

	<p><b>Institute of Infrastructure, Technology, Research And Management</b>          (An Autonomous University, Established by Government of Gujarat)          IITRAM Campus, Parishkar Campus, Near Khokhra Circle,          Maninagar (East), Ahmedabad – 380026, Gujarat.          Phone: 079-67775430          e-Mail: <a href="mailto:office@iitram.ac.in">office@iitram.ac.in</a>          Website : <a href="http://www.iitram.ac.in">www.iitram.ac.in</a></p>
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Tender No.: 2022/25

Date: 13.09.2022

**NOTICE INVITING TENDER**

**Important Information:**

Name of Item:	<b>BID FORM for Procurement of Equipment for Theory of Machines and Mechanisms Laboratory</b>
Date of Issue	13.09.2022
Tender Fee	Rs.1770.00 (Including 18% GST)
EMD	Rs.10,000.00 (Refundable)
Last date for Online BID Submission	04.10.2022 till 12:00 AM (midnight)
Last date for Physical BID Submission	06.10.2022 till 05:00 PM
Opening of Technical BID	<b>11.10.2022 at 11.00 AM</b>
Opening of Financial BID	<b>To be announced later through email</b>
Tender Inviting Authority and Address	The Registrar (In-Charge), Institute of Infrastructure, Technology, Research And Management, Near Khokhara Circle, Maninagar (East), Ahmedabad – 380026, Gujarat. Phone: - 079-67775430

# Institute of Infrastructure, Technology, Research And Management

## NOTICE INVITING TENDER

### Name of Item: Procurement of Equipment for Theory of Machines and Mechanisms Laboratory

Sir,

The Institute of Infrastructure, Technology, Research And Management (IITRAM), Ahmedabad invites quotations for **Procurement of Equipment for Theory of Machines and Mechanisms Laboratory** under “Two bid system in e-Tender format.” Interested parties who wish to participate in this e-Tender may obtain the Tender documents from IITRAM website [www.iitram.ac.in](http://www.iitram.ac.in) or from <https://education.nprocure.com>. Firms have to submit the technical documents through RPAD, Speed Post or in Person till the last date and time prescribed for submission. Tender sent by other means will not be accepted in any case. Hardcopy of Tender Document, Tender Fee, EMD and other essential documents should be submitted on or before **06.10.2022 till 05:00 PM** in the office of the Room No. G2, IITRAM, Near Khokhara Circle, Maninagar (East), Ahmedabad-380026. Financial bid is to be submitted in electronic form only on (n)Procure website (<https://education.nprocure.com>).

#### **1. Eligibility Criteria:**

- 1.1 The firm should have PAN No. Enclose a copy of the PAN Card.
- 1.2 The firm should be registered with GST. Enclose a copy of the Registration No.
- 1.3 The firm has to submit at least last three years Income Tax Return of their firm.
- 1.4 The firm has to submit the Firm Registration Certificate.
- 1.5 The firm has to submit the Authorization Letter from the Original Manufacturer in case if the firm is a Distributor or a Supplier.

#### **2. General Terms and Conditions:**

- 2.1 The firm has to quote the price for the item as mentioned in particular Annexure-I.
- 2.2 The price quoted shall include taxes, other levy payable, all freight, packing & forwarding, transportation, loading & unloading, custom duty, excise duty & other duties, other charges to supply Goods at IITRAM.
- 2.3 Rates quoted should also including training, installation, commissioning, erection and demonstration of machine/material/goods/instruments/equipment at our site.
- 2.4 The items for which quotation have been submitted must be in accordance with the specifications given in **Annexure-I**.
- 2.5 The rates quoted by the firm shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 2.6 The offer shall be valid up to 90 days from the date of opening of Technical bid.

- 2.7 The Tender is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the scheduled tender are not fully filled in. Particular attention must be paid to delivery date and also to the particulars referred to in the condition of the contract.
- 2.8 Financial bids will be opened in online format of technically qualified firms only.
- 2.9 Tenders not complying with the above conditions are liable to be rejected at the sole discretion of IITRAM without any further reference / communication.
- 2.10 This tender is not transferable.
- 2.11 IITRAM reserves the right to choose, accept or reject any or all requests/deviations/offers, in full or part and also reserve the right at any stage to reduce or increase the quantity and split the order.
- 2.12 The Supplier/Vendor has to submit photocopy of following documents along with duly signed & stamped:
- i. PAN Card
  - ii. Firm's Registration Certificate
  - iii. GST Registration Number
  - iv. Income Tax Return (Last three years')
  - v. This NIT Documents, Annexures, Appendix, etc.
  - vi. If firm is newly established, provide chartered accountant certificate to make firm eligible for tender. In case of foreign company/organization/industry, has to provide necessary document like firm registration, original manufacturing certificate etc. Otherwise, it shall be liable for disqualification of this NIT.
- 2.13 **Performance Security:** The successful firm shall be required to deposit Performance Security from any Nationalized Bank @5% of the cost of the items to be supplied for the duration of warranty plus additional two months in favor of "IITRAM" within 30 days of the receipt of the Purchase Order. If the firm fails to comply with the above requirements within the said period, the EMD already deposited by him/ them shall be applicable for forfeiture and IITRAM shall purchase the items required at the risk and cost of the successful firm.
- 2.14 This Performance Security will be returned (without any interest) within 30 (Working) days after satisfactorily completion of warranty period.
- 2.15 The successful firm shall have to enter into the Agreement in the prescribed Performa provided by IITRAM. (In Rs.300 Stamp Paper).
- 2.16 **Inspection:** Pre-dispatch inspection at Bidders site or inspection after the delivery of goods, as the case may be.
- 2.17 **Inspection Charges** @0.5% within Gujarat State and Inspection Charges @1% for outside Gujarat State of the total order value should be borne by the bidder.
- 2.18 All or any Claim(s), dispute(s) or difference(s) arising out of or in with connection with this agreement shall be subject to the jurisdiction of the Courts at Ahmedabad only.

- 2.19 Any loss or damage caused to the article in transit/Installation/Testing is to be made up item by the firm free of cost within period of 30 days.
- 2.20 If the firm is blacklisted by Central Government or State Government or any other Government body then its submitted tender will be rejected. It is essential for firm to submit **Appendix - I** duly filled, signed, sealed & stamped manner in hardcopy, failing which the tender will be summarily rejected.
- 2.21 If there happens to be a holiday on any date indicated in the quotation, the transaction shall be performed on the next Working Day.
- 2.22 No firm shall withdraw his rates after the Tender is opened. If a firm does so, his tender related deposit/s shall be forfeited and such firm shall be considered ineligible for work/contract in future.

### **3. Submission of bid:**

- 3.1 The Tender document can be downloaded from website [www.iitram.ac.in](http://www.iitram.ac.in) or from <https://education.nprocure.com>. The fully filled in and complete in all respect Tender must be submitted with Tender Fee, EMD in the form of Demand Draft in separate cover in favor of the "IITRAM" payable at Ahmedabad.
- 3.2 Please mention Tender Number and Firm Name of Firm on back side of DD.
- 3.3 The EMD is refundable (without any interest) within 30 (Working) days after successful award of Purchase Order:
- 3.3.1 EMD of unsuccessful suppliers / vendors will be returned within 30 (Thirty) working days from the date of award of Purchase Order.**
- 3.3.2 EMD of successful supplier / vendor will be returned within 30 (Thirty) working days after submission Performance Security.**
- 3.3.3 The EMD shall be forfeited:**
- If the bidder withdraws his bid during the validity period of the bid.
- 3.4 The firm has to submit the Tender in two parts viz., (a) Technical Bid in envelop No.1 and (b) EMD in envelope No.2; both these envelopes should be sealed and put together in a covering envelope, super scribed with, Please Don't Open, bid for "***Procurement of Equipment for Theory of Machines and Mechanisms Laboratory***" with due date, Tender Number and complete address.
- 3.5 The bidder has to provide the make, model and detail technical specifications of the quoted item(s) and provide the technical specification of item as mentioned in Appendix-I. **Without this information, bid submitted by the bidder will be rejected.**
- 3.6 The firm has to submit financial quotation online only at (n)Procure portal.
- 3.7 **It is essential for firm to submit Annexures, Appendix & Tender documents (all pages) and other essential documents as mentioned in this NIT notice with duly filled, signed, sealed & stamped manner in hardcopy, failing which the firm tender will be summarily rejected.**

3.8 Price quoted “ONLINE” will only be considered for L1.

#### **4. Evaluation of Quotations:**

The tender evaluation committee of the IITRAM will evaluate and compare the received quotations to determine the substantially responsive tender i.e. (i) tender is complete (ii) properly signed (iii) confirm the terms/conditions and specifications. Further, the financial evaluation will be done only for the substantially responsive tender based on the following parameter(s):

- Total Price quoted (ONLINE ONLY) as per specifications mentioned in Annexure-I.

#### **5. Award of Contract:**

- 5.1 IITRAM will award the contract to the firm who has offered lowest price.
- 5.2 Notwithstanding the above, IITRAM reserves the right to accept or reject any quotation and to cancel the bidding process and reject all quotations at any time prior to the award of contract without giving any reason.
- 5.3 The firm whose bid is accepted will be notified of the award of contract by the IITRAM prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the Purchase Order.

#### **6. Delivery Period & Penalty:**

- 6.1 The Equipment/ Instrument/ Machines/ Goods/ Item are to be delivered within a maximum time limit of 90 days from the issue date of Purchase Order. However, in case of imported Equipment/ Instrument/ Machines/ Goods/ Item are can be delivered within a maximum time limit of 120 days from the issue date of Purchase Order.
- 6.2 After the receipt of Items/Goods in acceptable condition at IITRAM, Ahmedabad bidder has to install Equipment/ Instrument/ Machines/ Goods/ Item within 30 Days. Bidder have to specify delivery period along with the technical documents.
- 6.3 **Penalty:** Penalty of 1% per week of order value will be charged after duration specified above individually. Further, 06 weeks or above delay from above mention days may lead to cancellation of order at the discretion of the university and forfeiting of Performance Security or EMD or Maximum Penalty shall be applicable 10%.

#### **7. Warranty:**

- 7.1 Minimum One-year complete warranty from the date of complete installation, commissioning and erection of all the Equipment/Instruments/Machines/Goods at our site.
- 7.2 Warranty certificate should be provided by original manufacturer in case of bidder is distributor or supplier on company's letter head.

**8. Terms of Payment:**

- The payment in INR will be released against firm Tax Invoice through the “CROSSED BANK CHEQUE” instrument within 30 days’ credit period after acceptance of successful delivery, installation at IITRAM.

**9. Address for the Physical Bid Submission:**

**The Registrar (In-charge),  
Institute of Infrastructure, Technology, Research And Management,  
Near Khokhara Circle, Maninagar (East), Ahmedabad- 380026.**

**I/c. Registrar**

## (Schedule of Quantity)

Sr. No.	Name of Item & Specification	Qty.
1.	<p><b>CAM ANALYSIS APPARATUS</b></p> <p><u>Specifications</u></p> <ul style="list-style-type: none"> <li>• Three cams i.e. Tangent, Eccentric, Circular Arc, made of hardened alloy – steel with Cam shaft should be driven by Variable speed FHP DC Motor (Power 250Watt and speed 60 to 670 rpm) with speed controlling unit. (Cam profiler should be provided along with the tender documents for the technical evolution).</li> <li>• Three Followers i.e. Roller, Knife edge, Mushroom should be made hardened alloy – steel.</li> <li>• Three interchangeable return spring has stiffness hard: - 5026N/m, medium 2601N/m, Soft 613N/m and spring preloaded</li> <li>• Transparent protective cover to be provided for the safe operation.</li> <li>• Weights of 500 gm, 300 gm, 200 gm &amp; 100 gm and Dial Gauge of Baker &amp; Mercer/Standard Make should be provided.</li> <li>• Digital RPM indicator with proximity sensor (non-contact type should be provided for RPM measurement.</li> <li>• The whole set-up should be well designed and arranged on a rigid structure painted with industrial PU Paint.</li> </ul> <p><u>Equipment should perform following experiments</u></p> <ul style="list-style-type: none"> <li>• With the help of combination of provided cams and followers following experiments can be conducted:</li> <li>• To plot the <math>n-\theta</math> (Follower displacement Vs Angle of rotation) curves for different cam follower pairs.</li> <li>• The follower bounce can be observed by using a stroboscope (Optional) &amp; effect of follower weight on bounce can be studied.</li> <li>• To study the effect of follower weight on bounce.</li> <li>• To study the effect of spring compression on bounce</li> </ul>	01 Nos.
2	<p><b>EPICYCLIC GEAR TRAIN APPARATUS (With digital RPM indicator)</b></p> <p><u>Specifications</u></p> <ul style="list-style-type: none"> <li>• Two stage planetary gear: module 2 mm</li> <li>• Sun gear 24 tooth d pitch 48mm, Plant gear 24 tooth, D –pitch circle 48 mm, Ring gear 72 tooth, D-pitch circle 144 mm</li> <li>• Drive: set of weight 5 to 50 kg</li> <li>• Max. potential energy 245, 3N-m</li> <li>• Load at stand will: 5 to 70 N</li> <li>• Speed measuring range: - 0 to 2000 RPM.</li> <li>• Three planet gear to be provided</li> <li>• Different transmission ratio to be provided.</li> <li>• Shock absorber to be provided</li> <li>• Transparent protective cover to be provided.</li> </ul>	01 Nos.

	<ul style="list-style-type: none"> <li>• Force measurement on different gear stages via 3 bending bars via dial gauges.</li> <li>• The whole set-up should be well designed and arranged on a rigid structure painted with industrial PU Paint.</li> </ul> <p><u>Equipment should perform following experiments:</u></p> <ul style="list-style-type: none"> <li>• To investigate the behaviour of a two stage planetary gear</li> <li>• To determine friction</li> <li>• Determine gear efficiency</li> <li>• To measure the transmitted force for a locked gear.</li> <li>• Conversion of potential energy into kinetic energy.</li> </ul>	
3	<p><b>DIGITAL STROBOSCOPE</b></p> <p><u>Specifications</u></p> <ul style="list-style-type: none"> <li>a) Comply with EN 61010 installation category</li> <li>b) Pollution degree 2</li> <li>c) Relative humidity 80% in max</li> <li>d) Display 0.4LED, 4 digits</li> </ul> <p>Accuracy: - 0.05%</p> <p>Sampling time: - one second</p> <p>Circuit: - One chip of microcomputer LSI circuit &amp; crystal control time base.</p>	01 Nos.
4	<p><b>DIGITAL TACHOMETER</b></p> <p><u>Specifications</u></p> <ul style="list-style-type: none"> <li>• LCD Laser Non-Contact Photo Tachometer</li> <li>• Measuring Distance: 50- 500 mm</li> <li>• Measurement Range: 5-99999</li> <li>• Measurement Accuracy: 0.02%</li> </ul>	01 Nos.



**FORMAT FOR SUBMISSION OF COMPANY DETAILS (DATA SHEET)**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Details to be filled by the Organization</b>
1	Name of the Company	
2	Registered Office Address Telephone Number Fax Number e-Mail	
3	Correspondence Address Telephone Number Fax Number e-Mail:	
4	Details of the authorized person (Name, designation, address) Telephone Number Fax Number e-Mail:	
5	Is the firm - <ul style="list-style-type: none"><li>• Government/ Public Sector Undertaking</li><li>• Proprietary Firm</li><li>• Partnership firm (if yes, give partnership deed)</li><li>• Limited company or Limited Corporation</li><li>• Member of a group of companies (if yes, give name and address and description of other companies)</li><li>• Subsidiary of a large corporation (if yes give the name and address of the parent organization) If the company is subsidiary, state what involvement if any, will the parent company have in the project.</li></ul>	
6	Goods & Service Tax Number (GST):	
7	Permanent Account Number (PAN) of the firm.	

**Seal & Signature of Company**

**Date:** \_\_\_\_\_

**Place:** \_\_\_\_\_

**FINANCIAL BID**

(Format for Submission of Financial Details)

(Data Sheet to be submitted ONLY Online at (n)Procure Portal)

Sr. No.	Name of Items	Qty.	Rate (Without GST)	Total Amount (INR)	GST Slab Rate (%)
A	B	C	D	E = (C*D)	F
1.	CAM ANALYSIS APPARATUS	01 Nos.			
2	EPICYCLIC GEAR TRAIN APPARATUS (With digital RPM indicator)	01 Nos.			
3	DIGITAL STROBOSCOPE	01 Nos.			
4	DIGITAL TECHOMETER	01 Nos.			

This table of financial bid is stated for reference purpose only and please do not disclose any price here at the time of submission of this document.

**Declaration:**

I/We hereby declare and affirm that I/We have read and understood the terms and conditions of the contract as stipulated in this NIT.

**Seal & Signature of Company**

Date: \_\_\_\_\_

Place: \_\_\_\_\_

*(To be printed on Firm's Letter Head)*

**Appendix - I**

**UNDERTAKING**

I, \_\_\_\_\_ hereby declare that Firm / Company / Agency / Organization / Partnership firm / Proprietary firm titled as \_\_\_\_\_ has not been blacklisted or banned or debarred at any stage from inception till this date by any of the NITs / IITs / IIITs / Central Universities / IISERs / CSIR Labs Central and State Government body / PSUs / Autonomous Institute or any Other Government Organization. In case of the any fraudulency, the Firm / Company / Agency / Organization / Partnership firm / Proprietary firm is fully aware that the tender / contract will be rejected / cancelled by IITRAM and EMD / Performance Security or any deposited amount shall be forfeited.

In addition to above, IITRAM will not be responsible to pay the bills for any completed / partially completed/supplied work.

**Seal and Signature of Company**

**Date:** \_\_\_\_\_

**Place:** \_\_\_\_\_