement and price quotation to be submitted in separate envelopes.

Sd/-

Head of the Department -ED



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INFORMATION OF TENDER TO UPLOAD IN CPP PORTAL.

DATE : 13/02/2024

1.	Purchase from	INSTITUTE
2.	Tender Reference No.	ED/TA/001/02/2023-24
3.	Name of the item	Digital pendulum model comprising a cart with a free-swinging dual arm pendulum attached and associated track. <input checked="" type="checkbox"/> Dual mode system – Crane or Inverted pendulum <input checked="" type="checkbox"/> Self erecting pendulum mode. <input checked="" type="checkbox"/> Controller integration with closed loop system (PID) <input checked="" type="checkbox"/> Ability to interface with MATLAB and similar software. <input checked="" type="checkbox"/> Software and hardware capability to do multiple experiments. <input checked="" type="checkbox"/> Detailed manual for various experiments to be provided.
4.	Tender Category (GOODS/WORKS/SERVICES)	GOODS
5.	Type of Tender (Limited)	Limited
6.	No. of Bids : (1/ 2)	2
7.	Tender Start Date	13-02-2024
8.	Tender Due Date & Time	27-02-2024
9.	Bid Opening Date & Time	28-02-2024
10.	Bid Opening Venue	Department of Engineering Design -Room No. 103
11.	Pre-bid meeting Date & Time	-
12.	Pre-bid Meeting Venue	-
13.	Quotation Validity Days	30 DAYS
14.	Tender Validity Days	60 DAYS
15.	Completion of work	-
16.	Quotation May be Sent to (Inviting Officer Name & Address)	Dr. T. Asokan, Dept. of Engineering Design, IIT Madras - 36
17.	No of documents to be uploaded in CPP portal	3

Sd/-
Head of the Department-ED