



Notice Inviting Tender

The National Institute of Technology Sikkim invites tenders/bids under two bid system (Technical Bid & Financial Bid both in separate sealed envelopes) in sealed envelope for supply of **Equipment for Vibration and Rotor Dynamics Laboratory of, Dept. of Mechanical Engineering** as per the specifications, terms and conditions given in this tender. The tender documents can be downloaded free of cost from the website www.nitsikkim.ac.in or from the Central Public Procurement Portal.

Schedule of Requirements

S.No.	Particular	Qty	Place of Delivery	Delivery period
1	Experiments on damping, resonance and absorber effects in forced vibrations	01	NIT Sikkim	120 Days
2	Determination of the oscillation period depending on torsion wire length, diameter and rotating mass	01		
3	Free and damped torsional vibrations	01		
4	Free and forced vibrations	01		
5	Investigation of cam mechanisms	01		
6	Elastic shafts	01		
7	Centrifugal governor	01		
8	Mechanical Model (Spur Gear Trains)	01		

Details	Information
Bidding System	Two Bid system: Technical Bid & Financial Bid (Separate Sealed)
Tender Floating Date	18 th Nov. 2019
Tender Closing Date & Time	9 th December 2019 at 12:30 PM
Technical Bid Opening Date & Time	9 th December 2019 at 02:00 PM (Tentative); Shall be announced at the time of technical bid opening
Financial Bid Opening Date & Time (Tentative)	10 th December 2019 at 11:00 AM (Tentative)
EMD (Earnest Money Deposit)	Rs.1,50,000/- (Rupees One Lakh Fifty Thousand Only) By Demand Drafts in favor of "Director, NIT Sikkim" payable at State Bank of India, Ravangla Branch (IFSC SBIN0007218).
Address for communication	The Registrar NIT Sikkim, Ravangla, South Sikkim - 737139
For any Clarification	registrar.office@nitsikkim.ac.in
Institute Website	www.nitsikkim.ac.in
Tender Submission	Tender may be deposited in the tender box or submitted in the Administrative Block at Reception/Registrar office.
Number of pages in the tender document	27

Registrar

Note Carefully: The Bidders are required to read carefully and understand all the terms and conditions, specifications, formats, instructions, etc. given in the Tender/Bid document with full understanding of its implications. Failure to furnish all information required for submission of a bid or bids not substantially responsive in every respect may result in outright rejection. The Bidder is required to give confirmation of their acceptance of all the terms and conditions mentioned in the Tender/Bid document. Failure to do so may result in rejection of Tender/Bid submitted by the Bidder.

General Terms & Conditions

1. In this tender document the Institute means “National Institute of Technology Sikkim (NIT Sikkim)”, the BUYER means NIT Sikkim and SELLER/SUPPLIER means the successful bidder awarded the Purchase Order (PO)/work order. The word “Tender” and “Bid” is used interchangeably having same meaning. Here, the word supply/agreement/ contract/project mean the Purchase order for the goods given in the scope of the work. Goods/Items/Stores means the items/service mentioned in the scope of work. A tender/bid document means all the pages of this document consisting of terms and conditions, specifications, bid formats, undertaking, etc.
2. **Scope of Work:** Supply of “**Equipment for Vibration and Rotor Dynamics Laboratory**” as per specification for NIT Sikkim. Suppliers with track record of supply of similar type of goods/equipments may bid for the same. The trade license submitted by the bidder must clearly mention the trade in which the bidder operates.
3. **Format for submission of bid:**

The bid shall be submitted only in the *forms and formats* attached with this bid document and every page of the bid document should be signed and stamped by authorized person. The bid should be forwarded by the bidders under their original memo/letter head inter alia furnishing all the required details like GST number, PAN, Bank details etc. and complete contact details (Postal address, email, fax, contact numbers) of their office. All bidding documents including technical and financial bids must be in English. One signed copy of the tender document, with bidding firm seal, agreeing to the terms & conditions and declaration etc. must also form part of the submitted bid.

4. **Two Bid system:**

The bidding process shall consist of **Two** bid system. The bid must be submitted in two parts comprising:

Part-I: Technical Bid [Annexure-A] & Part-II: Financial/Commercial/Price Bid (all have same meaning) [Annexure-D].

The Part-I (Technical bid) should contain the EMD, compliance/non-compliance of detailed technical specifications as per the BID/TENDER document along with other desired information/certificate, eligibility documents etc. **The Part-II** (Financial Bid) shall only contain the price offered in the Bid format provided with document along with other desired information/certificate, etc, if any.

Both the Bids should be properly placed in two **separate sealed envelopes** and marked accordingly (**must super-scribed TECHNICAL BID or FINANCIAL BID on the top of each respective envelope**) for their proper identification. These should again be sealed in a third bigger envelope super-scribing, “**Bid for Supply of Equipment for Vibration and Rotor Dynamics Laboratory**”.

The Part-I (Technical bid) will be opened on the date of tender opening and the Part-II (Financial Bid) after evaluation of Part-I. The Part-II (Financial Bid) of only technically qualified bidders shall be opened, as decided by the Tender Evaluation Committee. The decision of the Tender Evaluation Committee shall be final and binding on all the bidders.

5. Enclosures:

The bidder must attach the suitable supporting documents. The **Technical and Financial bids** will be submitted in the specific formats enclosed with this tender document in separate sealed envelopes. All the enclosures attached with the bid shall also be signed and stamped. Please ensure following:

(a) Technical bid must comprise of following:

- (i) A clause by clause compliance on Terms and Conditions of the tender and the Technical Specifications, etc.
- (ii) Duly filled, signed and stamped **Technical Bid (Bidder Profile)** on the **letter head of the bidder [Annexure-A]**.
- (iii) Duly filled, signed and stamped **Technical Specification Compliance Statement (Technical Criterion)** on the **letter head of the bidder [Annexure-B]**.
- (iv) Duly filled, signed and stamped **undertaking** on the **letter head of the bidder [Annexure-C]**.
- (v) All the certificates and declarations required under the Specific Conditions of this TENDER/BID document.
- (vi) The bidder must submit/supply records and satisfactory supply certificate of completing similar item to IIT's, NIT's, and Government/Public undertakings/Organizations of National Importance.
- (vii) Income Tax Returns and Annual report/audited annual accounts showing the turnover of the bidder.
- (viii) EMD in the form of Demand Draft must be enclosed with the Technical Bid.
- (ix) Trade License/Certificate of registration (as applicable) of the agency with the government in the required business/field will be enclosed with technical offer.
- (x) Brief description about the company including orders executed with Government organizations/Institutions, showing size, cost and completion details of each supply.
- (xi) The **GST registration** number and photocopy of certificate.
- (xii) **The PAN number** of proprietor/firm/company with photocopy of the PAN card.
- (xiii) **OEM certificate or authorized dealership certificate for the brand of equipments/goods quoted in the tender.**
- (xiv) The enclosed formats in original should be used for the Bids. All sheets submitted must be signed by the authorized signatory of the company and duly affixed with firm's stamp. Additional sheets, duly authenticated may be attached to elucidate specific issue, if any.

Noncompliance of any of the above may result in rejection of the bid summarily and no query in this regard shall be entertained.

(b) Financial Bid/Price Bid:

Financial bid will comprise of duly filled, signed and stamped Financial Bid in the format given at **Annexure-D**. Financial Bid/Price Bid only and must be placed in separate envelope duly sealed and signed. This envelop must be super-scribed with "**Financial Bid for supply of Equipment for Vibration and Rotor Dynamics Laboratory**".

NIT Sikkim being a Public Funded Research Institution, vide Notification No. 45/2017-Central Tax (Rate) and No 47/2017-Integrated Tax (Rate) is eligible for concessional

rate of GST on purchase of items. Further concession on customs duty is also available on customs duty vide notification No. 51/96-Cus. DSIR certificate shall be provided by the Institute to claim such concessional rate. Bidders are required to take into account the said concession in the Financial Bid.

6. Bid Security:

The Bid Security of **Rs. 1,50,000/-** (i.e. Earnest Money Deposit, EMD) in the form of Demand draft from any scheduled bank drawn in favor of “Director, NIT SIKKIM” payable at RAVANGLA, South Sikkim-737139 must accompany with **Technical Bid. No interest shall be paid on the submitted EMD. The demand draft must be drawn from the bank after the date of publication of tender and must carry minimum validity of 3 months, failing which the bid shall be rejected.** Offer without EMD will be rejected summarily except in case of exempted bidders holding valid MSME/NSIC license exempting such bidders from furnishing of EMD.

The Bid Security of unsuccessful bidders shall be refunded after finalization of bid/award of contract to successful bidder. EMD of the unsuccessful Bidders will be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract.

The Bid Security of the successful Bidder would be returned after the receipt of Performance Security as called for in the contract/adjusted towards performance security. No interest shall be payable to any bidder on the EMD with the Institute. The EMD of the technically disqualified bidders may be returned in original (i.e. the Demand Draft submitted along with bid).

The Bid Security shall be forfeited, (i) if a Bidder withdraws its bid during the period of bid validity; or (ii) if a Bidder makes any statement or submits any information which turns out to be false, incorrect and / or misleading at any time and / or conceals or suppresses material information: or (iii) in case of successful Bidder, if the Bidder fails to execute the order or withdraws the offer or uses means to secure the order which is prohibited as per the terms and conditions in this document. The decision of the Institute authorities shall be final and binding on the bidder(s).

7. Amendment in Bid/Tender Document:

At any time up to the last date of receipt of Bids, the Institute may, for any reason, whether at its own initiative or in response to a clarification requested by a Bidder, modify the Bid/tender document by an amendment. The amendment will be notified in writing through Institute website or email (if provided) to all the prospective Bidders, the same shall be binding on all the prospective bidders.

The Institute may, at its discretion, extend the last date for the receipt of Bids/cancel the Bidding process. It shall be the responsibility of the interested bidder(s) to regularly visit the website for any amendment/ information.

8. Bid Disqualification:

The proposal is liable to be disqualified in the following cases. However, the decision of the Institute committee shall be final and binding on all the bidders.

- a) Proposal not submitted in accordance with instructions provided in this document.
- b) Proposal is received in incomplete form.
- c) Proposal is received after due date and time.
- d) Proposal is not accompanied by all requisite supporting documents mentioned in the tender document.
- e) The Financial Bid/Price Bid is placed in the same envelope as the Technical Bid.
- f) If bid is not accomplished with EMD as per the clause given in this bid document.

- g) Canvassing by the Bidder in any form, unsolicited letter and post-tender correction will invoke summarily rejection of the bid and may result in forfeiture of EMD.
- h) Conditional tenders/Bids will be summarily rejected.
- i) Any false/misleading/ incorrect information/document.
- j) Bidder fails to deposit the Bid Security/Performance security or fails to enter into a contract within specified date of notice of award of contract or within such extended period, as may be specified by the Institute.

9. Queries and Clarification:

The queries and clarification in this Bid/Tender must be addressed to “Registrar” and the same must be sent through conventional mail as well as email/Fax in the format below:

S.No.	Clause No. (as per the Bid/Tender)	Your understanding /interpretation	Clarification sought from Institute

10. Clarification regarding contents of the Bids:

During evaluation and comparison of bids, the Buyer (NIT Sikkim) may, at its discretion, ask the bidder for clarification of his bid. The request for clarification will be given in writing (post/fax/email) and no change in prices or substance of the bid will be sought, offered or permitted. The clarification must be provided within the time stipulated by the Institute else the bid submitted may be rejected. No post-bid clarification on the initiative/request of the bidder will be entertained.

11. Withdrawal of Bid Submitted:

Bidders unwilling to participate in the bidding process after submitting the bid must ensure that intimation to this effect must reached the Registrar, NIT Sikkim before the due date and time of the opening of the Bids, failing which the defaulting Bidder may be delisted and will result in forfeiture of EMD.

12. Right to Accept/ Reject Bids:

The Institute reserves the right not to accept any bid and to annul the tender/bid process and reject all bids at any stage, without thereby incurring any liability or assigning any reason to the affected Bidders or any obligation to inform the affected Bidders on the grounds for such action.

13. Only One Bid per Bidder:

Each bidder shall submit only one tender either by himself or as partner in joint venture or as a member of consortium. If a bidder or of any of the partner in a joint venture or any one of the members of the consortium participate in more than one bid, the bids are liable to be rejected. Further, enterprises under common holding may bid only through one such enterprise.

14. Confidentiality:

The Bidder and their personnel shall not, either during the term or after expiration of this work order, disclose any proprietary or confidential information relating to the services, agreement or the Institutes business or operations without the prior written consent from the Institute.

15. Force Majeure:

During the pendency of the purchase agreement if the performance in whole or part thereof, by either party is prevented/delayed by causes arising due to any war, hostilities, civil commotion, act of public enemy, sabotage, fire, floods, explosion, epidemics, non-availability of raw material and other consumables, or any other causes including breakdown of equipment beyond their reasonable control. Neither of the two parties shall be made liable for loss or damage due to delay or failure to perform the contract during the pendency of forced conditions provided that the happenings are notified in writing within 7days from the date of occurrence. The work shall be

resumed under the contract as soon as possible after the restoration of normalcy. The Institute reserves the right to grant time period extension on the request of bidder or otherwise.

16. **Termination of Purchase Order:** The Institute may, without prejudice to any other remedy for breach of agreement, may terminate the purchase order/agreement in whole or in part, by written notice of default sent to the Bidder, and the performance guarantee shall stand forfeited if:

- (a) The Bidder fails to deliver any or all of the obligations within the time period(s) specified in the purchase order/ work order/contract/agreement, or any extension thereof granted by the Institute.
- (b) The Bidder fails to perform any other obligation(s) under the work order/agreement and fails to rectify it within the notice period for the rectification of the same.
- (c) Information/document submitted in technical proposal is found to be misrepresented, incorrect or false accidentally/unwittingly or otherwise at any time during the processing of the bid/contract (no matter at what stage) or during the tenure of the contract including the extension period if any. This may also invite any action (legal/debarring future participation in the bids) against the defaulter as deemed fit by the Institute.
- (d) The loss incurred due to termination of the work and addition cost incurred in completion of the work by any other firm, selected by the Institute shall be recovered from the defaulted firm/party.

17. **Termination for Insolvency:**

The Institute may at any time terminate the work order by giving written notice to the Bidder without compensation, if the Bidder becomes bankrupt/insolvent, provided that such termination shall not prejudice or affect any right of action or remedy which has accrued thereafter to the Institute.

Note: Termination shall be based on the advice of Technical Committee constituted by the Institute.

18. **Bid Evaluation Criteria:**

The broad guidelines for evaluation of Bids will be as follows:

- (a) Only those Bids will be evaluated which are found to be fulfilling all the eligibility and qualifying requirements of the Bid/TENDER document, both technically and financially.
- (b) In respect of Two-Bid system, the technical Bids Submitted by the Bidders will be evaluated by the Buyer's Tender Evaluation Committee (TEC) with reference to the eligibility criteria and technical specifications of the goods as mentioned in the BID/TENDER document. The Technical compliance of each Bid will be determined on the basis of the parameters and specifications specified in the BID/TENDER document. The Financial bids of only those Bidders will be opened whose Technical Bids shall qualify the technical evaluation.
- (c) The Bidders are required to spell out the **rates of GST, etc.** in unambiguous terms; otherwise their offers will be loaded with the maximum rates of duties and taxes for the purpose of comparison of prices.(Please refer to point 5 (b))
- (d) If there is a discrepancy between the **unit price and the total price** that is determined by multiplying the unit price and quantity, the **unit price** will prevail and the total price will be corrected by the Institute Committee. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price and comparison of bids.
- (e) NIT Sikkim reserves the right to modify in exceptional case any of the stipulated terms and conditions on merit / genuine and justifying grounds if it is in the larger interest of the Institute. The final acceptance of the tenders rests entirely with the NIT Sikkim who does not bind himself to accept the lowest tender. The lowest price may not be the sole criteria for deciding the successful bidder, the Institute is free to take other factors in deciding the

successful bidder for award of purchase order/ work order/contract/agreement in the interest of the Institute and its stakeholders. The Institute committee reserves all rights in this regard and no query or complaints in this regard shall be entertained. The selection will be made purely on the basis of committee's recommendation, genuineness of the firm and based on the technical specification of various products as per printed catalogues & also on the basis of experience, performance, promptness of delivery and requirement of the Institute.

19. **Firms/Bidders shall be required to accept all the Terms and Conditions mentioned in this BID/TENDER or modified/amended and shall be the part of the purchase order/work order/contract/agreement.**

20. **Placement of Order:**

The **Purchase/Work Order** will be placed on successful completion of the process to the successful bidder called the "SUPPLIER". Once the order is placed, it will be the firm/vendor's responsibility to supply the goods and complete the work awarded to the satisfaction of the Institute. It shall be the sole responsibility of the firm/vendor (Successful Bidder) to make the project functional in all respect. **Any additional cost incurred on account of this, for which the firm/vendor has not bid/quoted at the time of submission of the bid offer, will be borne by the firm/vendor.**

21. **Arbitration:**

All disputes or differences arising out of or in connection with the purchase order/ work order/contract/agreement shall be settled by bilateral discussions. Any dispute, disagreement or question arising out of or relating to the Contract or relating to the performance, which cannot be settled amicably, may be resolved through arbitration. The standard clause of arbitration will be as per the Institute norms/decision. All disputes, differences, claims and demands arising under or pursuant to or touching the agreement shall be referred to the sole arbitrator to be appointed by the Institute. The award of the sole arbitrator shall be final and binding on both the parties under the provisions of the Arbitration and Conciliation Act, 1996 or by statutory modification/re-enactment thereof for the time being in force. Such arbitration will be held at NIT SIKKIM. It is clarified that Civil court shall have no jurisdiction to entertain any such disputes.

22. **Jurisdiction of Courts:**

In all matters and disputes arising here under, the appropriate Courts at Sikkim/New Delhi only shall have jurisdiction to entertain and try them only after the failure of arbitration process, if any.

Specific Terms & Conditions

1. The bidder must have the relevant trade license for the goods as mentioned in this tender document and copy must be enclosed with the bid documents.
2. The bidder must either be an Original Equipment Manufacturer (OEM) or an authorized dealer/ licensed distributor of the item offered in the bid. The certificate of OEM/ Dealership/Authorized Agent should be enclosed with the bid.
3. Bidder should have valid GST registration for the current financial year. Only invoices/Bills with serial numbers and printed with GSTIN number shall be accepted.
4. The bidder must submit a self-certified declaration that the bidding firm/manufacturer or the consortium has not been blacklisted from participating in the Tendering process of any Central Government Organization.

5. The bidder should have prior experience in supply of similar type of goods/equipments in IIT's, NIT's, and Government/Public undertakings/Organizations of National Importance. The bidder must enclose purchase order or satisfactory supply certificate from the respective organization the technical bid/tender document submitted against this NIT.
6. The bidder must have an average turnover of Rs.1.00 Crore (Rupees One Crore only) in the related trade in each of the two previous financial years i.e. 2018-19 & 2017-18. The bidder must enclose annual report/audited annual accounts or income tax return as proof for the same.
7. Bid or order may be cancelled or delivered items may be not be accepted fully or partially at any time if it is found that **Goods** differs or deviates from the mentioned and accepted specification in the bid. The decision of the committee constituted by the Institute for this purpose shall be final and binding on the supplier(s). Any action under this clause shall make the EMD/security deposit liable to be forfeited.
8. **Packing, forwarding, insurance, freight, loading, unloading charges should be inclusive in the price. Prices must be quoted on F.O.R basis.** For any damage/loss during transit, **supplier** shall be solely responsible and damaged/lost items must be replaced by supplier at their own cost.
9. **Validity:** Bids shall remain valid for 180 days from date of the Tender closing Date.
10. All the terms and conditions mentioned herein must be strictly adhered to by all the bidders/firms/suppliers. Conditional tenders shall not be accepted on any ground and shall be rejected straightway.
11. The information/orders/notices, etc. communicated through **E-mail/Fax** provided by the firms/suppliers shall be treated authentic means of communication for all purposes. Providing the **correct contact details (Telephone/mobile Nos., official E-mail IDs, address, etc.)** shall be the sole responsibility of the bidders/firms/suppliers. No reason for non-receipt or non-acceptance of the information/orders, etc. through **E-mail** shall be entertained by the Institute. **The Institute may not send the above through formal postal services, if firms/suppliers so wishes may collect the Hard copy form the concern office of the Institute.** It is mandatory to sign all important documents/orders/notices, etc. to be considered valid.
12. **Delivery Period:** Total delivery period for the items shall be **120 days from date of issue of Purchase Order.** The Institute reserves the right to extend the delivery time on the request with valid reason. Liquidity damage as per the tender document shall be levied in case of failure to abide by the delivery period. If supplier fails to deliver the Goods within the delivery period, NIT Sikkim may cancel full order or parts of the order and EMD will not be returned to the bidder. NIT Sikkim also reserves the right to place the order for the GOODS to any other bidder/firm/supplier in case of failure of the successful bidder
13. **Place of Delivery:** National Institute of Technology, Ravangla, South Sikkim, Sikkim, Pin-737139, India (**26 km from Namchi, Sikkim, 140 km from Siliguri, West Bengal**).The consignee for the contract is Registrar/Store Officer of the Institute.
14. **Advance Payments:** No advance payment(s) will be made.
15. **Paying Authority:**

The Director, NIT Sikkim shall be the payment authority. The payments shall be released on fulfillment of all obligations under the purchase order/tender/contract to the satisfaction of the Institute authorities. The Institute authority reserves the right to withhold payment. The payments of bills will be made on submission of the following documents by the **seller** to the paying authority;

 - (a) Ink-signed copy of Commercial invoice/contingent bill/seller's bill in triplicate copy.

- (b) Exemption certificate for GST, if applicable (BY BUYER).
- (c) Details for electronic payments viz. Account holder's name, Bank name, Branch name and address, Account type, Account number, IFSC code (if these details are not incorporated in supply order/contract).
- (d) Performance Security as per the tender document.
- (e) Any other document/certificate that may be provided for in the Supply Order/Contract.

(Note: From the above list, the documents that may be required depend upon the peculiarities of the procurement being undertaken).

16. **Responsibility of ensuring quality with specification** lies with the supplier. Deviation of technical specification from the approved sample may lead to rejection of delivery or cancellation of order along with forfeiture of EMD.
17. **Warranty/Guarantee: Two (02) Years** onsite comprehensive warranty from the date of successful installation should be provided by the bidder. Certificate mentioning acceptance of this clause should be enclosed with the bid.
18. Bidder may choose authorized representative with proper authorization letter for attending bids opening as per the schedule notified by the Institute time to time.
19. A bid submitted with false information will not only be rejected but also the bidder will be debarred from participation in future tendering process of NIT Sikkim and may even invite a legal action against such bidder(s).
20. Any defect pointed out by the authorized representative/committee of the Institution in the goods/items, etc. in the scope of this tender, the same shall be rectified in reasonable time as per the directions of the Institute authority. It may consist of replacement of goods/ onsite rectification at supplier's own cost. Noncompliance of the Institute directions in stipulated time may invite other clause of this bid document.
21. The bidder may enclose certificates evidencing quality, or statutory compliance along with the bid documents duly certified to be true copies. Brochures of quoted model should also be attached with the bid documents.
22. NIT Sikkim may waive any minor informality or non-conformity or irregularity in a bid, which does not constitute a material deviation, provided such a waiver, does not prejudice or affect the relative ranking of any bidder.
23. The items to be supplied under this contract shall conform to the standards mentioned in the technical specifications. And when no applicable standard is mentioned, to the authoritative standard appropriate to the goods' country of origin and such standards shall be the latest issued by the concerned institution/Organization.
24. NIT Sikkim reserves right to award the order to one or more bidder.
25. **Performance Security:**
Within 07 days (seven) of the completion of order/ work order/contract/, the successful Bidder shall furnish a Performance Guarantee of an **amount equivalent to 5% of the order value**. Performance Guarantee submitted shall be from a Scheduled Commercial Bank only. Performances guarantee in the form of Demand Draft, Fixed deposit receipt/Bank Guarantee in the standard format from a scheduled commercial bank shall only be acceptable. Performance Bank Guarantee should be valid up to 60 days beyond the date of warranty/last date of contract period. In case of failure to submit the performance security, equivalent amount shall be deducted from the bill payable and kept as security.
26. **Liquidated Damages (LD) and Penalty Clause for Delay:**

In the event of the Suppliers/firms failure to supply the goods and conduct trials, installation of equipment, training, etc. as specified in this contract, the Buyer may, at his discretion, withhold any payment until the completion of the required work(s) to the satisfaction of the Institute. The BUYER may also deduct any amount/penalty from the SELLER/SUPPLIER (successful bidder) payment due as deemed necessary. Liquidated damages for the delayed/undelivered stores/goods/services/installation as mentioned above, subject to the maximum value of the Liquidated Damages being not higher than 10% of the total PO/contract value.

In case of delay attributed solely to the negligence of the firm (service provider) in the execution of supply of goods, service, etc., penalties at the following rates shall be imposed;

- (a) 1% of the total cost for delay up to 15 days;
- (b) 2% of the total cost for delay more than 15 days but less than 30 days;
- (c) 5% of the total cost for delay more than 30 days but less than 60 days;
- (d) 10% of the total cost for delay more than 60 days;

The competent authorities of the Institute reserve the right to increase the supply/installation/service etc. time period on the request of the firm or its own reasons or waive off the penalty. Maximum delay of 150 days is tolerable, beyond which the order/agreement is liable to be cancelled. The loss incurred due to non-performance of the firm/vendor will be recovered from the firm/vendor.

27. Effective Date of the Supply Order:

The work/supply/contract Order shall come into effect from the date **three days** later of its issuance by the NIT Sikkim. The firm has to acknowledge the same and shall remain valid until the completion of the obligations of the parties under the Order. The deliveries, supplies and performance of the services shall commence from the effective date of the Order. In case of non-receipt of acknowledgement from the Bidder, effective date of the Order will be the **three day from the date of signing this Order**. The information/orders/notices, etc. communicated through **E-mail** provided by the firms/suppliers shall be treated authentic means of communication for all purposes.

28. Penalty for use of Undue influence:

The Seller undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts/work orders or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Institute for showing or forbearing to show favour or disfavour to any person in relation to the present Contract or any other Contract with the Institute. Any breach of the aforesaid undertaking by the Seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the Seller) or the commission of any offers by the Seller or anyone employed by him or acting on his behalf shall entitle the Buyer to cancel the contract and all or any other contracts with the Seller and recover from the Seller the amount of any loss arising from such cancellation. A decision of the Buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the Seller towards any officer/employee of the Buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

29. Termination of Contract:

The Buyer shall have the right to terminate this Contract in part or in full in any of the following cases:

- (a) Contract can be cancelled/ terminated unilaterally by the buyer in case items are not received within the contracted delivery period. Extension of contracted delivery period will be at the sole discretion of the Buyer with applicability of LD (Liquidated Damages) clause mentioned above.
- (b) The Seller is declared bankrupt or becomes insolvent.
- (c) The delivery of material is delayed due to causes of Force Majeure by more than three months.
- (d) The Buyer has noticed that the Seller has utilized the services of any Indian/Foreign agent in getting this contract and paid any commission to such individual/company etc.
- (e) As per decision of the Arbitration.

30. Notice:

Any notice required or permitted by the contract shall be written in the English language and may be delivered personally or may be sent by E-mail/FAX or registered pre-paid mail/airmail, addressed to the last known address of the party to whom it is to be sent.

31. Transfer and Sub-letting:

The Seller has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present Contract or any part thereof.

32. Amendments:

No provision of present Contract shall be changed or modified in any way (including this provision) either in whole or in part except by an instrument in writing made after the date of this Contract and signed on behalf of both the parties and which expressly states to amend the present Contract.

33. Risk and Expense Clause:

- (a) Should the stores/goods or any installment thereof not be delivered within the time or times specified in the contract documents, or if defective delivery is made in respect of the stores or any installment thereof, the Buyer shall after granting the Seller 30 days to cure the breach, be at liberty, without prejudice to the right to recover liquidated damages as a remedy for breach of contract, to declare the contract as cancelled either wholly or to the extent of such default.
- (b) Should the good/stores or any installment thereof not perform in accordance with the specifications/ parameters provided by the SELLER during the check proof tests to be done in the BUYER, the BUYER shall be at liberty, without prejudice to any other remedies for breach of contract, to cancel the contract wholly or to the extent of such default.
- (c) In case of a material breach that was not remedied within 30 days, the BUYER shall, having given the right of first refusal to the SELLER be at liberty to purchase, manufacture, or procure from any other source as he thinks fit, other stores of the same or similar description to successful completion of the project in all respect.
- (d) Any excess of the purchase price, cost of manufacturer, or value of any stores procured from any other supplier as the case may be, over the contract price appropriate to such

default or balance shall be recoverable from the SELLER. Such recoveries shall not exceed 10% of the value of the contract.

34. Quality: The quality of the stores/goods delivered according to the present Contract shall correspond to the technical specifications and standards valid for the deliveries of the same stores for in Seller's country or specifications enumerated as per BID/TENDER and shall also include therein modification to the stores suggested by the Buyer. The following Specification clause will form part of the contract placed on successful Bidder:

35. Inspection Authority: The Inspection will be carried out by a Technical Committee appointed by the Institute for this purpose. The mode of Inspection will be Technical Committee Inspection/or as defined by the Institute. The committee may suggest the seller with respect to above quality clause for compliance.

36. Franking Clause: The following Franking clause will form part of the contract placed on successful Bidder:

- (a) Franking Clause in the case of Acceptance of Goods "The fact that the goods have been inspected after the delivery period and passed by the Inspecting officer/committee will not have the effect of keeping the contract alive. The goods are being passed without prejudice to the rights of the Buyer under the terms and conditions of the contract".
- (b) Franking Clause in the case of Rejection of Goods "The fact that the goods have been inspected after the delivery period and rejected by the Inspecting officer/committee will not bind the Buyer in any manner. The goods are being rejected without prejudice to the rights of the Buyer under the terms and conditions of the contract." In this case action will be taken as per the clause given in this bid document.

37. Claims:

The following Claims clause will form part of the contract placed on successful Bidder:

- (a) The claims may be presented either;
 - (i) On quantity of the stores, where the quantity does not correspond to the quantity shown in the Packing List/Insufficiency in packing.
 - (ii) On quality of the stores/goods, where quality does not correspond to the specifications/quality mentioned in the contract.
- (b) The description and quantity of the stores are to be furnished to the Seller along with concrete reasons for making the claims. Copies of all the justifying documents shall be enclosed to the presented claim. The Seller will settle the claims within 30 days from the date of the receipt of the claim at the Seller's office, subject to acceptance of the claim by the Seller. In case no response is received during this period the claim will be deemed to have been accepted.
- (c) The Seller shall collect the defective or rejected goods from the location mentioned by the Buyer and deliver the repaired or replaced goods at the same location under Seller's arrangement.
- (d) Claims may also be settled by reduction of cost of goods under claim from Performance Security submitted by the Seller or payment of claim amount by Seller through demand draft drawn on an Indian Bank in favor of the Director/Registrar of the Institute.
- (e) The quality claims will be raised solely by the Buyer and without any certification/countersignature by the Seller's representative stationed in India.

Note Carefully:

1. The Bidder is required to read and examine all the terms and conditions, specifications and instructions given in the TENDER/BID document with full understanding of its implications.
2. Failure to furnish any information required for submission of a bid or bids not substantially responsive in every respect may result in outright rejection.
3. The Bidder is required to give an undertaking of understanding and acceptance of all the terms and conditions mentioned in the Bid document.
4. The sole responsibility to comply with all terms and conditions, specifications and instructions in all respect lies with the bidder and NIT Sikkim shall not be held responsible in any respect in this regard.

Registrar

The Detailed Technical Specification

S.No.	Experiments Name and Specification	Qty
1	<p><u>Experiments on damping, resonance and absorber effects in forced vibrations</u></p> <p>Features</p> <ul style="list-style-type: none"> - detailed, wide-ranging series of experiments on the mechanical vibration theory - experiments on various pendulums, bar-type oscillators and spring-mass systems - damping, resonance and absorber effects in forced vibrations <p>Equipment must to be perform below mention experiments</p> <ul style="list-style-type: none"> - experiments with pendulums <ul style="list-style-type: none"> -- Kater's pendulum -- reduced pendulum length - spring-mass system - bar-type oscillator <ul style="list-style-type: none"> -- undamped oscillation -- damped oscillation -- forced vibration - damped and undamped resonance - absorber effect in multi-mass oscillators <p>Specification</p> <p>vibration trainer with experiments on damping, resonance, dual-mass system and vibration absorption</p> <p>6 pendulum oscillators, 2 bar-type oscillators and 1 spring-mass oscillator</p> <p>electrical imbalance exciter</p> <p>control unit for the imbalance exciter with a digital frequency display and a TTL output for triggering external devices</p> <p>tuneable absorber with a leaf spring</p> <p>adjustable oil damper</p> <p>electrically operated drum recorder for recording free vibrations</p> <p>polar chart recorder for determining the amplitude and phase of forced vibrations</p> <p>Technical details</p> <p>Beam, rigid: LxWxH: 700x25x12mm, 1,6kg</p> <p>Beam, elastic: LxWxH: 700x25x4mm, 0,6kg</p> <p>Tension-pressure springs</p> <ul style="list-style-type: none"> - 0,75N/mm - 1,5N/mm - 3,0N/mm <p>Imbalance exciter</p> <ul style="list-style-type: none"> - 0...50Hz - 100cmg <p>Oil damper: 5...15Ns/m</p> <p>Absorber</p> <ul style="list-style-type: none"> - leaf spring: WxH: 20x1,5mm - total mass: approx. 1,1kg - tuneable: 5...50Hz <p>Drum recorder: 20mm/s, width 100mm</p> <p>Polar chart recorder: Ø 100mm</p> <p>230V, 50Hz, 1 phase</p> <p>230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase</p>	01

	<p>UL/CSA optional</p> <p>LxWxH: 1010x760x1800mm Frame opening WxH: 870x650mm Weight: approx. 150kg</p> <p>Equipment must be quote with</p> <p>System for data acquisition</p> <p>Measurement and illustration of frequency and phase response</p> <p>Features</p> <ul style="list-style-type: none"> - measurement and illustration of frequency and phase response - digital storage oscilloscope <p>Learning objectives/experiments</p> <ul style="list-style-type: none"> -- natural vibration of a bar-type oscillator -- damped vibration of a bar-type oscillator -- forced vibration of a bar-type oscillator (damped and undamped resonance) -- frequency and period time measurements -- Kater's pendulum <p>Specification</p> <p>data analysis for vibration trainer. measurement, recording and analysis of frequency response and transfer function functions as a digital storage oscilloscope interface box with 3 sensor inputs and 3 analogue outputs 1 inductive displacement sensor (amplitude), 1 reference sensor (exciter force)</p> <p>Technical data</p> <p>Sensor input channels: 3 Inputs in oscilloscope mode: 2 Time basis: 10...750ms/DIV Record length: 2000 points Displacement sensors</p> <ul style="list-style-type: none"> - measuring range: 5...10mm - frequency range: 0...50Hz <p>230V, 50Hz, 1 phase 230V, 60Hz, 1 phase 120V, 60Hz, 1 phase; UL/CSA optional</p> <p>LxWxH: 265x260x110mm (interface box) Weight: approx. 7kg LxWxH: 600x400x170mm (storage system)</p> <p>* The manufacturer should have CE certified and have minimum experience of 10 years of manufacturing the same equipments.</p>	
2	<p><u>Determination of the oscillation period depending on torsion wire length, diameter and rotating mass</u></p> <p>Features</p> <ul style="list-style-type: none"> - vibrations of different torsion bars <p>Learning objectives/experiments</p> <ul style="list-style-type: none"> - determine the oscillation period as a function of -- the length of the torsion bar 	01

	<p>-- the diameter of the torsion bar -- the rotating mass and its shape</p> <p>Specification torsional vibrations on different torsion bars 5 aluminium torsion bars with different diameters adjustable effective length of the torsion bars quick-action chucks to swap components generate torsional vibration via a circular disk or circular ring stopwatch to measure the oscillation period bracket for wall mounting</p> <p>Technical data Five torsion bars - aluminium - length: 1100mm - diameter: 2mm, 3mm, 4mm, 5mm, 6mm</p> <p>Circular ring - outer diameter: 160mm - inner diameter: 100mm - height: 31mm - moment of inertia: 0,01335kgm²</p> <p>Circular disk - diameter: 160mm - height: 19mm - moment of inertia: 0,0096kgm²</p> <p>Stopwatch: 1/100s</p> <p>LxWxH: 700x200x200mm Weight: approx. 12kg</p> <p>* The manufacturer should have CE certified and have minimum experience of 10 years of manufacturing the same equipments.</p>	
3	<p><u>Free and damped torsional vibrations</u></p> <p>Influence of mass, torsional rigidity and damping on the behavior of a rotary oscillator</p> <p>Features - influence of mass, torsional rigidity and damping on the behavior of a rotary oscillator</p> <p>Learning objectives/experiments - natural frequency of a rotary oscillator - influence of torsional stiffness, mass and damping</p> <p>Specification supplementary experiment for torsional vibrations 3 torsion bars with different diameters, freely selectable effective length 3 different mass disks with clamping chuck 3 with ball bearings and clamping chuck oil damper for damped vibrations</p> <p>Technical data Torsion bars, stainless steel - Ø 3mm, 5mm, 6mm - length: 800mm</p>	01

	<p>Mass disks - small: Ø 150mm approx. 2,7kg - large: Ø 228mm approx. 4,8kg</p> <p>Clamping chuck: Ø 0,5...8,0mm</p> <p>LxWxH: 480x240x1180mm Weight: approx. 33kg</p> <p>* The manufacturer should have CE certified and have minimum experience of 10 years of manufacturing the same equipments.</p>	
4	<p><u>Free and forced vibrations</u></p> <p>Basic experiments on mechanical vibration theory</p> <p>Features - demonstration of basic fundamentals of mechanical vibration theory - damping and resonance in forced vibrations - two different principles of vibrational excitation</p> <p>Learning objectives/experiments - free vibrations - damped vibrations - inertia force and displacement excitation - forced vibrations - resonance - amplitude response and phase response</p> <p>Specification fundamentals of mechanical vibration theory; free, damped and forced vibrations bar-type oscillator 3 coil springs imbalance exciter with DC motor displacement exciter with DC motor electronic control unit with digital display, adjustable excitation frequency damper with oil fill electrically driven drum recorder amplitude meter with electrical contact for triggering devices storage system for parts</p> <p>Technical data Bar-type oscillator: LxWxH: 700x25x12mm, 1,6kg</p> <p>Coil springs - 0,75N/mm - 1,5N/mm - 3,0N/mm</p> <p>Exciter frequency: 0...50Hz, electronically controlled Imbalance of the imbalance exciter: 0...1000mmg Stroke of the displacement exciter: 20mm Damper constant: 5...15Ns/m, oil-filled</p> <p>Mechanical drum recorder - feed: 20mm/s - paper width: 100mm 230V, 50Hz, 1 phase</p>	01

	<p>230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase UL/CSA optional</p> <p>LxWxH: 1000x420x900mm Frame opening WxH: 870x650mm Weight: approx. 52kg Storage system: LxWxH: 1170x480x237mm Weight: approx. 12kg</p> <p>* The manufacturer should have CE certified and have minimum experience of 10 years of manufacturing the same equipments.</p>	
5	<p><u>Investigation of Cam Mechanisms</u></p> <p>Comparison of different cam members; recording elevation curves</p> <p>Features</p> <ul style="list-style-type: none"> - record elevation curves of cam mechanisms - four different cam members, two different engaging members - influence of spring stiffness and mass on the dynamic behaviour <p>Learning objectives/experiments</p> <ul style="list-style-type: none"> - elevation curves in non-matching engaging member - elevation curve in sprung-engaging member - determine the limit speed and compare with theory - influence of moving mass on the motion of cam member/plunger - influence of return-spring stiffness and preload on the motion of cam member/plunger - comparison of the elevation curves of different cam-member shapes - comparison of elevation curves with theory <p>Specification</p> <p>investigation of cam mechanisms</p> <p>cam-shaped cam members: tangent cam, hollow cam, 2 circular arm cams with different head radius</p> <p>2 different engaging members: flat receiver with plunger or rolling receiver with plunger</p> <p>3 interchangeable return springs and spring preload</p> <p>drive motor with variable speed</p> <p>oscillating mass can be increased with 5 additional weights</p> <p>mechanical drum recorder with nib and coated paper</p> <p>optical speed sensor</p> <p>transparent protective cover for safe operation</p> <p>Technical data</p> <p>Drive motor</p> <ul style="list-style-type: none"> - DC asynchronous motor with frequency converter - power: 250W - speed: 60...670min⁻¹ <p>Cam-shaped cam member</p> <ul style="list-style-type: none"> - stroke, each: 15mm - opening angle, each: 140° <p>Spring stiffness</p> <ul style="list-style-type: none"> - hard: 5026N/m - medium: 2601N/m - soft: 613N/m 	01

	<p>Masses</p> <ul style="list-style-type: none"> - additional weight: 200g - plunger: 530g - flat receiver: 93g - rolling receiver: 20g <p>Recorder: toothed belt drive 230V, 50Hz, 1 phase 230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase UL/CSA optional</p> <p>LxWxH: 800x440x440mm (experimental unit) Weight: approx. 40kg LxWxH: 360x320x160mm (display and control unit) Weight: approx. 5kg</p> <p>* The manufacturer should have CE certified and have minimum experience of 10 years of manufacturing the same equipments.</p>	
6	<p><u>Elastic shafts</u></p> <p>Determination of critical speeds and investigation of natural modes of a shaft.</p> <p>Features</p> <ul style="list-style-type: none"> - investigation of the natural modes of various shafts with continuous mass distribution and of a Laval rotor - optimal visibility and simultaneous protection thanks to transparent protective cover <p>Learning objectives/experiments</p> <ul style="list-style-type: none"> - investigation of a Laval rotor -- critical speed -- self-alignment - natural modes on a shaft with continuous mass distribution with -- different bearing clearances -- different shaft diameters -- different shaft lengths <p>Specification</p> <p>experimental unit for determining critical speeds and investigating the natural modes of a shaft</p> <ul style="list-style-type: none"> 6 high-tensile steel shafts up to 4 self-aligning ball bearings, each moveable to any point as a shaft bearing 1 mass for constructing a Laval rotor 3 safety bearings and transparent protective cover for safe operation three-phase motor: 2 pre-selectable speed ranges; speed electronically controlled and continuously adjustable digital speed display <p>Technical data</p> <ul style="list-style-type: none"> 6 shafts - Ø 3mm, 6mm, 7mm - L: 600mm, 900mm - high-tensile steel <p>Mass, disk-shaped</p> <ul style="list-style-type: none"> - Ø 80mm - m: 965g 	01

	<p>- high-tensile steel</p> <p>Motor</p> <ul style="list-style-type: none"> - power: 0,25kW - max. speed: 6000min⁻¹ - speed electronically controlled <p>Shaft bearing</p> <ul style="list-style-type: none"> - 4x self-aligning ball bearings - 3x safety bearings <p>Measuring ranges</p> <ul style="list-style-type: none"> - speed: 0...6000min⁻¹ - scale for clearance measurement: 0...1000mm <p>230V, 50Hz, 1 phase 230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase UL/CSA optional</p> <p>LxWxH: 1550x380x450mm Weight: approx. 65kg</p> <p>* The manufacturer should have CE certified and have minimum experience of 10 years of manufacturing the same equipments.</p>	
7	<p><u>Centrifugal Governor</u></p> <p>Characteristic curves of different centrifugal force governors</p> <p>Features</p> <ul style="list-style-type: none"> - visualisation of the effect of centrifugal force - how various centrifugal systems work - determination of characteristic curves and setting curves of different centrifugal governors <p>Learning objectives/experiments</p> <ul style="list-style-type: none"> - kinetics and kinematics of the following centrifugal systems -- Porter governor -- Proell governor -- Hartnell governor - adjustment of centrifugal governors - recording the governor characteristic curves and setting curves - calculation of the structural design and adjustment of different governors <p>Specification</p> <p>how centrifugal systems work three different centrifugal governors: Porter, Proell and Hartnell governors versatile range of variations on the governors: adjustment of the centrifugal mass, the sleeve force and the spring preload continuous adjustment of speed via a potentiometer drive with DC motor digital speed display protective cover with electronic coupling to the drive ensures safe operation</p> <p>Technical data</p> <p>DC motor</p> <ul style="list-style-type: none"> - max. power: 35W <p>Speed control: 60...400min⁻¹</p> <p>Proell governor</p>	01

	<p>- sleeve mass: 3x 100g - centrifugal mass: 2x 150g</p> <p>Porter governor - sleeve mass: 3x 100g - centrifugal mass: 2x 400g</p> <p>Hartnell governor - centrifugal mass: 2x 400g - 2 compression springs, adjustable spring preload</p> <p>Measuring ranges - speed: 0...600min-1 230V, 50Hz, 1 phase 230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase UL/CSA optional</p> <p>LxWxH: 420x420x430mm Weight: approx. 30kg</p> <p>* The manufacturer should have CE certified and have minimum experience of 10 years of manufacturing the same equipments.</p>	
8	<p><u>Mechanical Model (Spur Gear Trains)</u></p> <p>Compact one model consisting of following 4 Models (a,b,c,d) illustrating series of Spur Gear Trains visible from both sides</p> <p>a) Single Stage Spur Gear b) Single Stage Spur Gear With Intermediate Gear c) Two Stage Spur Gear d) Three Stage Spur Gear and Single Speed Reverse Gear</p> <p><u>Mechanical Model (Crank Drive):</u> Compact one model consisting of following 3 Models (a,b,c) illustrating series of Crank Drive visible from both sides</p> <p>a) Crank Drive To Oscillating Link b) Crankshaft And Slider Mechanism c) Crank And Slotted Link Drive (OSCILLATOR)</p> <p><u>Mechanical Model (Cam Drive):</u> Compact one model consisting of following 3 Models (a,b,c) illustrating series of Cam Drive visible from both sides</p> <p>a) Geneva Drive (MALTESE Cross) b) Cam With Straight Line and Lever Follower c) Free Cam Drive (FREE Follower)</p> <p><u>Mechanical Model ((Friction Wheel And Clutch)</u></p> <p>Compact one model consisting of following 2 Models (a,b) illustrating series of Friction Wheel visible from both sides</p> <p>a) Friction Wheel Drive (Circumference) b) Friction Wheel Drive (Variable Speed)</p>	01

Mechanical Model Clutch Drive

Compact one model consisting of following 3 Models (a,b,c) illustrating series of Clutch Drive visible from both sides

- a) Centrifugal Mechanism and Clutch Drive
- b) Cone Clutch Drive (SINGLE Sided)
- c) Dog Clutch Drive (SINGLE Sided)

Mechanical Model (Belt Drives):

Compact one model consisting of following 4 Models (a,b,c,d) illustrating series of Belt Drives visible from both sides

- a) Belt Drive Single Speed
- b) Belt Drive - Two Stage
- c) Belt Type Contra Rotation
- d) Belt Drive Multi Speed

Mechanical Model (Belt Types):

Compact one model consisting of following 4 Models (a,b,c,d) illustrating series of Belt Types visible from both sides

- a) Flat Belt Drive (with Tensioner)
- b) Belt Drive Toothed
- c) Chain Drive (with Tensioner)
- d) V Belt Drive

Mechanical Linkage Gears:

Compact one model consisting of following 4 Models (a,b,c,d) illustrating series of linkages visible from both sides

- a) Watt Mechanism
- b) Peaucellier Linkage Drive
- c) Pantograph Mechanism

Mechanical Linkage Gears

Also another compact one model consisting of following 4 Models (a,b,c,d) illustrating series of linkages visible from both sides

- a) Four Bar Link Mechanism
- b) Elipse Tracer
- c) Oldham Coupling
- d) Scotch Yoke Mechanism

Mechanical Model Special Gears:

Compact one model consisting of following 3 Models (a,b,c) illustrating series of Special Gears visible from both sides

- a) Worm Gear
- b) Bevel Gear
- c) Rack and Quadrant Gear Drive

Mechanical Model Internal Gears:

Compact one model consisting of following 3 Models (a,b,c) illustrating series of Internal Gears visible from both sides

- a) Epicyclic Gear (Sun and Planet)
- b) Internal Gear And Pinion Drive
- c) Internal Rolling Gear Drive

Mechanical Model Spiral/Helical Gears:

Compact One model consisting of following 3 Models (a,b,c) illustrating series of Spiral / Helical Gears from both sides

- a) Helical Gear
- b) Herringbone Gear
- c) Spiral Gear 90 Degree

Mechanical Model Differential Gear:

Compact one model consisting of following 4 + 1 Models (a,b,c,d,e) showing evolution of differential gear

- a) First Stage of Differential Gear
- b) Second Stage of Differential Gear
- c) Third Stage of Differential Gear
- d) Final Stage of Differential Gear
- e) Single Model of Differential Gear

Mechanical Model (Machine Tools) 3 Models:

Following single models illustrating Machine Tools visible from both sides

- 1) Lathe Screw Cutting Model
- 2) Shaper
- 3) Hobbing

(Annexure-A)

Part-I: Format for Submission of Technical Bid (Bidder Profile)

(To be enclosed with Technical Bid)

S.No.	Particulars	Fill-in Details	Ref No/ remarks, if any
01	Name and address of the Firm/Agency		
02	Whether the firm is Proprietary/Partnership Firm/Private Ltd./Public Ltd./ Others.		
03	Name of Proprietor/Partner of the firm/Agency		
04	Name & contact detail of Authorized representative: (Designation, Address, Mobile No., E-mail ID)		
05	Month and Year of Establishment of Firm		
06	Number of years of experience in this field		
07	Registration Number of the Firm		
08	Valid GSTIN Number		
09	PAN number of the firm or Proprietor		
10	Trade License related to same kind of business (should be valid for financial year 2019-20)		
11	Showroom/Outlet Address		
12	Turnover of the firm	2018-19: 2017-18:	
13	OEM/Authorized Dealership (Brand) (Original Equipment Manufacturer)		
14	Detail of Demand Draft submitted for EMD of Rs.	DD No. Date:	
15	Relevant documents as in the Tender Document		

**All fields are mandatory to fill with the copy of duly signed and stamped proof. These above points together constitute eligibility criteria.*

(Annexure B)

COMPLIANCE STATEMENT
(Technical Criterion)

The following is the Model Quoted against the below mentioned Specification:

S.No.	Item	Make and Model No.	Technical compliance (Write Yes or No)	Detailed technical specification (Write Attached or Not attached)	OEM or Authorized dealership (Write Attached or Not attached)

S.No	Following Equipment as per the specifications given in this bid	Compliance (Yes/No)	Remark (If any)
01	Experiments on damping, resonance and absorber effects in forced vibrations		
02	Determination of the oscillation period depending on torsion wire length, diameter and rotating mass		
03	Free and damped torsional vibrations		
04	Free and forced vibrations		
05	Investigation of cam mechanisms		
06	Elastic shafts		
07	Centrifugal governor		
08	Mechanical Model (Spur Gear Trains)		

Undertaking

(On the letter head of the bidder)

To,

**The Registrar
National Institute of Technology Sikkim
Ravanla, South Sikkim-737139**Sub.: Undertaking for *Tender No:* *Date:*

Dear Sir,

This is to undertake that I/We, owner(s) of M/s, of ...<*name of city*>... have read all the terms and conditions, specifications etc. of this Tender document and I/We fully understood all of them and I/We are fully aware of their implications. We undertake that if I/We were given the Purchase Order (PO), will abide by all the terms and conditions of the Tender document and provide all the goods/items to the satisfaction of the Institute authorities.

I further undertake that after understanding all and their implications all the pages of this tender document are signed and stamped by the authorized person of the firm. The documents and information furnished by me/firm is correct in all respect and if anything found incorrect, I shall be liable for the action as per the terms and conditions given in this tender document.

Signed by

(Name)

Authorized Signatory of M/s

Official Stamp

Date:

Place:

(Annexure-D)

PART-II: Financial Bid

(To be sealed in a separate envelope duly signed)

S.No.	Name of items	Unit Price (Rs.)	GST (@ %)	Qty	Total Unit Price (Rs.)	Total (Rs.) inclusive all taxes
01	Experiments on damping, resonance and absorber effects in forced vibrations					
02	Determination of the oscillation period depending on torsion wire length, diameter and rotating mass					
03	Free and damped torsional vibrations					
04	Free and forced vibrations					
05	Investigation of cam mechanisms					
06	Elastic shafts					
07	Centrifugal governor					
08	Mechanical Model (Spur Gear Trains)					

Total Amount (In figure):

(In words):

Total unit quoted price should be inclusive all charges (taxes, transportation, etc.). NO extra charges will be paid. Rate quoted must be F.O.R. NIT Sikkim.

Bank Account Details for Direct PaymentTo be submitted by bidder

S. No.	Particulars	Details
01	Firm (Beneficiary) Name	
02	Please enclose a cancelled cheque	
03	Complete Bank Account No. of the Firm [beneficiary]	
04	Bank Name & Address	
05	IFSC Code No.	
06	Mobile No.& Email ID for information	

We undertake that all information provided above is correct and NIT Sikkim will not be responsible in case of any error on the part of firm.