



INDIAN INSTITUTE OF TECHNOLOGY DHARWAD
Off Pune Bengaluru Highway, Near High Court,
Dharwad, Karnataka - 580011

SEALED TENDERS ARE INVITED FROM PROSPECTIVE BIDDERS AS PER SECTION
IV - SCHEDULE OF REQUIREMENTS FOR SUPPLY, INSTALLATION,
COMMISSIONING, DEMONSTRATION & TRAINING OF SOLID MECHANICS LAB
AND KINEMATICS AND DYNAMICS OF MACHINERY LABORATORY EQUIPMENT
AT INDIAN INSTITUTE OF TECHNOLOGY DHARWAD

NOTICE INVITING TENDER (NIT) / RFP

Tender No.	IITDH/MMD/ME/2019-20/38	
Description	<u>SUPPLY, INSTALLATION, COMMISSIONING, DEMONSTRATION & TRAINING OF SOLID MECHANICS LAB & KINEMATICS AND DYNAMICS OF MACHINERY LABORATORY EQUIPMENT AT IIT DHARWAD</u>	
Tender Date	16.08.2019	
Tender Category	Goods	
Tender Type	Open Tender	
No. of Covers	2	
Covers Information / Submission of Bids		
Cover No.	Cover Type	Description
1	Technical	EMD, Technical Specification, Tender Document, Schedule of Requirement and Compliance, Bidders Information/Indian Agent Information, Previous Supply Orders etc.
2	Financial	Financial Bid
<p>Two Bid System: - The two bid system will be followed for this tender. In this system bidder must submit their offer in separate sealed envelopes as – Technical Bid and Commercial Bid. Separate technical bid and commercial bid envelopes should be clearly marked as "Envelope No. 1 - Technical Bid" and "Envelope No. 2 - Commercial Bid". Both these sealed covers are to be put in a bigger cover which should also be sealed and duly super-scribed with our Tender No. & Due Date and to be submitted to the concern department/section mentioned in tender document. Note: The technical offer should not contain any price information. If the price quoted is submitted in technical bid the tender will be rejected at the sole discretion of IIT Dharwad. Initially Technical Bids will be opened and evaluated by the purchase committee. Commercial bids of only Technically qualified bidders will be opened later. Contract/ Purchase Order will be awarded to the lowest bidder (L1) identified.</p>		
Form of Contract	Buy	
EMD Fee Details (in the form of Bank Guarantee)		
EMD Fee INR: Payable to:	Rs.1,00,000/- "The Registrar, IIT Dharwad"	



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Indian Institute of Technology Dharwad

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Payable at:	Hubali, Dharwad
Bid Validity (Days):	90 Days
Period of Work/Delivery Period (Days)	90 Days
Start date for Submission of queries via email to armm@iitdh.ac.in	16.08.2019
End date for Submission of queries via email to armm@iitdh.ac.in	26.08.2019 till 01:00 PM
Date of rebuttal/reply of queries (to be uploaded on the website) and publishing revised RFP (as the case may be)	28.08.2019
Contract Type:	Tender
Delivery Location:	IIT Dharwad
Pin Code	580011
Bid Submission End Date/Date & Time Submission	11.09.2019 till 10:00 am
Place of Submission of Bid	The Assistant Registrar (MMD), IIT Dharwad Off Pune Bengaluru Highway, Near High Court, Dharwad, Karnataka- 580011
Bid Opening Date & Time	11.09.2019 at 11:00 am
Bid Opening Place	The Assistant Registrar (MMD), IIT Dharwad Off Pune Bengaluru Highway, Near High Court, Dharwad, Karnataka- 580011
Other Terms & Conditions	Warranty as per mentioned in technical specification
Tender Inviting Authority:	Name : The Assistant Registrar (MMD), IIT Dharwad Address: Off Pune Bengaluru Highway, Near High Court, Dharwad, Karnataka- 580011

Sd/-
Assistant Registrar (MMD), IIT Dharwad
(For and on behalf of Director, IIT Dharwad)



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Section - I: Invitation of the Bids

1. Indian Institute of Technology Dharwad invites sealed tenders (under two bid system) from reputed suppliers/manufacturers OR authorized dealers for the supply, installation, commissioning, demonstration & training of Solid Mechanics Lab & Kinematics and Dynamics of Machinery Laboratory Equipment as per the Technical Specifications given in the schedule annexed to the tender.
2. The bidder should note that the technical specifications mentioned in **Section IV** form the core of the product. The offers must strictly be as per the specifications given. At the same time, it must be kept in mind that mere copying of our specifications in the quotation shall not make the technical bid eligible for consideration. A bid has to be supported with original catalogue of the quoted item duly signed by the principals and the same must be sent along with the technical bid. Non-compliance with above shall be treated as incomplete/ambiguous and the bid may be ignored without giving an opportunity to the bidder for further clarification/negotiation etc.
3. In order to specify/modify technical specifications of the equipment and clarify various issues as may arise, a pre-bid clarification is provided. Resultant rebuttal/re-publishing of modified RFP (as the case may be) will be published. **The bidders are advised to utilise the period given for clarifying any issue pertaining to RFP and to bring out any limitation / suggestion in the RFP. After the period is over, no issue will be addressed and the institute will assume general acceptance of RFP terms and conditions.** Prospective bidders will submit their bids post rebuttal/modification in RFP (as the case maybe).
4. Any item not specifically mentioned in the tender document but essential in the opinion of the bidder for successful supply, installation, commissioning, demonstration & training of Solid Mechanics Lab & Kinematics and Dynamics of Machinery Laboratory Equipment, should be brought to the notice of the IIT Dharwad within the pre-bid clarification period, and before end date of submission of queries. On clearance from our side, the same may be included in the modified RFP (as the case may be). However, the decision as to whether to consider such items or not, rests with the Institute.
5. The bidder shall ensure that the bid submitted by him includes all accessories (as per annexures) for full execution of contract. The bidder shall not charge extra for additional items required to meet the operational requirement at the stage of installation and commissioning.
6. Quantity requirements of each item as per the specification enclosed at **Section IV**.

Sl. No.	Particulars of the item(s)	Requirement
(a)	<u>Supply, installation, commissioning, demonstration & training of Solid Mechanics Lab & Kinematics and Dynamics of Machinery Laboratory Equipment</u>	Individual item requirements as per <u>Section IV</u>

7. It may kindly be noted by all the prospective bidders that the **tender will be awarded to the lowest successful bidder (L-1) for setting up the complete Laboratory (as per tender subject).**



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Procedure for Bid submission

Following is the procedure for submission of Bid, and other important conditions to be fulfilled by the bidder: -

1. Every page, containing the said procedure for submission of bid and other important conditions, are to be signed by the bidder (to be serially numbered & bounded) and to be submitted along with their Technical bids towards their acknowledgement that they have gone through all the contents in these pages and in the Annexure as well and they are agreeing to comply to all of the conditions mentioned there. Non adherence to this may lead to the disqualification of the bid without further notice.
2. Two bid system: The offers/bids are to be submitted under a two bid system, namely (i) Technical Bid and (ii) Commercial Bid. The Technical Bid must contain all the details as specified in the Annexures along with the terms and conditions whereas Commercial Bid must indicate the quantity & rate only. There must not be any price element in the technical bid.
3. Sealing & marking of bid: The tender should be submitted in a proper manner with index for easy identification i.e.: -

<u>Envelope Number</u>	<u>To be super-scribed as</u>
A	EMD for Tender
B	Technical Bid
C	Commercial Bid

Envelope – A (duly sealed): should contain the Demand Draft / BG towards Earnest Money Deposit.

Envelope – B (duly sealed): should contain the documents as listed under Technical Bid below.

Envelope – C (duly sealed): should contain the document as listed under Commercial Bid below.

All the above three envelopes should clearly be marked on top of envelopes about the type of envelopes (i.e., A, B, & C), details of contents in envelopes, name of agency submitting the bid.

The envelopes (A, B & C) including the bigger envelopes shall be addressed to:

The Assistant Registrar (MMD)

IIT Dharwad, Off Pune Bengaluru Highway,

Next to High Court, Dharwad - 580011, Karnataka, KA, INDIA

The bigger envelopes must be sealed and must bear the following identification on top: -

a) Tender for '**supply, installation, commissioning, demonstration & training of Solid Mechanics Lab & Kinematics and Dynamics of Machinery Laboratory Equipment to IIT Dharwad**'

b) Tender Number: _____ Date: _____ and

c) Name and Address of the Bidder. (on bottom left of the envelopes)

If the outer envelope is not sealed and not marked as above, the Institute will assume no responsibility for the misplacement or premature opening of Bid.

4. **Submission of tender:** The tender can be personally dropped in the tender box (kept near the IIT Dharwad building entrance outside MMD Section under supervision of a security guard) to be kept in on all working days (except Saturday, Sunday & Holidays) between 10.00 am and 1.00 pm in the forenoon and 3.00 pm and 5.00 pm in the afternoon session before the date and time as specified in the Tender Notice and up to 10.00 am on the last date of submission of tender. The tender can also be sent by registered post to The Assistant Registrar (MMD), Indian Institute of Technology Dharwad, Off Pune Bengaluru Highway, Next to High court, Dharwad - 580011, Karnataka, INDIA. Tender shall not be received after expiry of the time as specified on the 1st page of the tender notice. Late bids will not be accepted.



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Eligibility Criteria

5. Only those bidders fulfilling the following Eligibility Criteria are expected to participate in the Tender: -
- The Bidder must be a reputed suppliers/manufacturers/ authorized dealers/ authorized distributor/ authorized stockiest/ channel partner in the business of supply, installation, commissioning, demonstration & training of Solid Mechanics Lab & Kinematics and Dynamics of Machinery Laboratory Equipment or similar equipment for a period not less than 3 years (i.e. must be in this business from July 2016 or earlier). A certificate to this effect is required to be enclosed.
 - A Certificate/Undertaking on the letter head of the Company to the effect that the bidder/Manufacturer had not been blacklisted anywhere in India or abroad by any organization.
 - The Bidder should be registered with concerned statutory authorities for GST/Income Tax etc. the bidder should furnish relevant GST registration documents and PAN/TAN copies.

TECHNICAL BID

6. The bidder must submit the following documents/information with the Technical Bid (**all 09 criteria to be mandatorily fulfilled for technical qualification**):
- a. The entire tender document duly signed on each page.
 - b. Copy of the valid PAN Card, Goods & Sales Tax Registration be forwarded.
 - c. Proof of establishment of company/business for a period of more than 3 years.
 - d. Copy of at-least one performance certificate (along with purchase order) of supplying similar item/s to IITs/ NITs/ IISc/ IISERs/ Central Universities/ laboratories of national importance etc.
 - e. A Certificate/Undertaking on the letter head of the Company to the effect that the bidder/Manufacturer had not been blacklisted anywhere in India or abroad by any organization.
 - f. EMD as sought in the succeeding paragraphs of this document. In case EMD exemption is sought under SME/MSME/NSIC, Valid certificate explicitly mentioning nature of operation shall be forwarded in addition. EMD exemption is not permissible in case of Import purchases.
 - g. Copy of Income tax returns for last three consecutive financial years (period ending 31.03.2018).
 - h. Duly filled and completed Section-IV (on the letter head of the company/bidder) comprising all sub-parts viz. Schedule of requirements & Compliance, Bidder information & Reasonability of prices.
 - i. They should provide convincing evidence that equipment in the bid is capable of performing the experiments that have been specified in this tender document. The evidence should be in terms of complete (filled with experimental values corresponding to experiments mentioned in Technical Specifications) manuals or videos. The manuals or videos must clearly show the experiments mentioned in the technical specifications. Wherever applicable, the manuals/videos must include details for installation & assembly, and maintenance. Any other technical specifications should be supported with documents like drawings and catalogues.
7. The tenderer must submit all documents required for evaluation of technical bid and sought in the RFP as forming part of technical evaluation with signature and seal of the competent authority of the firm. In the event of non-receipt of any of the documents forming part of Technical Bid, tenderer will be disqualified from the process. No paper relating to the technical bid will be received during the Technical Bid meeting or afterwards except for exceptional cases as decided by the Procurement Committee. Further, any separate correspondence in the matter shall also not be entertained.
8. During evaluation of the Technical Bid, the Procurement Committee will scrutinize the documents mentioned above and may forward any or all the documents to the concerned authorities for verification and



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authentication. In case of any document(s) as submitted by the tenderer found/reported to be fake, the tenderer will be out of the tendering process besides any legal action that may be initiated against the tenderer, as per rules. Further, the Committee may visit the factory site of the Manufacturer to inspect and assess the capability etc.

9. Besides, scrutinizing the documents submitted with the Technical Bid, the tenderer may be interviewed by the Committee to assess the eligibility, capability, and suitability of the tenderer. As such, the presence of the tenderer or any authorized representative of the tenderer in the Technical Bid meeting & commercial bid opening or as and when desired by authorities of IIT Dharwad is preferable. It may also be noted that the any prospective bidder (after opening of technical bids) may be called for technical presentation to the Procurement Committee for consideration of their price bids. The bidders are requested to keep this point in mind while quoting for this tender.

The above mentioned basic eligibility conditions and additional clauses are broad guidelines for pre-qualification and the Director, IIT Dharwad hereby reserves the right to relax/alter/modify/add any or all the conditions.

10. Delivery terms:

Items should be door delivered at IIT Dharwad (KA) 580011 (***delivered DDP IIT Dharwad in case of imported item/part***) within the quoted price. The supplier should arrange for entire process from unloading to commissioning and demonstration within the quoted price.

11. Freight & Insurance:

No freight and insurance charges will be provided and the materials are to be delivered at IIT Dharwad WALMI Campus, as may be desired by the IIT Dharwad at the cost and risk of the supplier/Bidder within quoted price.

12. Warranty declaration:

- The Bidder/supplier must give a comprehensive support and maintenance for a period of specified in respect of each item (mentioned in Section-IV) from the date of commissioning and acceptance of the items.
- Any deviation in the equipment, and the specification from the accepted terms and conditions may be liable to be rejected and the bidder/manufacturer needs to supply all the items in the specified form to the satisfaction/ specifications specified in the order and demonstrate at their own cost. The payments shall be made only after receiving the materials as per required specification and quality to the satisfaction of the competent authority of IIT Dharwad.

13. Installation & Demonstration:

- The supplier is required to carry out the supply, installation, commissioning, demonstration & training of the items at the IIT Dharwad installation site within the delivery period; otherwise the penalty clause will be the same as per the supply of material (refer to the liquidated damages below).
- In case of any mishandling/damage to items and supplies during carriage from the origin of items to the installation site, the supplier has to replace it with new items/supplies immediately at his own risk of cost. Supplier will settle his claim with the insurance company as per his convenience. IIT Dharwad will not be liable for any type of losses in any form.



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14. Liquidated Damages:

The equipment should be delivered/dispatched to destination and ready for use not later than the delivery period specified. If the supplier/Bidder fails to deliver any or all the stores or perform the service by the specified date, liquidated damages @0.5% per week or part thereof in respect of the value of the delayed stores will be deducted from the bill subject to a maximum of 10%. Same terms are applicable for installation, training and demonstration clause mentioned above.

15. Dispute and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to the whole process of this tender shall be settled in the court of competent jurisdiction in the district of Dharwad, Karnataka.

16. Acknowledgement by the Bidder:

It is hereby acknowledged that we have gone through all the schedules as well as the conditions mentioned above and we agree to abide by these.

Date:

Signature of the Bidder along with official seal.

Place:

CANVASSING OR OFFERING AN ADVANTAGE OR ANY OTHER INDUCEMENT BY ANY PERSON WITH A VIEW TO INFLUENCING ACCEPTANCE OF A BID WILL BE AN OFFENSE UNDER LAWS OF INDIA. SUCH ACTION WILL RESULT IN THE REJECTION OF BID, IN ADDITION TO OTHER PUNITIVE MEASURES.

Sd/-
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(For and on behalf of Director, IIT Dharwad)



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Section II: Instructions to Bidders

1. Preparation and Submission of offers:

- a) The Quotation **MUST BE ENCLOSED IN A SEALED ENVELOPE** super-scribing Tender number and due date & should reach the undersigned on or before the due date and time mentioned in the tender notice. If the quotation envelope is not sealed, it will be rejected.
- b) Tender should be dropped in the tender box kept in the office of concerned Department / Section. Tender should not to be handed over to our staff personally unless otherwise specified. All communications are to be addressed to the undersigned only. In case due date happens to be holiday the tender will be accepted and opened on the next working day.
- c) The bid can be submitted in person or through post/ courier (IIT Dharwad shall not be held responsible for any postal delays or any other reason for not submitting the bid in the specified time and resulting in disqualification / rejection of any bid) so as to reach on or before the due date and time specified in the tender document.
- d) The leaflets catalogue, etc. should be sent invariably so that a proper evaluation of the equipment offered is possible.
- e) It is mandatory for bidders to have GSTN Registration No. And should submit duly filled Bidders Information along with the tender document.

2. **Cost of Bidding:**

The Bidder shall bear all costs associated with the preparation and submission of its Bid and the Purchaser shall not be held responsible or liable for those costs incurred regardless of the conduct or outcome of the bidding process.

3. **Validity of the Bid:**

90 Days from the last date of submission of bid.

4. **Amendments to Tender Document:**

- a) At any time prior to the deadline for submission of bids, IIT Dharwad may, for any reason, whether on its own initiative or in response to the clarification sought by a prospective BIDDER may modify the bid document by issuing necessary corrigendum.
- b) All prospective BIDDERS who have downloaded the tender document are requested to visit IIT Dharwad website for any amendments / modifications and make a note of the same, which will be binding on them.

5. **Deadline for Submission of Bids:**

Bids must be received by IIT Dharwad before the due date and time at the address specified in the tender document. In the event of the specified date for the submission of bids being declared as a holiday for IIT Dharwad the bid-closing deadline will stand extended to the next working day up to the same time without any further notice.

6. **Bid Opening Process:**

- a) In case of one bid system, technical & financial bid will be opened simultaneously in the presence of representatives of the bidders at IIT Dharwad.
- b) In case of two bid system, The Technical Bid will be opened in the first instance in the presence of Technical Evaluation Committee (TEC)/MMD, representatives of the bidders at IIT Dharwad.
- c) Financial bids of only those bidders, whose bids are found technically qualified, by the Technical Evaluation Committee, will be opened in the presence of the Technical Evaluation Committee (TEC)/MMD, vendor's representatives subsequently at a later date for further evaluation. Date and Time of financial bid opening shall be intimated to technically qualified bidders only.
- d) One authorized representative of each of the bidder would be permitted to be present at the time of opening of the bids.
- e) The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the Technical/Commercial bid opening session.



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7. Late Bids:

IIT Dharwad will not be responsible:

- a) For delayed / late quotations submitted / sent by post / courier etc.
- b) For submission / delivery of bids/quotations at the wrong places other than the mentioned in the tender.
- c) Any bid inadvertently received by IIT Dharwad after the deadline i.e. after due date & time for submission of bids, will not be accepted and returned unopened to the BIDDER, without any prejudice by hand/speed post/courier services.

8. Supplementary offer /Modification of Original Bid:

BIDDER desirous to modify their offer/terms may submit their revised / supplementary offer (s) strictly within the Tender Opening Date (TOD) by clearly stating to the extent of updation done to the original offer. The purchaser reserves the right to open the original offer along with the revised offer.

9. Confidentiality:

- a) Information relating to the evaluation of bids, and recommendation of Contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders. On completion of Technical Evaluation by the Committee, Vendors whose offer do not meet with the users Technical Specification will be restricted to participate in commercial bid opening process. Information regarding the criteria for disqualification of the tender would be communicated to the bidder in writing.
- b) Any attempt by a Bidder to influence the Purchaser in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
- c) Notwithstanding, from the time of Bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it shall do so in writing.

10. Deviation, Reservations and Omissions:

During the evaluation of Bids, the following definitions apply:

- a. "Deviation" is a departure from the requirement specified in the Tender Documents;
- b. "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Tender Documents; and
- c. "Omission" is the failure to submit part or all of the information or documentation required in the Tender Documents.

11. Correction of Arithmetical Errors:

- a) Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
 - i. if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
 - ii. if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - iii. if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- b) Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with the same, shall result in the rejection of the Bid.

12. Evaluation of Bid:

- (a) Technical bids will be evaluated for suitability as per documentary validation, eligibility criteria and technical specifications laid out in this tender document. The bids found suitable will be recommended by the Procurement committee and after approval of competent authority shall be deemed as technically



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suitable offers. The technically qualified bidders will be informed accordingly and commercial bids of such offers will be evaluated on a suitable designated time and date. Unopened commercial bids of the other bidders, who are not found technically suitable will be returned.

- (b) IIT Dharwad will evaluate technical and commercial acceptable offers on landed **Net Price basis**.
- (c) In case any BIDDER is silent on any clauses mentioned in this tender documents, IIT Dharwad shall construe that the BIDDER had accepted the clauses as per the invitation to tender no further claim will be entertained.
- (d) No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

13. (a) Price Bid (For Import Supplies):

- i. Quoting of Price (s): **It is mandatory to quote price in DDP basis only.**
- ii. **PRICE BID must be submitted in enclosed Price Bid Form only.**
- iii. If the price is not quoted in Price Bid Form provided in the tender document then, IIT Dharwad will reject bid.
- iv. If the bidder wishes to give pricing details, it may be attached in separate sheet. It is mandatory to quote optional items in separate sheet otherwise your quote will be rejected.
- v. In case of multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- vi. Quantity: The quantity mentioned in the tender can be increased or decreased to any extent depending upon the actual requirement.
- vii. It is mandatory to quote optional items in separate sheet otherwise your quote will be rejected.

(b) Price Bid (For Indigenous Supplies):

- i. Quoting of Price (s): **Price quoted should be in Indian Rupees, free delivery at IIT Dharwad Campus at site.**
- ii. PRICE BID must be submitted in enclosed Price Bid Form only.
- iii. Prices should include all the taxes including GST and other duties/levies.
- iv. If the price is not quoted in Price Bid Form only provided in tender document then, IIT Dharwad will reject bid. If bidder wish to give pricing details, it may be attached in separate sheet.
- v. In case of multiple options of same product, bidders are requested to quote only one best option and not multiple options.
- vi. Quantity: The quantity mentioned in the tender can be increased or decreased to any extent depending upon the actual requirement.
- vii. It is mandatory to quote optional items on a separate sheet otherwise your quote will be rejected.

14. Corrupt & Fraudulent Practices:

IIT Dharwad requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the terms set forth below are defined as follows:

- a) “Corrupt practice “means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of in kind/value to influence the action of a public official in the procurement process or in contract execution;
- b) “Fraudulent practice” means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
- c) “Collusive practice” means a scheme or arrangement between two or more bidders, designed to establish bid prices at artificial, non- competitive levels; and
- d) “Coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;



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IIT Dharwad will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

15. Cancellation of Tender:

- a) Notwithstanding anything specified in this tender document, Purchaser/IIT Dharwad in his sole discretion, unconditionally and without assigning any reasons, reserves the rights:
 - i. To accept OR reject lowest tender or any other tender or all the tenders.
 - ii. To accept any tender in full or in part.
 - iii. To reject the tender offer not confirming to the tender terms.
- b) IIT Dharwad will give purchase preference to Public Sector undertakings when applicable as per Govt. Policy/ Guidelines.
- c) Offer which deviates from the vital conditions (as illustrates below) of the tender shall be rejected:
 - i. Non-submission of complete offers as mentioned in the tender document,
 - ii. Receipt of offers after due date and time and or by email / fax (unless specified otherwise).
 - iii. Receipt of offers in open condition.
 - iv. Conditional Tenders and Unsigned Tenders will also be rejected.

16. Delivery:

The successful BIDDER should deliver the material as per tender document/purchase order. **The successful bidder should emboss stickers of purchase order number on the material to be delivered.**



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Indian Institute of Technology Dharwad

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Section III: Conditions of Contract

1. Award of Contract:
 - a) **IIT Dharwad shall award the contract to the technically qualified eligible BIDDER whose bid has been determined as the lowest evaluated commercial bid under this tender subject.**
 - b) If more than one BIDDER happens to quote the same lowest price, IIT Dharwad reserves the right to award the contract to more than one BIDDER or any BIDDER.
2. Prices:
 - a) **For Import Supplies - As per Govt. Of India Notification No.51/96-Customs dtd. 23rd July 1996, IIT Dharwad is exempted from Custom duty and IGST (substituted under Notification No.43/2017 dtd. 30th June 2017) for all research equipment.** We shall provide all the documents under this notification to enable you to clear the goods without payment of Custom duty, whenever required. Please state clearly that this certificate is required. The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.
 - b) **For Indigenous Supplies -** The supplier shall pay and bear all other liabilities, taxes and duties not specifically agreed by the Purchaser in the contract.
3. Pre-installation:

Please also mention the pre-installation requirements for the equipment like ambient temperature, humidity, civil work, weather specifications, power specifications, etc. When items are provided full performance satisfaction should be demonstrated.
4. Installation:
 - a) BIDDER shall be responsible for installation / demonstration wherever applicable and for after sales service during the warranty period and thereafter as mentioned in the contract.
 - b) Installation demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days of the arrival of the equipment at site.
5. Training:
 - a) The BIDDER shall submit training proposal for the operation and maintenance to the personnel of IIT Dharwad on the offered equipment/machinery.
 - b) Wherever needed, our technical persons should be trained by the supplier at the project site free of cost. In case the person is to be trained at supplier's site abroad or in India it should be mentioned in the quotation clearly. The supplier should bear all the expenses for such training including 'to & fro' fares and lodging & boarding charges.
6. (a) Terms of Payment (For Import Supplies):
 - i. 100% Payment by Letter of Credit (90% payment will be released on receipt of documents without any discrepancies and balance 10% will be paid after satisfactory installation and commissioning). IIT Dharwad does not pay any advance payment to party. Any request of Advance payment will be rejected summarily.
 - ii. Any request for change in payment terms and conditions will not be accepted. In case, if it is necessary to change payment terms and conditions then IIT Dharwad will not pay any additional charges. If the above payment terms conditions are not acceptable then tender will be rejected.
- (b) Terms of Payment (For Indigenous Supplies):
 - i. Payment within 30 days from the date of delivery, installation and Acceptance Certificate of concerned Department / Section / Materials Management Division, IIT Dharwad.
 - ii. Payment shall be made by Cheque or such other mode / electronic fund transfer offered by the Bank.
 - iii. IIT Dharwad does not pay advance payment to party. Any request of Advance payment will be summarily rejected.



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7. Legal Matter:

All Domestic and International disputes are subject to Dharwad jurisdiction only.

8. Transfer and Subletting:

The seller shall not sublet, transfer, assign or otherwise part with the acceptance to the tender or any part thereof, either directly or indirectly, without the prior written permission of the Purchaser.

9. Force Majeure:

Force Majeure will be accepted on adequate proof thereof.

10. Penalty/ Liquidated Damages:

- a) Timely delivery is essence of the contract and hence if any consignment be delayed, liquidated damages at the rate 0.5% of the price of the delayed consignment, for each week or part whereof shall be levied and recovered subject to maximum of 10% of total purchase order value.
- b) IIT Dharwad reserves the right to cancel the order in case the delay is more than 10 weeks. Penalties if any will be recovered by forfeiting PBG at vendor's cost and risks.

11. Specification and Samples:

The suppliers shall supply the stores in accordance with the specifications/ descriptions of stores given in the acceptance of tender. The Purchaser reserved the rights to alter the description of stores including drawings given in the acceptance of tender. In the event any such alteration result in any implication to the deliver and price, such implication shall be mutually agreed between the Purchaser and supplier. In case certified sample has been issued by the Purchaser and the Specifications / Drawings also exist in the acceptance of tender then the certified sample will govern the supply to the extent of material, workmanship and finished product.

12. Supervision of Erection and Commissioning:

Successful BIDDER shall depute concerned specialist, for supervision of erection & commissioning of the machine to be carried out. The successful BIDDER shall make necessary arrangement at their own expenses for stay, transport and other expenses of their specialist during their stay in Dharwad which also includes imparting free of cost training to IIT Dharwad personnel.

13. EARNEST MONEY DEPOSIT (GFR 2017 Rule 170):

- i. **Earnest Money Deposit is mandatory to be enclosed in the tender.**
- ii. While submitting bid, the BIDDER shall deposit an amount mentioned in tender document as Earnest Money, with the IIT Dharwad through the following instruments:
A confirmed Bank Guarantee or Demand Draft by an Indian Nationalized Bank/Scheduled bank promising payment of the guaranteed sum to the BUYER without any demur whatsoever and without seeking any reasons whatsoever.
- iii. The Earnest Money shall be valid up to a period of 90 days or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and the BUYER whichever is later.
- iv. Bidders registered with any of the following agencies/ bodies as per Public procurement policy for Micro & Small Enterprises (MSE) order 2012 are exempted categories from payment of EMD provided that the registration certificate issued by any one of these below mentioned agencies must be valid as on close date of tender. Micro small or medium enterprises who have applied for registration or renewal of registration with any of these agencies/bodies but have not obtained the valid certificate as on close date of tender are not eligible for exemption.
 - a. Khadi and Village Industries Commission (KVIC)
 - b. National Small Industries Corporation (NSIC)
 - c. Any other body specified by Ministry of MSME/GOI
- v. EMD Exemption against NSIC/MSME and KVIC certificate will not be applicable for import purchases.



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- vi. No interest shall be payable by the BUYER to the BIDDER on Earnest Money for the period of its currency.
- vii. If successful bidder fails to submit the Performance Guarantee Bond within 15 days from the date of placing of Purchase Order, then purchase order will be cancelled and EMD will be forfeited.
- viii. If there is any difficulty in submitting Bank Guarantee then Demand draft can be submitted in the favour of 'The Registrar, IIT Dharwad' payable at Hubli-Dharwad.
- ix. Return of EMD: In case of successful BIDDER, EMD in the form of Bank guarantee will be returned within 30 days from the date of submission of Performance Guarantee Bond.
- x. For unsuccessful bidder, Bank Guarantee will be returned within 30 days from the date of placing the Purchase Order.
- xi. In case of Demand Draft, amount of EMD will be returned within 60 days from the date of placing the purchase order.

14. Performance Guarantee (GFR 2017 Rule 171):

- i. Performance Guarantee Bond is mandatory.
- ii. Successful tenderer/ bidder should submit performance guarantee as prescribed above to be sent to “The Registrar, IIT Dharwad” on or before 15 days from the due date of issue of order acknowledgement. The PBG to be furnished in the form of bank guarantee as per proforma or annexure of the tender documents, for an amount covering 5% of the purchase order value.
- iii. The Performance Guarantee should be established in favour of “The Registrar, IIT Dharwad”.
- iv. PBG to be established through any of the National Banks/Scheduled bank (whether situated at Dharwad or outstation) with a clause to enforced the same on their local branch or any scheduled bank (other than national bank). Bonds issued by co-operative banks will not be accepted.
- v. Performance Guarantee Bond shall be for the due and faithfully performance of the contract and shall remain binding, notwithstanding such variations, alterations for extensions of time as may be made, given, conceded or agreed to between the successful tenderer and the purchaser under the terms & conditions of acceptance to the tender.
- vi. The successful tenderer is entirely responsible for due performance of the contract in letter and spirit and all other documents referred to in the acceptance of tenders.
- vii. The PBG shall be kept valid during the period of contract and shall continue to be enforceable for a period (as mentioned in the tender document) or up to warranty period whichever is later from the date of order acknowledge. In case PBG needs extensions up to warranty period then supplier shall initiate extensions to PBG one month prior to expiry of PBG.
- viii. For successful suppliers, if PBG is not submitted within **15 days** from the date of Order Acknowledgement, then the Purchase Order will be cancelled with forfeiting of EMD.
- ix. **No interest shall be payable by the buyer to the Bidder on PBG.**



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FORMAT FOR EARNEST MONEY DEPOSIT / BID BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONALISED BANKS/SCHEDULED BANKS (WHETHER SITUATED AT DHARWAD OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK). BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED)

LETTER OF GUARANTEE

To,
The Assistant Registrar (MMD)
Indian Institute of Technology Dharwad
Dharwad, Karnataka – 580 011

IN ACCORDANCE WITH YOUR TENDER No: dated.....for supply of, M/s. (hereinafter called the “Bidder”) having its Registered Office at, wish to participate in the said bid for the supply as an irrevocable Bank Guarantee against Earnest Money Deposit for an amount of Rs. (Rupees.....) valid up to (90 days from the date of issue of Bank Guarantee), is required to be submitted by the bidder as a condition precedent for participating in the said bid, which amount is liable to be forfeited by the Purchaser on (1) the withdrawal or revision of the offer by the bidder within the validity period, (2) Non acceptance of the Letter of Intent/Purchase order by the Bidder when issued within the validity period, (3) failure to execute the contract as per contractual terms and condition with in the contractual delivery period and (4) on the happening of any contingencies mentioned in the bid documents.

During the validity of this Bank Guarantee:

We,(Bank name) having its registered Office at guarantee and undertake to pay immediately on first demand by the amount of Rs..... (Rupees.....) without any reservation, protest, demur and recourse. Any such demand made by the IIT Dharwad shall be conclusive and recourse. Any such demand made by the purchaser shall be binding on the Bank irrespective of any dispute or difference raised by the Bidder.

The Guarantee shall be irrevocable and shall remain valid up to(180 days from the date of issue of Bank Guarantee) If any further extension is required, the same shall be extended to such required period on receiving instruction form the Bidder, on whose behalf the is Guarantee is issued.

Notwithstanding anything contained herein:

- * Our liability under this Bank Guarantee shall not exceed Rs..... (Rupees.....) .
- * This Bank Guarantee shall be valid up to(date).
- * We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee Only and only if you serve upon us a written claim or before (date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Yours truly,

Date:

Signature and seal of the guarantor:

Name of Bank:

Address:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.



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FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on Non-judicial stamp paper of the value of Indian Rupees of One Hundred) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONALISED BANKS/SCHEDULED BANKS (WHETHER SITUATED AT DHARWAD OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH OR ANY SCHEDULED BANK (OTHER THAN NATIONALISED BANK). BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED)

To,
The Assistant Registrar (MMD)
Indian Institute of Technology Dharwad
WALMI Campus, Dharwad – 580011

LETTER OF GUARANTEE

WHEREAS Indian Institute of Technology Dharwad (Buyer) have invited Tenders vide Tender No..... Dt. for purchase of AND WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of “**The Registrar, Indian Institute of Technology Dharwad**” in the form of Bank Guarantee for Rs. (5% (five percent) of the purchase value) and valid till **one year or up to OEM warranty period whichever is later** from the date of issue of Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of Order Acknowledgment as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Technology Dharwad on demand and without protest or demur Rs (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology Dharwad (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or Indian Institute of Technology Dharwad (Buyer).

Notwithstanding anything contained herein:

- i. Our liability under this Bank Guarantee shall not exceed Rs.(Indian Rupees only).
- ii. This Bank Guarantee shall be valid up to(date) and
- iii. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Dharwad serve upon us a written claim or demand on or before(date).

This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Date:

Yours truly,
Signature and seal of the guarantor:
Name of Bank:
Address:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.



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Section IV - Schedule of Requirements and Compliance

Note:- Any clarity / issue will be entertained during pre-bid session only. No suggestion, clarification or query will be entertained after the query submission date and time as per NIT is over.

The following equipment are required for Kinematics & Dynamics of Machinery Laboratory Equipment (as per the specifications mentioned against each):

<u>S. No.</u>	<u>Description of Equipment</u>	<u>Total equipment</u>	<u>Criteria for awarding the order to L-1 bidder</u>
1	Solid Mechanics Lab & Kinematics and Dynamics of Machinery Lab Facility	11 (Eleven)	On the basis of grand total amount quoted for all 11 equipment



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Solid Mechanics Lab & Kinematics and Dynamics of Machinery
Teaching Laboratory Facility (Total 11 equipment for full set-up)

1. Trainer for Strain Gauge (Table top)

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<p><u>Experiments</u> Compact, self-contained, desk-mounting trainer, different configuration (quarter-, half-, full-bridge) in should be possible with aid of dummy resistors. Strains in a bending, torsion and tension systems should be determined.</p> <p>Capability to do the following set of experiments</p> <ol style="list-style-type: none"> Comparison of different bridge connections (quarter, half and full bridge) against strain reading and voltage O/P To measure strains in bending To measure strains in torsion To measure longitudinal and lateral strains in tensile loading 		
<p><u>Specifications of accessories (Sets of masses)</u></p> <ul style="list-style-type: none"> - The large mass set gives weights from 1 kg to 10 kg in steps of 0.5 kg. - The small mass set gives weights from 10 g to 500 g in steps of 10 g units. 		
<p><u>Features</u></p> <ul style="list-style-type: none"> - Set of three resistors that match the strain gauges. ((quarter, half and full-bridge should be possible with aid of dummy resistors) - Strain display shall be digital and should include: Bridge output voltage (μV), Strain reading in micro-strain ($\mu\epsilon$), Active arms (gauges) and Gauge factor. - Strain gauge shall be fixed as indicate below: <ul style="list-style-type: none"> o Flexural specimen: Atleast four standard gauges fitted on a steel beam, fixed as a cantilever. Nominal beam cross-section is 4.5-5.5 mm X 19-21 mm. o Torsional specimen: Atleast two sets of identical 45-degree shear/torque strain gauge rosettes fitted to a torsion bar. Nominal bar diameter is 9-10 mm. o Tensile specimen: Atleast two sets of identical 90-degree 'T' strain gauge rosettes fitted to a tensile test specimen. Nominal tension specimen cross-section is 1.5-2.5 mm X 9-10 mm. 		
<p><u>Specimens:</u></p> <ul style="list-style-type: none"> • Steel for bending, tensile and torsional loading; Aluminium, Brass and Copper for tensile loading 		
<ul style="list-style-type: none"> • <u>WARRANTY:</u> At-least 5 Years 		



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2. Thick-walled Pressure Cylinders with DAQ

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<p><u>Thick Cylinder</u></p> <p><u>Experiments</u> Experimental setup (Table top) for evaluating direct strain in radial, tangential and axial direction in thick walled cylinder</p> <ul style="list-style-type: none"> • Capable of doing the following experiments <ul style="list-style-type: none"> – To find radial, tangential with pressure at various radial position – To find the longitudinal strain 		
<ul style="list-style-type: none"> • Test setup should include: <ul style="list-style-type: none"> – The strain gauges shall be fixed at various radial points across thickness in the vessel (to measure the radial and circumferential strains) and on the inner and outer cylindrical surfaces to measure hoop and longitudinal strains. – Manual hydraulic pump to generate pressure – Pressure gauge to measure the pressure inside the cylinder – In-built strain displaying unit with capability of connecting to DAQ – Strain gauge shall be fixed to the inside and outside wall of the cylinder to measure strains in the cylinder 		
<p><u>Technical Data</u></p> <ul style="list-style-type: none"> • Thick cylinder Specifications <ul style="list-style-type: none"> – Metal (Preferred Aluminium alloy) and Corrosion free • Internal pressure: max. 6-8 MPa (60-80 bar) 		
<p><u>Data Acquisition (DAQ) for Thick Pressure vessel</u></p> <ul style="list-style-type: none"> • Bench-mounted and should be compatible with pressure vessel (preferred if it can also cater to other Solid Mechanics lab equipment in the list) 		
<ul style="list-style-type: none"> • WARRANTY: At-least 5 Years 		



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3. Stability of Struts

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<p><u>Experiments</u> A structural reaction frame to study the relationships between length, end fixing conditions and buckling load of struts</p> <ul style="list-style-type: none"> • Capable of conducting following Experiments <ul style="list-style-type: none"> – Euler buckling loads determination – Relationship between strut length and critical load – Relationship between various end-fixing conditions and critical load 		
<p><u>Specifications</u></p> <ul style="list-style-type: none"> – A manually-operated adjustable loading mechanism with load cell and provision to apply the load to the strut – A digital force display unit to display the buckling load with capability of connecting to DAQ – Appropriate mechanical fixtures/chucks to simulate following boundary conditions: <ol style="list-style-type: none"> i. Fixed both ends ii. Pinned both ends iii. Fixed one end and pinned at the other – To consist of a support plate with a load cell at one end and a device to load the struts at the other end. – A linear scale to be provided to monitor the horizontal deflection 		
<p><u>Test struts:</u></p> <ul style="list-style-type: none"> – 5 x Metal make (preferred aluminium alloy). Dimensions to be: section 1.5-2 mm X 18-20 mm – Lengths: 275-325 mm, 350-375 mm, 400-425 mm, 450-475 mm, 500-525 mm 		
<p><u>Accessories included:</u></p> <ul style="list-style-type: none"> – Set of different chucks – Vernier – Tools <ul style="list-style-type: none"> – Leads to connect to a digital force display 		
<ul style="list-style-type: none"> • WARRANTY: At-least 5 Years 		



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4. Apparatus for testing Creep

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<p><u>Experiments</u> A table-top equipment to study the creep of different materials under different conditions with capability to do the following experiments</p> <ul style="list-style-type: none"> - To see creep at different stresses and temperature - To evaluate creep recovery 		
<p>Capabilities:</p> <ul style="list-style-type: none"> - The setup shall include a simple lever (load beam) and should have mechanical advantage to achieve the load. - A digital displacement indicator with capability of connecting to DAQ for measuring the extension (creep) of the specimen - A transparent enclosure to maintain a constant temperature (isothermal condition) & should facilitate study of the effect of temperature on creep by accommodating isothermal bag in the enclosure. - Capability to show the three phases of creep (primary, secondary and tertiary) 		
<p><u>Accessories (to be supplied) :</u></p> <ol style="list-style-type: none"> a. Laboratory standard thermometer or thermocouple to measure the temperature effects of creep b. Weight hanger (Preferred) <ol style="list-style-type: none"> i. 1x 100 g weight ii. 2x 200 g weights iii. 3x 500 g weights c. A cool pack (isothermal pack) to apply temperature on specimen (to accommodate hot and cold water) 		
<ul style="list-style-type: none"> - Specimens: Lead, polypropylene, nylon and un-plasticized PVC specimens compatible with the apparatus 		
<ul style="list-style-type: none"> • WARRANTY: At-least 5 Years 		



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5. Shear Centre and Unsymmetrical Bending

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<p><u>Experiments</u> An experimental setup to study unsymmetrical bending (to measure vertical and horizontal deflections) and Shear centre for different cross-sections</p> <ul style="list-style-type: none"> • Experiments <ul style="list-style-type: none"> – Horizontal and vertical deflection of different sections at various indexable angles against loads (Unsymmetrical bending) and evaluate the principal moment of areas for different sections – To find shear centre of the sections 		
<ul style="list-style-type: none"> • A structural frame to hold the test specimen subjected to unsymmetrical bending • Test setup should include a plate and chuck (should be index able in convenient steps) • Another plate/end to have two digital/dial indicators able to be arranged at 90° to each other for the unsymmetrical bending experiment or parallel to each other for the shear centre experiment – To be supplied (Preferred) with 5x 10 g weight hangers and 150x 10 g weights 		
<p><u>Specimens:</u> Supplied with the following metal specimens: Sections–One ‘U’ , One L’ , One rectangular flat</p>		
<p><u>Accessories included:</u></p> <ul style="list-style-type: none"> – Steel rule and Vernier 		
<ul style="list-style-type: none"> • WARRANTY: At-least 5 Years 		



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6. Hertzian Apparatus

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<p><u>Experiments</u></p> <ul style="list-style-type: none"> - Effect of pressure on the profile for constant angle between the contacting pads - To study influence of different angle between pads (different relative curvature) with constant pressure 		
<p><u>Features</u></p> <ul style="list-style-type: none"> • Compact, table top-mounted and self-contained • Flexible material for contacting to produce magnified and easily viewed results • Ease of use (Simple design) <ul style="list-style-type: none"> • Variable relative contact angles and pressures for a range of experiments 		
<p><u>Technical Specifications</u> Comprises of</p> <ul style="list-style-type: none"> • Two pads with curved surfaces. The upper pad (preferred transparent) has a double convex surface. The lower pad has a convex surface. • A hand-operated system to force the two pads together (it can be either by use of lever or hydraulic pump and cylinder system or some other system which can accomplish the same). It must have a safety system to limit the load to prevent damage to equipment. • To study effect of different relative curvatures, provision to rotate the lower pad along with a pointer to show the angle of rotation must be provided. • A transparent scale to measure the contact shape and angle 		
<ul style="list-style-type: none"> • WARRANTY: At-least 5 Years 		



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7. Diaphragm

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<p>Bench-mounted machine to examine the effect of pressure on the surface profile of a diaphragm having sturdy base containing all parts of the apparatus (for compactness).</p> <p><u>Experiments</u></p> <p>Experiments with this apparatus include the effect of pressure on:</p> <ul style="list-style-type: none"> • Measurement of effect of pressure on surface profile of a diaphragm • Radial and circumferential strains under pressure • Radial and circumferential strain gradients across the diaphragm 		
<p><u>Specifications</u></p> <ul style="list-style-type: none"> • Diaphragm material: Metal (preferred Aluminium alloy) • Flanges to clamp the edge of the diaphragm to provide built-in edge conditions • Diaphragm Dimensions; o Nominal diameter = 150 -250 mm <ul style="list-style-type: none"> – Nominal thickness = 2-3 mm • Self-contained, hand-operated hydraulic pressurizing system. Pressure gauge to be measured by a gauge • Surface profile measurement: By digital displacement indicators, with an option to be connected Data Acquisition system (DAQ) • Strain and Strain gauge: o Measured by electrical resistance gauges (full/half bridge) and displayed digitally with an option to be connected to DAQ. The signals from each strain gauge to be shown on a digital display. <ul style="list-style-type: none"> • Gauge layout: <ul style="list-style-type: none"> ▪ Circumferentially mounted strain gauges (atleast 3) ▪ radially mounted strain gauges (atleast 3) • Strain gauges at 45° (at-least 1) 		
<ul style="list-style-type: none"> • WARRANTY: At-least 5 Years 		



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Indian Institute of Technology Dharwad

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Off Pune Bengaluru Highway, Near High Court,
Dharwad, Karnataka - 580011

8. Vibration Bench

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<ul style="list-style-type: none">• Capability to do experiments on simple and compound pendulum• Capability to do experiments on center of percussion• Capability to do experiments on trifilar pendulum• Capability to do experiments on torsional system with multi-degree of freedom (multiple rotors).• Capability to do experiments on spring-mass-damper systems including multi-degree-of freedom systems.• Capability to do experiments on forced vibration with forcing at different frequencies.• Presence of sensor and data acquisition system to capture fast changing physical quantities of interest.		
<ul style="list-style-type: none">• The bid should accompany detailed manual and demonstration video on how each of the above mentioned experiments can be performed.		
<ul style="list-style-type: none">• WARRANTY: At-least 5 Years		

9. Balancing of rotating masses

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
<ul style="list-style-type: none">• Capability to do experiments on static and dynamic balancing of rotors in three or more planes.		
<ul style="list-style-type: none">• The bid should accompany detailed manual and demonstration video on how the experiments can be performed.		
<ul style="list-style-type: none">• WARRANTY: At-least 5 Years		



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10. Balancing of reciprocating masses

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
Capability to do experiments on inertial forces in inline cylinder engines		
• At least four engines in inline configuration		
• Ability to change relative phase of the cranks in the engines		
• Instrumentation to assess both primary and secondary forces and moments		
• The bid should accompany detailed manual and demonstration video on how the experiments can be performed.		
• WARRANTY: At-least 5 Years		

11. Whirling of shafts experiment

Description & technical specifications required	Whether complied fully (Yes / No)	Remarks if any
• Capability to observe mode shapes and measure critical speeds.		
• Ability to observe angle between the whirl plane and the line of eccentricity when eccentric disks are added on the shaft.		
• Presence of safety features to avoid excessive amplitude in the whirling of shaft.		
• The bid should accompany detailed manual and demonstration video on how the experiments can be performed.		
• WARRANTY: At-least 5 Years		



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Bidders Information

1.	Name of the Bidder	
2.	Address of the Bidder	
3.	PAN No.	
4.	GSTN No.	
5.	State of GST Registration	
6.	E-mail	
7.	Contact Person's Name & Designation	
8.	Mobile No.	



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Reasonability of Prices

Please quote best minimum prices applicable for a premier Educational and Research Institution of national importance.

Previous Supply Orders

Name of the Firm _____

Order placed by (Full address of Purchaser)	Order No. and Date	Description and quantity of ordered equipment	Value of Order	Date of completion of delivery as per contract	Remarks indicating reasons for late delivery, if any and justification for price difference of their supply order & those quoted to us	Has the Equipment being installed satisfactorily (Attach a Certificate from the Purchaser/ Consigner)	Contact Person along with Telephone No., Fax No. and e-mail address.

Signature and Seal of the Manufacturer / Bidder _____

Place : _____

Date : _____



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Section V – PRICE BID

for Imported Supplies

Tender No. :- IITDH/MMD/ME/2019-20/38

Sl. No.	Short Description of Item (As per specifications in Section-IV)	HSN Code / SAC Code (I)	Qty. (in Units) (II)	*IGST % (III)	Price Basis DDP (IV)	Total Bid Price (V)
1.	Supply, installation, commissioning, demonstration and testing of Solid Mechanics Lab & Kinematics and Dynamics of Machinery Laboratory Equipment (11 equipment) (Five Year Warranty for set-up)		As specified in Schedule IV			
2.	Other Charges, if any (please specify for each equipment separately)					

#HSN Code: “Harmonized System of Nomenclature Code No.” and SAC Code: “Service Accounting Codes Code No.”

1. Delivery Period: _____ days

2. Terms of Payment:

(a) 90% payment by Letter of Credit (90% payment will be released on receipt of documents without any discrepancies and balance 10% will be paid by wire transfer after satisfactory installation and commissioning.

(b) Payment by wire transfer (on request) within 30 days from the date of supply and installation of item.

3. Validity of the bid: 90 days from the date of submission of quotation/tender.

Signature.....

Name:.....

Company Name & Address:.....

Affix Rubber Stamp:.....

Place:

Date:

Note-1: Price Bid should be submitted in given format only.

Evaluation Criteria: The L-1 bidder will be identified on the basis of Net Price (to be provided in column IV above).

Note-2: The quantities mentioned above are subject to upward and downward revision, depending on the requirement of IIT Dharwad in future.



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Section V – PRICE BID

for Indigenous Supplies, Quotes in INR only

Tender No. :- IITDH/MMD/ME/2019-20/38

Sl. No.	Description of Item & Specification	HSN Code / SAC Code (I)	Qty. in Units (II)	Unit Price (III)	Discount % (IV)	IGST % (V)	CGST % (VI)	SGST % (VII)	Total Bid Price (VIII)
1.	Supply, installation, commissioning, demonstration and testing of Solid Mechanics Lab & Kinematics and Dynamics of Machinery Laboratory Equipment (11 equipment) (Five Year Warranty for set-up)		As specified in Schedule IV						
2.	Other Charges, if any (please specify for each equipment separately in INR)								

#HSN Code: “Harmonized System of Nomenclature Code No.” and SAC Code: “Service Accounting Codes Code No.”

- Delivery Mode: Delivery at IIT Dharwad, at site only.
- Total bid Price in the above column should be inclusive of all taxes and levies transport, loading, unloading etc.
- Validity Date: Minimum 90 days from the date of submission of quotation/tender.
- Payment Term: Payment within 30 days from the date submission of bill Acceptance Certificate to concerned Dept./ Sect./MMD.
- Prices quoted in other currencies will be summarily rejected.

Signature.....

Name:.....

Company Name & Address:.....

Affix Rubber Stamp:.....

Place:

Date:

Note-1: Price Bid should be submitted in given format only.

Evaluation Criteria: The L-1 bidder will be identified on the basis of Unit Price (to be provided in column III above).

Note-2: The quantities mentioned above are subject to upward and downward revision, depending on the requirement of IIT Dharwad in future.